



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, April 8, 2026**, and then opened and read publicly at that time by the Procurement Staff for the following project:

Bid # 26-13-2 – Justice Center Boilers

This bid package is available online at www.bidexpress.com or LaPAC <https://wwwcfprd.doa.louisiana.gov/osp/lapac/dspBid.cfm?search=department&term=185>. 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.

The project classification is:

Building Construction or Mechanical

Paper Bids must be sealed. In addition, the outside of the envelope, box, or package containing the Bid shall be marked with the following information. 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. Bids submitted without this information may be deemed non-responsive.

A NON-MANDATORY pre-bid meeting will be held at 10:00 AM on Friday, March 16, 2026, at the St. Tammany Parish Justice Center located at 701 Columbia St., Mandeville, LA 70471. We will meet at the North side of the building entrance. Attendance is not mandatory but highly recommended. Immediately following the pre-bid meeting, we will walk the building and site to review the existing conditions.

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.

The Procurement Department can be contacted by telephone at (985) 898-2520 or via e-mail at Procurement@stpgov.org. St. Tammany Parish Government reserves the right to reject any or all quotes and to waive informalities.

BID PROPOSAL

ST. TAMMANY PARISH
GOVERNMENT



BID PACKAGE FOR

Justice Center Boilers

BID NO.: 26-13-2

December 23, 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 fifty (150) 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 and is the responsibility of the contractor to obtain tax exemption if applicable. 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 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.
48. 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.
49. 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.
50. Deductibles: Any and all deductibles in the described insurance policies shall be assumed by and be at the sole risk of the Contractor.
51. 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.
52. 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.

53. 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.
54. 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.
55. 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.
56. 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).
57. 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 protestor can request additional methods of notification.

58. 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 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	April 8, 2026	2:00 PM
Inquiry Deadline	March 27, 2026	2:00 PM
Addendum Deadline	April 2, 2026	2:00 PM
Non-Mandatory Meeting	March 16, 2026	10:00 AM

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.

59. 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.
60. 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).
61. 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.
62. 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:

Base Bid to include the removal of (2) existing hot water heating boilers with (1) new boiler to be replaced in a configuration similar to existing. Piping for the second boiler shall be stubbed out and capped for future replacement. A rental boiler shall be included to maintain building heating during the project. A new opening and roll door in the boiler room wall to be installed to accommodate boiler removal and installation as well as future service. The door to the loading dock area will be replaced with a pair of 3'-0" x 8'-0" hollow metal doors and hardware to accommodate boiler replacement.

The Parish reserves the right to add, remove or otherwise modify the above as determined necessary by the Parish and as allowed by law.

A NON-MANDATORY pre-bid meeting will be held at 10:00 AM on Friday, March 16, 2026, at the St. Tammany Parish Justice Center located at 701 Columbia St., Mandeville, LA 70471. We will meet at the North side of the building entrance. Attendance is not mandatory but highly recommended. Immediately following the pre-bid meeting, we will walk the building and site to review the existing conditions.

II. Location of Work:

701 Columbia Street, Covington, LA 70433

III. Documents: Bid Documents dated December 23, 2025, and entitled:

Justice Center Boilers

Bid No.: 26-13-2

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

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: Justice Center Boilers
Bid No.: 26-13-2

(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 RCL Architecture and dated: _____.

(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 *(The replacement of a second hot water heating boiler not replaced under the Base Bid.)* for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 2 *(The replacement of the 2 existing hot water heating boilers with a new configuration turned 90 degrees to the original to accommodate future service and replacement.)* for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 3 *(The replacement of the 2 existing heating hot water pumps with new pumps including new isolation valves and all piping modifications required for the replacement.)* for the lump sum of:

_____ 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: Justice Center Boilers _____

Bid#: 26-13-2 _____

*****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 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 to include coverage for, but not limited to: negligence, mistakes, faulty workmanship, improper installation, not following design specifications, etc. 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:

PROGRESS



MICHAEL B. COOPER
Parish President

Councilmember Name
Council District X

\$XXX,XXX.XX

Total Dollar \$ amount specified here

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:

PROGRESS



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.

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

Section 10

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:	
	PHONE (A/C, No. Ext):	FAX (A/C, No):
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"/>	<input type="checkbox"/>				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS	<input type="checkbox"/>	<input type="checkbox"/>				PROPERTY DAMAGE (Per accident) \$
							\$
	UMBRELLA LIAB						EACH OCCURRENCE \$
	<input type="checkbox"/> OCCUR						AGGREGATE \$
	EXCESS LIAB						\$
	<input type="checkbox"/> CLAIMS-MADE						
	DED						RETENTION \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						OTHER
	If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y / N	<input type="checkbox"/> N / A				E.L. EACH ACCIDENT \$
							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

SECTION 11

Bond No.: _____

**CONTRACT AGREEMENT
BETWEEN PARISH AND CONTRACTOR**

BY: ST. TAMMANY PARISH GOVERNMENT

WITH: «TXTCOMPANYNAME»

UNITED STATES OF

AMERICA

STATE OF LOUISIANA

ST. TAMMANY PARISH

This agreement is entered into this _____ day of _____, 20____, by and between: «TXTCOMPANYNAME», hereinafter called the "Contractor", whose business address is «TXTADDRESS», «TXTCITY», «TXTSTATE» «txtZip» 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

«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».

5. RETAINAGE

A retainage fee will be applied to all contracts with a total price of \$100,000.00 or more. For contracts priced between \$100,000.00 and \$499,999.99, the retainage shall be 10% of the amount. For contracts priced at \$500,000.00 or more, the retainage shall be 5%. Retainage will be deducted from each payment and released in accordance with the contract closeout and acceptance requirements.

6. 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.

7. 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.

8. 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 (9)(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. 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:

CONTRACTOR:

Signature

Signature

Print Name

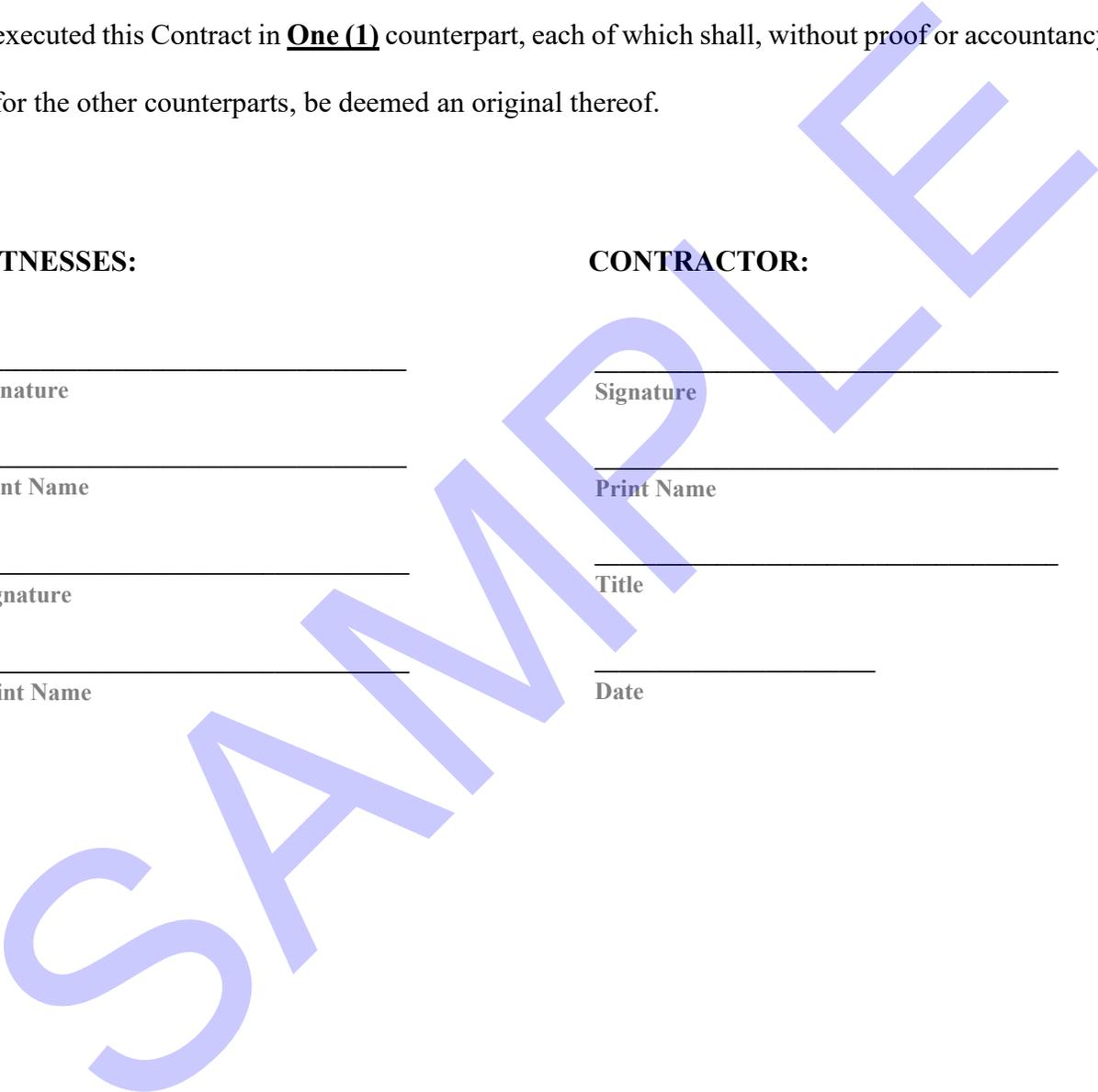
Print Name

Signature

Title

Print Name

Date



Bond No.: _____

WITNESSES:

**ST. TAMMANY PARISH
GOVERNMENT:**

Signature

**Michael B. Cooper
Parish President**

Print Name

Signature

Date

Print Name

APPROVED BY:

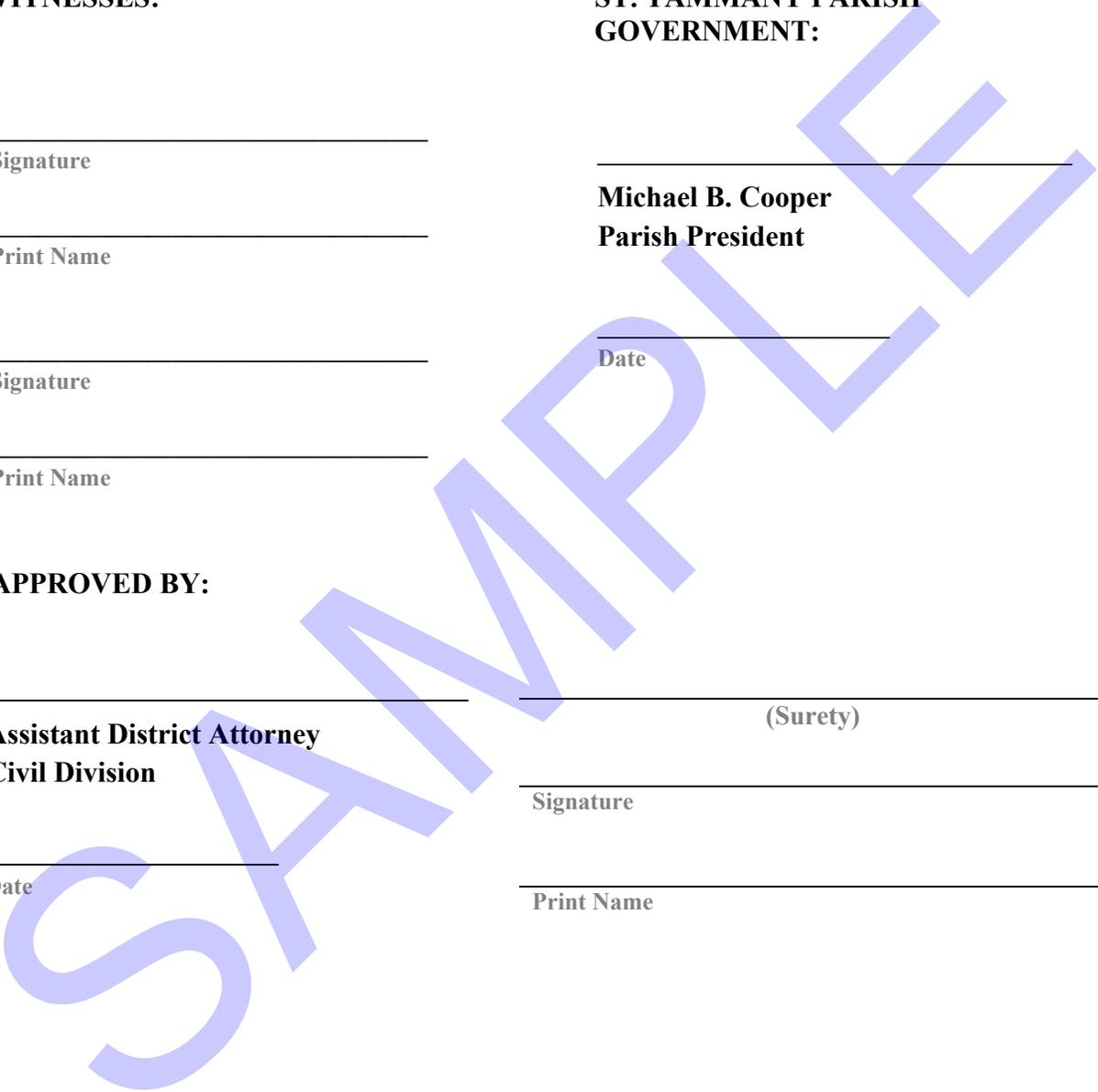
**Assistant District Attorney
Civil Division**

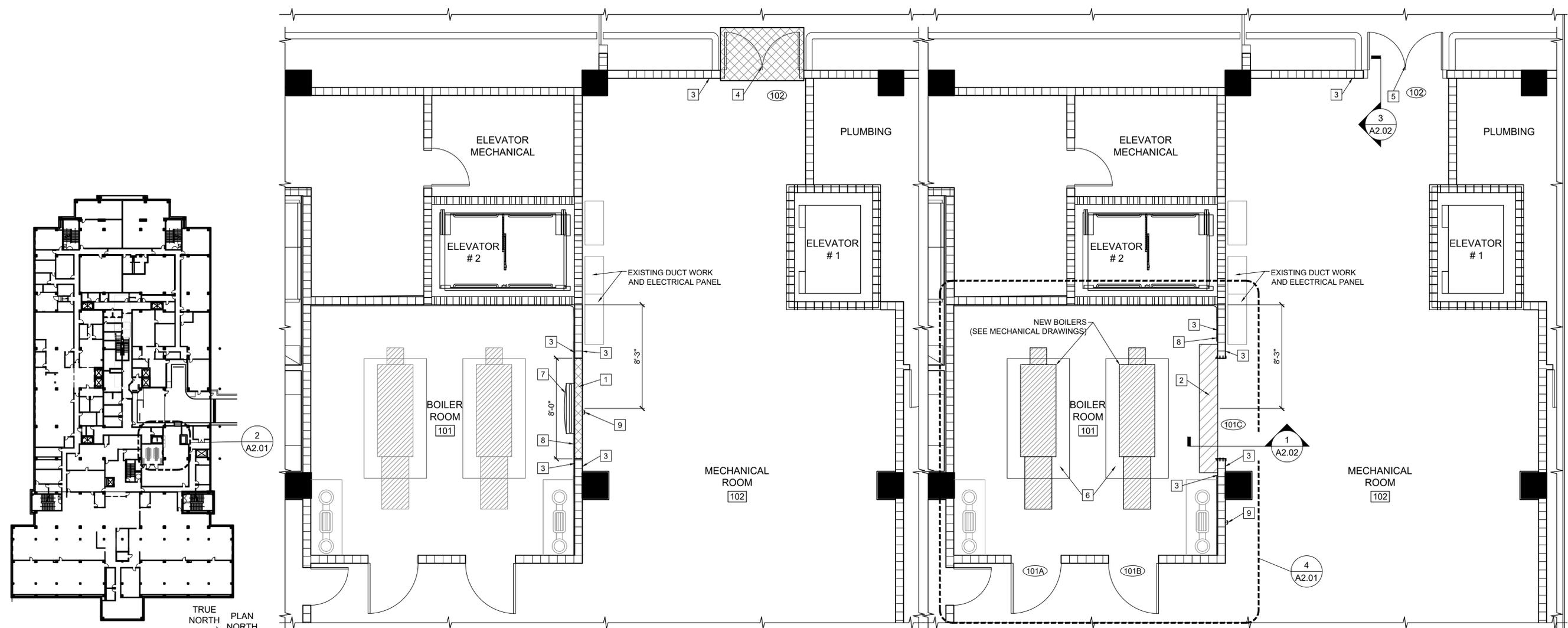
(Surety)

Signature

Date

Print Name





1 SITE PLAN
 A2.01 SCALE: 1/4"=1'-0"

2 BOILER ROOM DEMOLITION PLAN VIEW
 A2.01 SCALE: 1/4"=1'-0"

3 BOILER ROOM NEW PLAN VIEW
 A2.01 SCALE: 1/4"=1'-0"

4 BOILER ROOM ALTERNATE PLAN VIEW
 A2.01 SCALE: 1/4"=1'-0"

GENERAL NOTES:

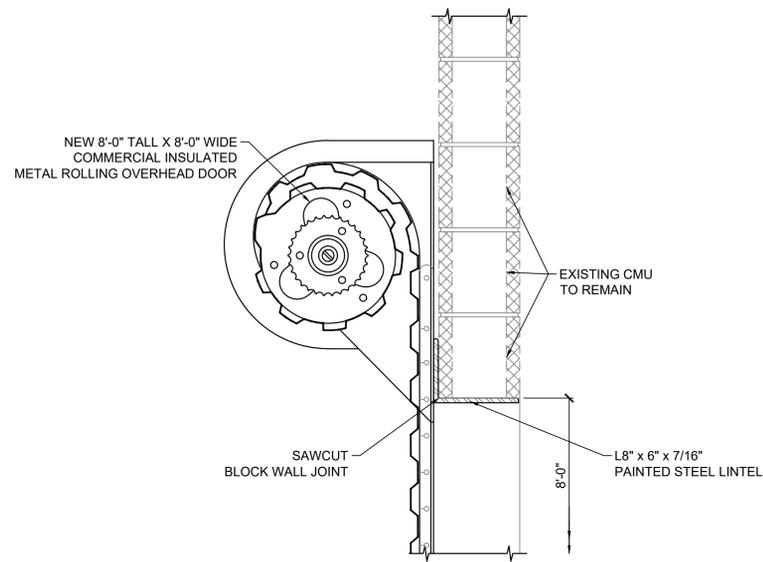
- ALL REQUIRED WORK MAY NOT BE INDICATED. IT SHALL BE THE RESPONSIBILITY OF EACH BIDDER TO EXAMINE THE SITE, VERIFY ALL DIMENSIONS AND REVIEW EXISTING CONDITIONS IN ORDER TO FULLY UNDERSTAND THE SCOPE OF THE WORK.
- THE WORK REQUIRED UNDER THIS CONTRACT SHALL BE PERFORMED AT SUCH TIMES AND IN SUCH A MANNER AS TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH JUSTICE CENTER OPERATIONS.
- THE JUSTICE CENTER WILL BE OCCUPIED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE ALL TEMPORARY DISRUPTION OF SERVICES AND DELIVERY TIMES WITH JUSTICE CENTER ADMINISTRATION. THE CONTRACTOR AND JUSTICE CENTER ADMINISTRATION SHALL MEET TO ESTABLISH SUITABLE GUIDELINES FOR DEALING WITH NOISY OR DISRUPTIVE ACTIVITIES.
- THE CONTRACTOR SHALL COORDINATE WITH JUSTICE CENTER ADMINISTRATION AS TO THE EXACT LOCATION OF THE STAGING AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ANY MATERIALS STORED ON THE JOB SITE. IT IS THE CONTRACTOR'S OPTION IF SECURE TEMPORARY FENCING IS USED. THE OWNER BEARS NO RESPONSIBILITY FOR THE PROTECTION OF ANY MATERIALS STORED AT SITE.
- CONTRACTOR'S FORCES ARE TO PARK IN DESIGNATED PARKING AREAS DETERMINED BY JUSTICE CENTER ADMINISTRATION PRIOR TO CONSTRUCTION.
- THE CONTRACTOR WILL BE REQUIRED TO COMPLY FULLY WITH THE WORK LIMITATIONS LISTED AND AS CONTAINED IN THE SPECIFICATIONS. IN ADDITION, THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL SAFETY DIRECTIVES ISSUED DURING CONSTRUCTION.
- FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION OF BUILDING COMPONENTS.
- THE CONTRACTOR IS TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR UNCLEAR INFORMATION GIVEN ON THE CONSTRUCTION DOCUMENTS PRIOR TO ANY WORK BEING EXECUTED.
- MEANS OF EGRESS SHALL BE MAINTAINED AT ALL TIMES.
- CONTRACTOR IS TO CLEAN ALL CONSTRUCTION DEBRIS AT THE END OF EACH DAY. ALL TRASH SHALL BE DISPOSED OF AND BUILDING MATERIALS PROTECTED AND STORED.
- CONTRACTOR TO PROVIDE ONSITE PORT-O-LET FOR THE DURATION OF THE JOB. JUSTICE CENTER RESTROOMS WILL NOT BE USED BY THE CONTRACTOR'S FORCES AT ANY TIME.
- NO SMOKING IS ALLOWED ON JUSTICE CENTER PROPERTY.
- THE GENERAL CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS AGAINST DAMAGING ANY EXISTING CONSTRUCTION THAT IS TO REMAIN. ALL DAMAGES CAUSED BY THE OPERATIONS OF THIS CONTRACT SHALL BE REPAIRED AT THAT CONTRACTORS EXPENSE TO THE COMPLETE SATISFACTION OF THE OWNER.

DEMOLITION GENERAL NOTES:

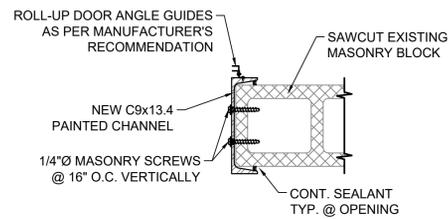
- THESE DRAWINGS ARE NOT INTENDED TO INDICATE OR FULLY DESCRIBE EACH AND EVERY ITEM TO BE REMOVED AND INSTALLED. IT SHALL BE THE RESPONSIBILITY OF EACH BIDDER TO EXAMINE THE SITE, VERIFY ALL DIMENSIONS AND REVIEW EXISTING CONDITIONS IN ORDER TO FULLY UNDERSTAND THE SCOPE OF THE WORK.
- SEE MECHANICAL DRAWINGS FOR OTHER DEMOLITION WORK REQUIRED. ANY DEMOLITION OF MECHANICAL OR ELECTRICAL EQUIPMENT SHOWN ON THESE DRAWINGS, IS FOR COORDINATION ONLY. COORDINATE ALL WORK BY OTHER CONTRACTORS INCLUDING DISCONNECTING OF BUILDING SERVICES SUCH AS WATER OR ELECTRICAL.
- BEFORE DEMOLITION, GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW WITH OWNER'S REPRESENTATIVE ALL ITEMS BEING REMOVED BY THEIR TRADES. ALL ITEMS DESIGNATED DURING THIS REVIEW TO REMAIN OWNER'S PROPERTY, SHALL BE MAINTAINED IN GOOD CONDITION AND TURNED OVER TO OWNER. ALL ITEMS DESIGNATED TO BE REUSED AS PART OF NEW CONSTRUCTION SHALL BE MAINTAINED IN A REUSABLE CONDITION AND STORED ON SITE BY CONTRACTOR IN A CLEAN, DRY LOCATION UNTIL INSTALLATION. ALL REMAINING ITEMS AND MATERIALS DEEMED TO BE TRASH SHALL BE DISPOSED OF PROPERLY BY LAW, OFF SITE BY THE RESPONSIBLE CONTRACTOR.
- EXISTING CONDITIONS AS THEY APPEAR IN THESE CONTRACT DOCUMENTS MAY VARY WITH ACTUAL CONDITIONS BECAUSE OF ITEMS REMOVED BY THE OWNER'S STAFF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PATCHING AND REPAIR WORK AS A RESULT OF THE OWNER'S REMOVAL OF SUCH ITEMS.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING BUILDING DIMENSIONS AND CONDITIONS, INCLUDING FINISHES AND MATERIALS, SYSTEMS SHOWN AND DESIGNATED AS EXISTING TO REMAIN ON CONTRACT DRAWINGS PRIOR TO STARTING DEMOLITION AND CONSTRUCTION. NOTIFY ARCHITECT OF ANY AND ALL DISCREPANCIES IN INFORMATION INDICATED ON CONTRACT DRAWINGS PRIOR TO STARTING OF DEMOLITION AND CONSTRUCTION. VERIFICATION AND COORDINATION OF CLEARANCES REQUIRED FOR ALL NEW WORK BY ALL AND ANY ASSOCIATED CONFLICT RESOLUTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- THE OWNER RESERVES THE RIGHT TO SALVAGE AND REMOVE ANY EXISTING ITEMS BEFORE OR DURING DEMOLITION WORK.
- GENERAL CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS AGAINST DAMAGING ANY EXISTING CONSTRUCTION THAT IS TO REMAIN. ALL DAMAGES CAUSED BY THE OPERATIONS OF THIS CONTRACT SHALL BE REPAIRED AT THAT CONTRACTORS EXPENSE TO THE COMPLETE SATISFACTION OF THE OWNER.
- DEMOLITION PLANS REFLECT LOCATIONS OF DEMOLITION. EXTENT OF WORK SHALL BE ALL CONSTRUCTION WORK NECESSARY TO PROPERLY COMPLETE THE PROJECT.

BOILER ROOM SCOPE NOTES:

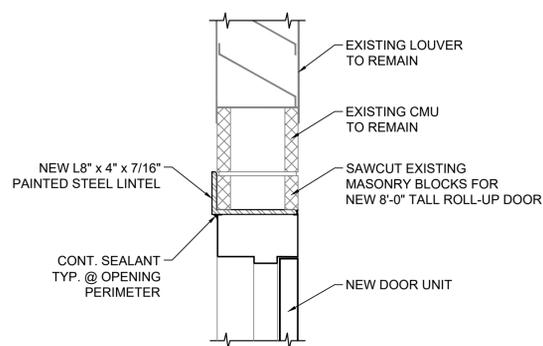
- SAWCUT OPENING IN AN EXISTING BLOCK WALL TO INSTALL AN 8'-0" TALL x 8'-0" WIDE OVERHEAD ROLL-UP DOOR. INSTALL NEW STEEL SUPPORT LINTEL L8" X 6" X 7/16" AT HEADER AND C9x13.4 CHANNELS AT JAMBS. IF NECESSARY, SUPPORT EXISTING BLOCK WALL THAT IS TO REMAIN BEFORE CUTTING IN OPENING. GENERAL CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS AGAINST DAMAGING ANY EXISTING CONSTRUCTION THAT IS TO REMAIN.
- INSTALL NEW 8'-0" TALL x 8'-0" WIDE COMMERCIAL INSULATED METAL ROLLING OVERHEAD DOOR W/ COMMERCIAL DOOR OPENER.
- CUT SOUND MATS FOR NEW ROLL-UP DOOR. MATCH ATTACHMENT IN KIND.
- DEMO A PAIR OF 3'-0" x 7'-0" TALL DOORS AND FRAME IN EXISTING BLOCK WALL. SAWCUT EXISTING BLOCK TO ENLARGE EXISTING OPENING FOR A NEW PAIR OF 3'-0" x 8'-0" TALL DOORS. INSTALL NEW STEEL SUPPORT LINTEL L8" X 4" X 7/16" AT HEADER. IF NECESSARY, SUPPORT EXISTING BLOCK WALL THAT IS TO REMAIN BEFORE CUTTING IN OPENING. GENERAL CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS AGAINST DAMAGING ANY EXISTING CONSTRUCTION THAT IS TO REMAIN.
- INSTALL NEW PR. 3'-0" x 8'-0" TALL GALVANIZED EXTERIOR INSULATED METAL DOOR.
- INSTALL NEW 4" TALL CONCRETE PAD FOR NEW BOILERS. NEW PAD CONFIGURATION OR PAD MODIFICATION IS DEPENDENT ON SELECTION OF BOILER PLACEMENT.
- RE-LOCATE EXISTING LIGHT FIXTURE. COORDINATE WITH OWNER ON NEW LOCATION. RE-ROUTE EXISTING ELECTRICAL CONDUIT.
- RE-LOCATE EXISTING FIRE ALARM STROBE LIGHT. FOR INSTANCES WHERE FIRE ALARM DEVICES ARE TO BE REMOVED AND REINSTALLED TO AVOID CONFLICT WITH NEW INSTALLATION AND DEMOLITION WORK, THE WORK SHALL BE DONE BY A LICENCED FIRE ALARM CONTRACTOR. ANY SUBMITTALS REQUIRED BY THE STATE FIRE MARSHAL SHALL BE PREPARED BY THE FIRE ALARM CONTRACTOR, INCLUDING REVIEW FEES. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING CONTROL PNEUMATIC TUBING. RECONNECT AS REQUIRED. REPLACE ANY TUBING DAMAGED DURING DISCONNECTION / RECONNECTION.



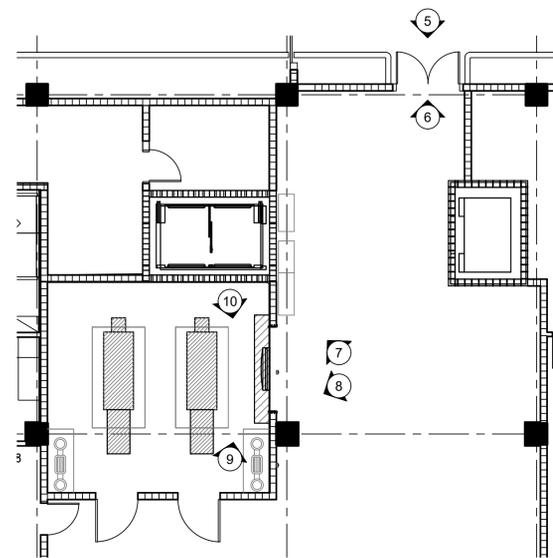
1 ROLL-UP DOOR HEADER
A2.02 SCALE: 1 1/2" = 1'-0"



2 ROLL-UP DOOR JAMB
A2.02 SCALE: 1" = 1'-0"



3 EXTERIOR DOOR HEADER
A2.02 SCALE: 1 1/2" = 1'-0"



4 BOILER ROOM PLAN VIEW
A2.02 SCALE: 1/8" = 1'-0"

OPENING SCHEDULE										
OPENING NO.	DOOR		FRAME				HARDWARE SET #	FIRE RATING (MINUTES)	NOTES	OPENING NO.
	SIZE (W X H)	THICKNESS	MATERIAL	MATERIAL	HEAD DETAIL	JAMB DETAIL				
101A	EXISTING	-	-	-	-	-	-	-	NO WORK	101A
101B	EXISTING	-	-	-	-	-	-	-	NO WORK	101B
101C	8'-0" x 8'-0"	1 3/4	MTL	MTL	-	-	-	90	1, 2, 3	101C
102	3'-0" x 8'-0"	1 3/4	MTL	MTL	-	-	-	90	4, 5, 6, 7, 8	102
REMARKS: 1. COMMERCIAL INSULATED METAL ROLLING OVERHEAD DOOR. 2. SHUT DOWN MECHANISM AND SHUT DOWN BUTTON. 3. EXTERIOR GALVANIZED INSULATED METAL DOOR. 4. PAINT DOOR AND FRAME. 5. THROAT SIZE TO MATCH WIDTH OF WALL. 6. WEATHER STRIPPING. 7. THRESHOLD.										

GENERAL DOOR AND WINDOW OPENING NOTES:

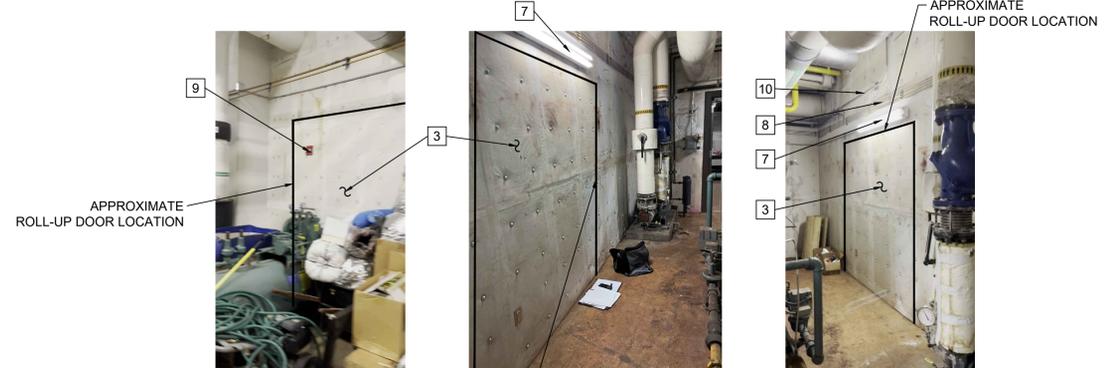
- ALL DOORS AND WINDOWS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- ALL EXTERIOR DOORS TO HAVE THRESHOLDS AND WEATHER STRIPPING, AS REQUIRED.
- 90 MINUTE FIRE RATED ROLL-UP DOOR
- FOR ALL SIZES, MATERIALS & ACCESSORIES REFER TO DOOR AND FRAME SCHEDULES.
- MASONRY ROUGH OPENING DIMENSIONS SHOWN ARE NOMINAL DIMENSIONS.
- CONTRACTOR TO COORDINATE ALL DOOR SIZES WITH FRAMING CONTRACTOR FOR CORRECT ROUGH OPENING DIMENSIONS AND REQUIRED FRAME THROAT OPENINGS.
- CONTRACTOR TO FIELD VERIFY ACTUAL OPENING DIMENSIONS PRIOR TO FABRICATION.
- CONTRACTORS TO ALLOW 3/8" PERIMETER SEALANT JOINT TYPICAL ALL SIDES AT EXTERIOR OPENINGS.
- CONTRACTORS TO ALLOW 1/4" PERIMETER SEALANT JOINT TYPICAL ALL SIDES AT INTERIOR OPENINGS.
- ALL HARDWARE SETS AND KEYED LOCKS TO BE COORDINATED BY CONTRACTOR WITH THE OWNER.



5 PHOTO
A2.02 SCALE: N.T.S.

6 PHOTO
A2.02 SCALE: N.T.S.

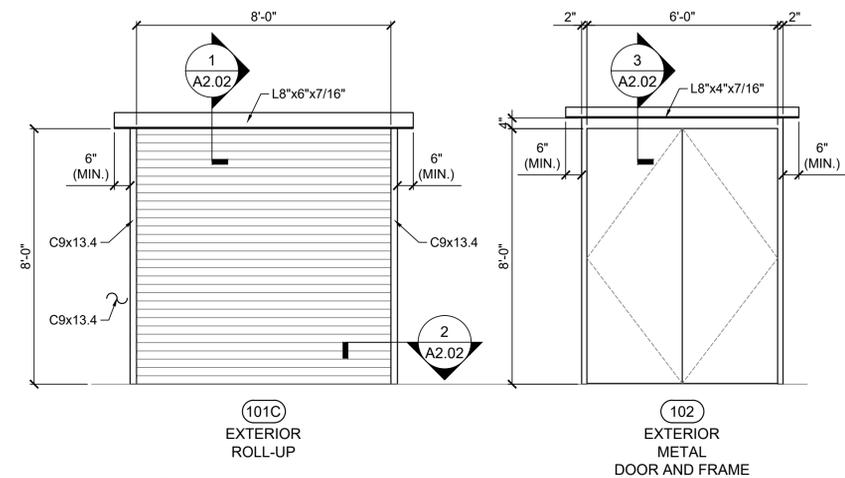
7 PHOTO
A2.02 SCALE: N.T.S.



8 PHOTO
A2.02 SCALE: N.T.S.

9 PHOTO
A2.02 SCALE: N.T.S.

10 PHOTO
A2.02 SCALE: N.T.S.



4 DOOR ELEVATIONS
A2.02 SCALE: 3/8" = 1'-0"



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RCLA
Project Number: 22507
STPG
Project Number: FM24000137
Bid No.: 26-13-2
Date Issued: 12-23-25
Drawn By: TLM
Checked By: PFD
Revisions:

JUSTICE CENTER BOILERS
ST. TAMMANY PARISH JUSTICE CENTER
701 COLUMBIA STREET
COVINGTON, LA 70433



SECTIONS,
DOOR
SCHEDULE
& PHOTOS

Copyright 2025
Sheet Number:
A2.02

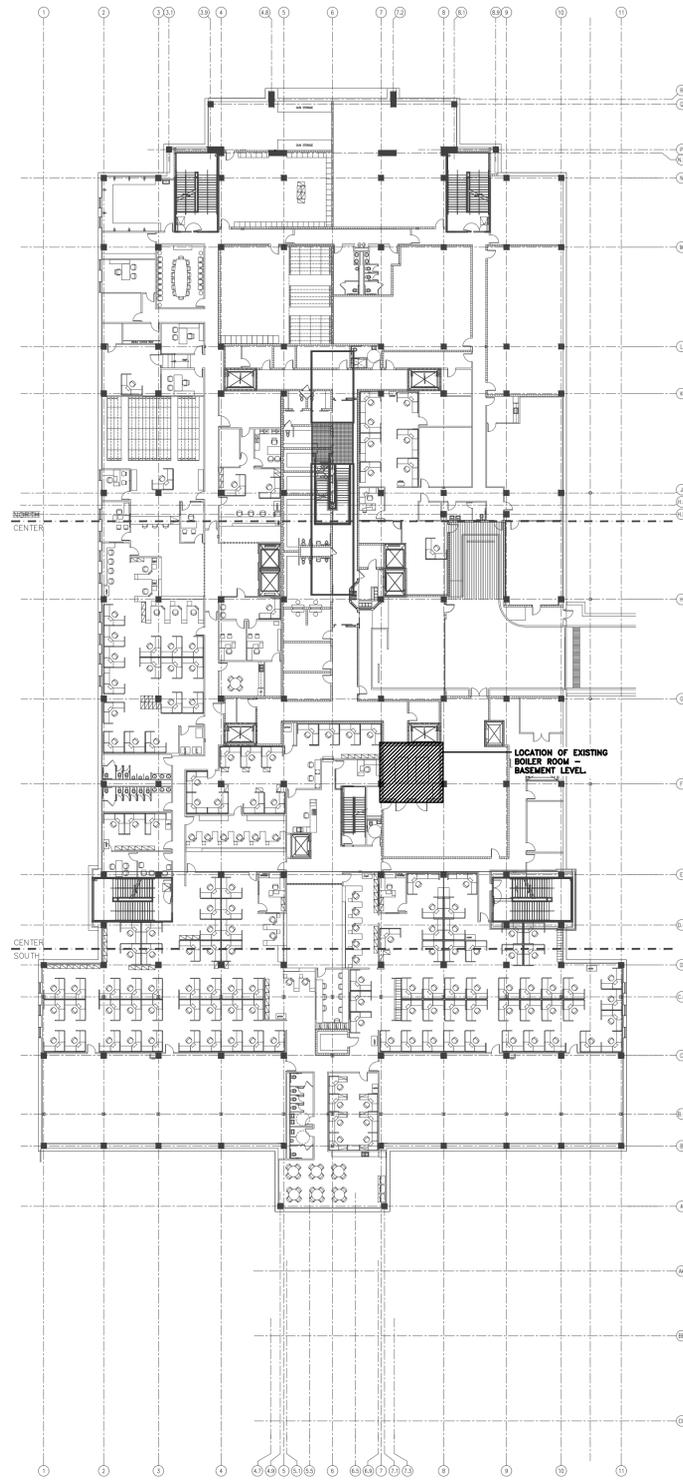
DEMOLITION GENERAL NOTES:

THE FOLLOWING IS A BRIEF DESCRIPTION OF WORK SPECIFIC TO CERTAIN ASPECTS OF THIS PROJECT. THIS IS NOT INTENDED TO BE A COMPREHENSIVE SUMMARY OF WORK. PROSPECTIVE BIDDERS/CONTRACTORS SHALL REVIEW ALL CONSTRUCTION DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS AND MAKE ALLOWANCES FOR ALL WORK INCLUDED HEREIN AND ANY ADDITIONAL WORK REQUIRED TO COMPLETE THIS PROJECT. MEANS AND METHODS FOR THE PROPER INSTALLATION OF THIS WORK IS STRICTLY THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS.

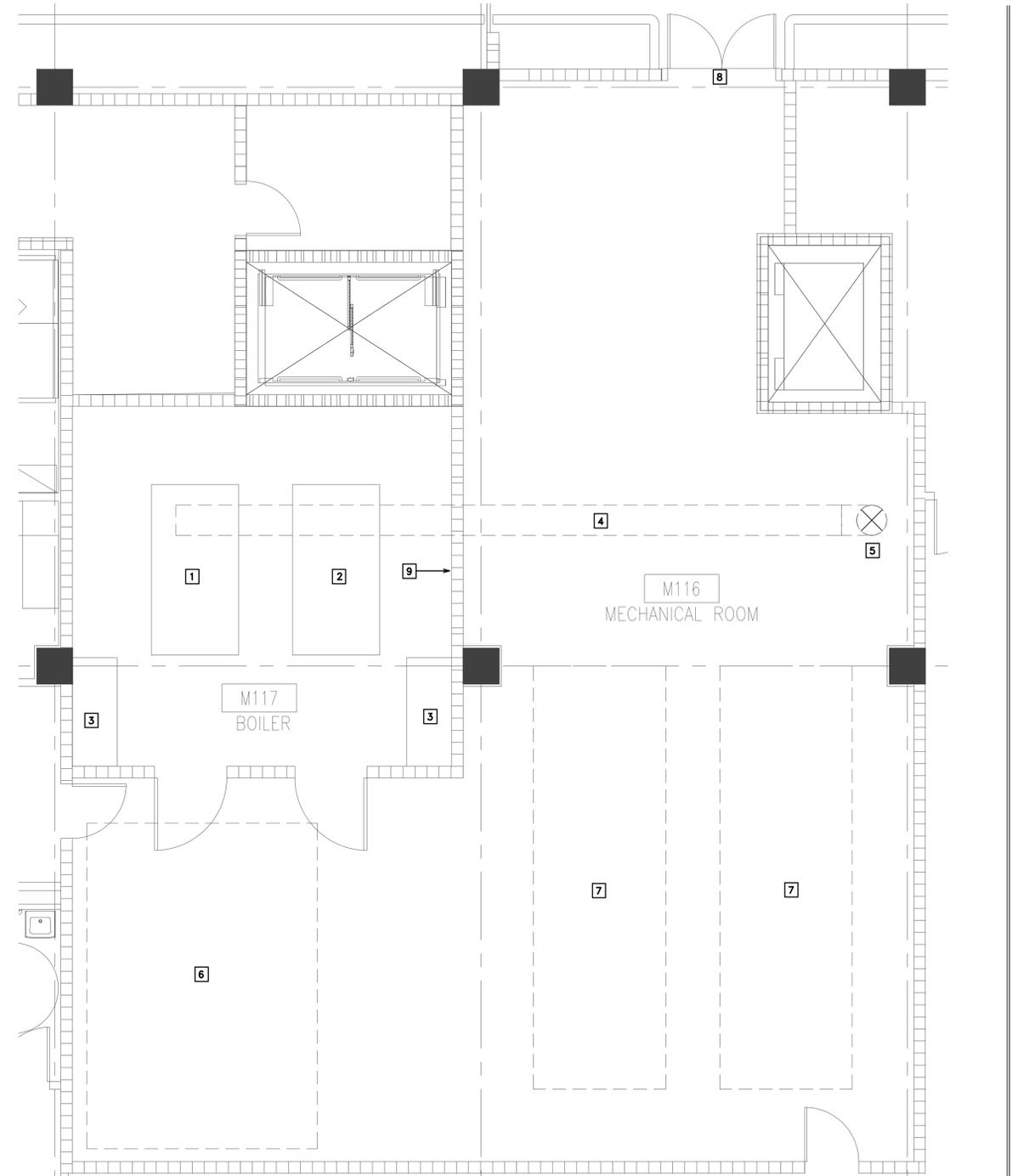
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE FIELD AND SHALL MAKE ANY ADJUSTMENTS TO PIPING TO ACCOMMODATE NEW EQUIPMENT AND/OR EXISTING CONDITIONS. EXISTING CONDITIONS SHOWN ARE BASED UPON PLANS PROVIDED BY OTHERS. EXISTING CONDITIONS TO BE FIELD VERIFIED.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXACT EXTENT OF HIS WORK. COORDINATION WITH EXISTING CONDITIONS IS REQUIRED AND NO EXTRA SHALL BE ALLOWED FOR OFFSETS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
- CONTRACTOR SHALL MAKE ALL AREAS READY FOR NEW CONSTRUCTION AS REQUIRED.
- OWNER SHALL HAVE THE OPTION TO RETAIN ANY ITEMS SLATED FOR REMOVAL. ANY ITEM THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF PROPERLY.
- CUT AND PATCH EXISTING SURFACES AS REQUIRED TO ACCOMMODATE DEMOLITION AND NEW CONSTRUCTION REQUIREMENTS. CONTRACTOR SHALL PATCH ALL HOLES LEFT IN FINISHED SURFACES TO MATCH ADJACENT CONSTRUCTION AND FINISHES.
- CONTRACTOR SHALL PROTECT ALL EXISTING SURFACES FROM DAMAGE INCLUDING BUT NOT LIMITED TO WALLS, FLOORS, DOORS, PIPING, INSULATION, EQUIPMENT AND ANY OTHER OWNER PROPERTY REMAINING IN THE AREA OF WORK DURING CONSTRUCTION. DAMAGE AND ASSOCIATED REPAIR/REPLACEMENT AS A RESULT OF THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER/ENGINEER/ARCHITECT.
- PHOTOGRAPH ALL AREAS OF CONSTRUCTION PRIOR TO BEGINNING WORK TO DOCUMENT EXISTING CONDITIONS, ESPECIALLY IN AREAS WHERE EXISTING DAMAGE IS PRESENT.
- TEST AND BALANCE CONTRACTOR SHALL TAKE PRELIMINARY TEMPERATURE AND WATER FLOW READINGS AT EXISTING BOILERS AND HEATING HOT WATER PUMPS PRIOR TO DEMOLITION. THESE READINGS SHALL BE USED AS A BASE LINE TO ENSURE PERFORMANCE IS UNCHANGED AFTER WORK IS COMPLETE. REPORT MUST BE TURNED IN FOR REVIEW PRIOR TO ANY DEMOLITION.
- REMOVE AND REPLACE INSULATION ON EXISTING HEATING HOT WATER PIPING AS REQUIRED TO ACCOMMODATE NEW INSTALLATION. CONTRACTOR SHALL VERIFY ALL EXISTING WATER LINE SIZES PRIOR TO ORDERING. RE-INSULATE TO MATCH EXISTING UPON COMPLETION OF WORK.
- ALL EXISTING ISOLATION VALVES, T&P FITTINGS, GAUGES, THERMOMETERS, CONTROL SENSORS, ETC THAT ARE REMOVED TO ACCOMMODATE MODIFICATIONS OF PIPING SHALL BE REPLACED WITH NEW. EXISTING CONTROL SEQUENCES ARE TO REMAIN. DISCONNECT AND RECONNECT ALL EQUIPMENT AS REQUIRED. CONFIRM ALL EXISTING CONTROL SEQUENCES AND PROVIDE DOCUMENTATION THAT THIS HAS BEEN DONE PRIOR TO DEMOLITION OF ANY EQUIPMENT.
- WHERE FIRE ALARM DEVICES MUST BE REMOVED AND REINSTALLED TO AVOID CONFLICT WITH NEW INSTALLATION AND DEMOLITION WORK, THE WORK SHALL BE DONE BY A LICENSED FIRE ALARM CONTRACTOR. ANY SUBMITTALS REQUIRED BY THE STATE FIRE MARSHAL SHALL BE PREPARED BY THE FIRE ALARM CONTRACTOR, INCLUDING REVIEW FEES AND A COPY OF ALL SUBMITTALS SHALL BE PROVIDED TO THE OWNER. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXACT EXTENT OF HIS WORK. COORDINATION WITH EXISTING CONDITIONS IS REQUIRED AND NO EXTRA SHALL BE ALLOWED FOR OFFSETS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
- CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING CONTROL PNEUMATIC TUBING. WHERE PNEUMATIC TUBING MUST BE REMOVED TO ACCOMMODATE INSTALLATION OF NEW WORK, REPLACE AND RECONNECT WITH NEW. DO NOT REUSE TUBING THAT HAS BEEN REMOVED. ANY PIPING DAMAGED DURING THIS PROJECT SHALL BE REPLACED.
- THE CONTRACTOR SHALL DRAIN THE EXISTING HOT WATER HEATING SYSTEM AS REQUIRED IN PREPARATION TO REPLACE THE EXISTING BOILERS. VERIFY LOCATION OF EXISTING ISOLATION VALVES, ISOLATE WHERE POSSIBLE TO MINIMIZE DISRUPTION. SYSTEM MUST REMAIN OPERATIONAL DURING BUILDING WORKING HOURS. ANY DISRUPTION OF SERVICES MUST BE DURING UNOCCUPIED PERIODS. CONTRACTOR SHALL PRE-FABRICATE AS MUCH AS POSSIBLE TO LIMIT DISRUPTION.
- REPAIR EXISTING HOUSEKEEPING PAD IF REQUIRED TO ACCOMMODATE NEW BOILER INSTALLATION. EXISTING HOUSEKEEPING PAD SHALL BE ENLARGED AS REQUIRED TO ACCOMMODATE NEW EQUIPMENT FOOTPRINTS.
- EXISTING 20" COMMON BOILER FLUE TO REMAIN IN SERVICE. REPLACE EXISTING INDIVIDUAL FLUES TO ACCOMMODATE NEW BOILER AND RECONNECT TO EXISTING 20" COMMON FLUE. BOILERS SUBMITTED MUST BE COMPATIBLE WITH EXISTING FLUE.
- INSTALL BOILERS FOLLOWING MANUFACTURER'S RECOMMENDATIONS MAKING SURE TO MAINTAIN ALL OPERATIONAL AND MAINTENANCE CLEARANCES. ALL PIPING AND CONDUIT SHALL BE RUN OVERHEAD WHERE POSSIBLE TO MAINTAIN CLEAR WORK SPACE.
- ALL BOILER DRAINS SHALL BE RUN SEPARATE TO NEAREST EXISTING FLOOR DRAIN. DO NOT CONSOLIDATE TO A SINGLE DRAIN LINE. ROUTE DRAIN LINES SUCH THAT THEY DO NOT PRESENT A TRIP HAZARD OR BLOCK SERVICE ACCESS/CLEARANCES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BOILER INSPECTIONS AND SHALL PROVIDE A FRAMED TEST CERTIFICATE ON WALL ADJACENT TO NEW BOILERS.
- ALL NEW PIPING SHALL BE SUPPORTED FROM HOT DIPPED GALVANIZED OR STAINLESS STEEL HANGERS AND PIPE SUPPORTS. DO NOT BLOCK EQUIPMENT ACCESS WITH SUPPORTS.

DEMOLITION KEY NOTES:

- HOT WATER HEATING BOILER HWB-2: EXISTING CLEAVER BROOKS FLX450 WATERTUBE BOILER TO BE REPLACED WITH NEW (BASE BID). REWORK EXISTING BOILER PIPING AS REQUIRED TO ACCOMMODATE NEW BOILER INSTALLATION. ALTERNATE 2 INCLUDES THE REPLACEMENT AND RE-ORIENTATION OF THIS BOILER.
- HOT WATER HEATING BOILER HWB-1: EXISTING CLEAVER BROOKS FLX450 WATERTUBE BOILER TO BE REMOVED AS A PART OF THE BASE BID TO ALLOW FOR REPLACEMENT OF HWB-1. IF ALTERNATE 1 IS NOT ACCEPTED, VALVE AND CAP ALL PIPING AND CONNECTIONS FOR FUTURE REPLACEMENT. REMOVE EXISTING BOILER PIPING ONLY AS NECESSARY TO ACCOMMODATE REPLACEMENT OF HWB-2. IF ALTERNATE 1 OR ALTERNATE 2 ARE ACCEPTED, REPLACE HWB-1 WITH NEW, REWORK EXISTING BOILER PIPING AS REQUIRED TO ACCOMMODATE NEW BOILER INSTALLATION.
- EXISTING HEATING HOT WATER PUMP TO REMAIN IN SERVICE IN BASE BID. REPLACE PUMP IN KIND IN ALTERNATE NO.3.
- EXISTING 20" FLUE TO REMAIN IN SERVICE (SELKIRK METALBESTOS 16P-AG18 304).
- BOILER FLUE UP INTO EXISTING CHASE TO ROOF THIS VICINITY.
- VICINITY OF EXISTING CHILLED WATER PUMPS. CONTRACTOR TO COORDINATE INSTALLATION OF NEW BOILERS WITH EXISTING OBSTRUCTIONS.
- VICINITY OF EXISTING CHILLERS. CONTRACTOR TO COORDINATE INSTALLATION OF NEW BOILERS WITH EXISTING OBSTRUCTIONS.
- EXISTING DOUBLE DOOR ACCESS TO MECHANICAL ROOM FROM EXTERIOR.
- COORDINATE INSTALLATION OF NEW DOOR TO BOILER ROOM WITH EXISTING PNEUMATIC TUBING ON WALL. OFFSET TUBING AS REQUIRED TO ALLOW FOR DOOR INSTALLATION. COORDINATE DISCONNECTION OF PNEUMATICS WITH OWNER, DOWNTIME SHALL BE MINIMIZED. BUILDING CANNOT BE UNCONDITIONED DURING OCCUPIED PERIODS. REPLACE ALL RELOCATED TUBING WITH NEW, DO NOT REUSE TUBING THAT HAS BEEN REMOVED.
- CONTRACTOR SHALL MAINTAIN ACCESS TO SALLYPORT DURING THE DURATION OF CONSTRUCTION. COORDINATE USE OF THIS AREA WITH THE OWNER.



1 BASEMENT LEVEL KEY PLAN
M1.00 1/32"=1'-0"



2 HVAC DEMO FLOOR PLAN
M1.00 1/32"=1'-0"

NOTE:
THE CONTRACTOR MAY SCALE THESE DRAWINGS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, PLAN SCALE, AND SITE CONDITIONS BEFORE BIDDING AND DURING CONSTRUCTION.

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USE AND INTERPRETATION OF THIS DRAWING

- GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, ARTICLE 1 AND DOCUMENT A01 ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THIS DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENT, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ANYONE SHALL BE AS BIDDING AS IF REQUIRED BY ALL WORK NOT COMPLETELY DELINEATED HEREIN SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAIL AS SHOWN AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.
- BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER REPRESENTS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS, AND THAT THE CONSTRUCTION DOCUMENTS OF THE PROJECT IS COMPLETE. THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE CONTRACT DRAWING AND CONTRACT TIME MAY BE CHANGED ONLY BY CHANGE ORDER TO THE CONTRACTOR ISSUED BY THE OWNER AND THE ARCHITECT. ANY WORK PERFORMED IN VIOLANCE WITH THE CONTRACT DOCUMENTS AND NOT COVERED BY THE ARCHITECT'S WRITTEN ORDER FOR A WORK CHANGE IN THE WORK OR A CHANGE ORDER, WILL NOT BE ACCEPTED.
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STPG
Project Name: FM24000137
Bid No.: 26-13-2
Date Issued: 12-23-25
Drawn By: FJM/ABM
Checked By: ABM
Revisions:

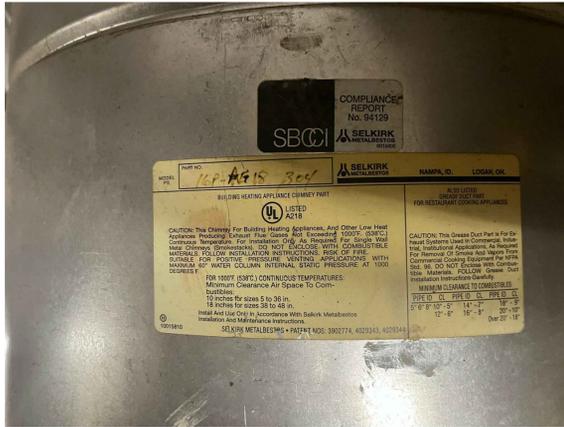
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HVAC DEMO PLAN

Sheet Number:
M1.00



1 EXISTING FLUE NAMEPLATE
M1.01 No Scale



2 MECH RM EXTERIOR ACCESS DOOR
M1.01 No Scale



3 EXISTING CHILLER OBSTRUCTION
M1.01 No Scale



4 EXISTING PUMP OBSTRUCTION
M1.01 No Scale



5 EXISTING BOILERS
M1.01 No Scale



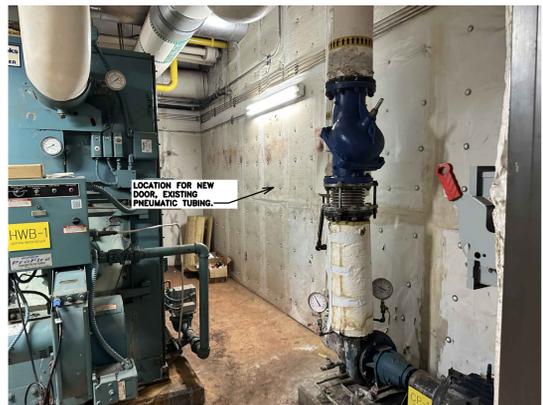
6 SALLYPORT TO EXTERIOR
M1.01 No Scale



7 BOILER ROOM WALL OPENING LOCATION
M1.01 No Scale



8 EXISTING BOILERS
M1.01 No Scale



9 EXISTING BOILER RM AT BOILER #1
M1.01 No Scale



10 EXISTING BOILER FLUE PIPING
M1.01 No Scale



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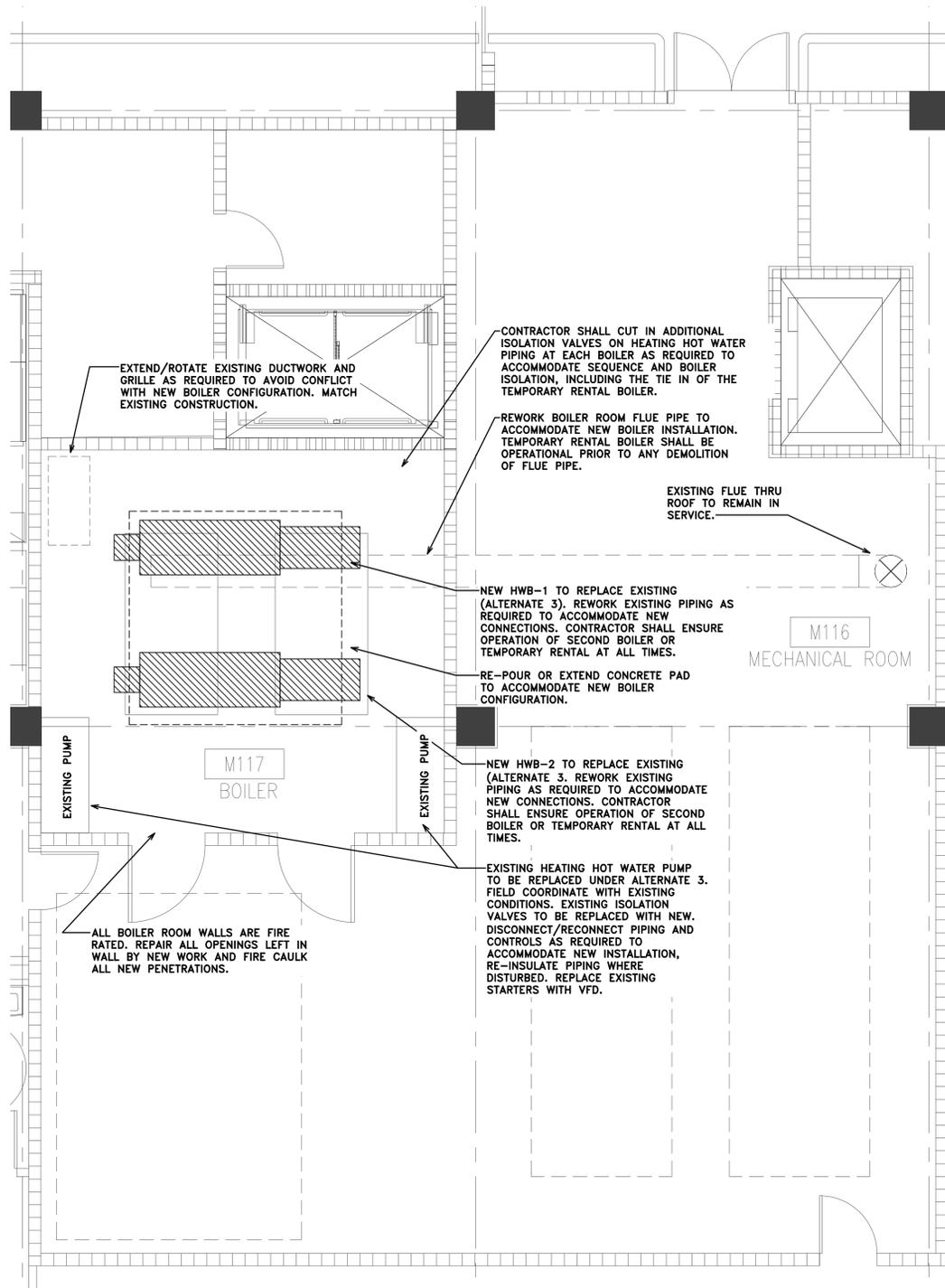
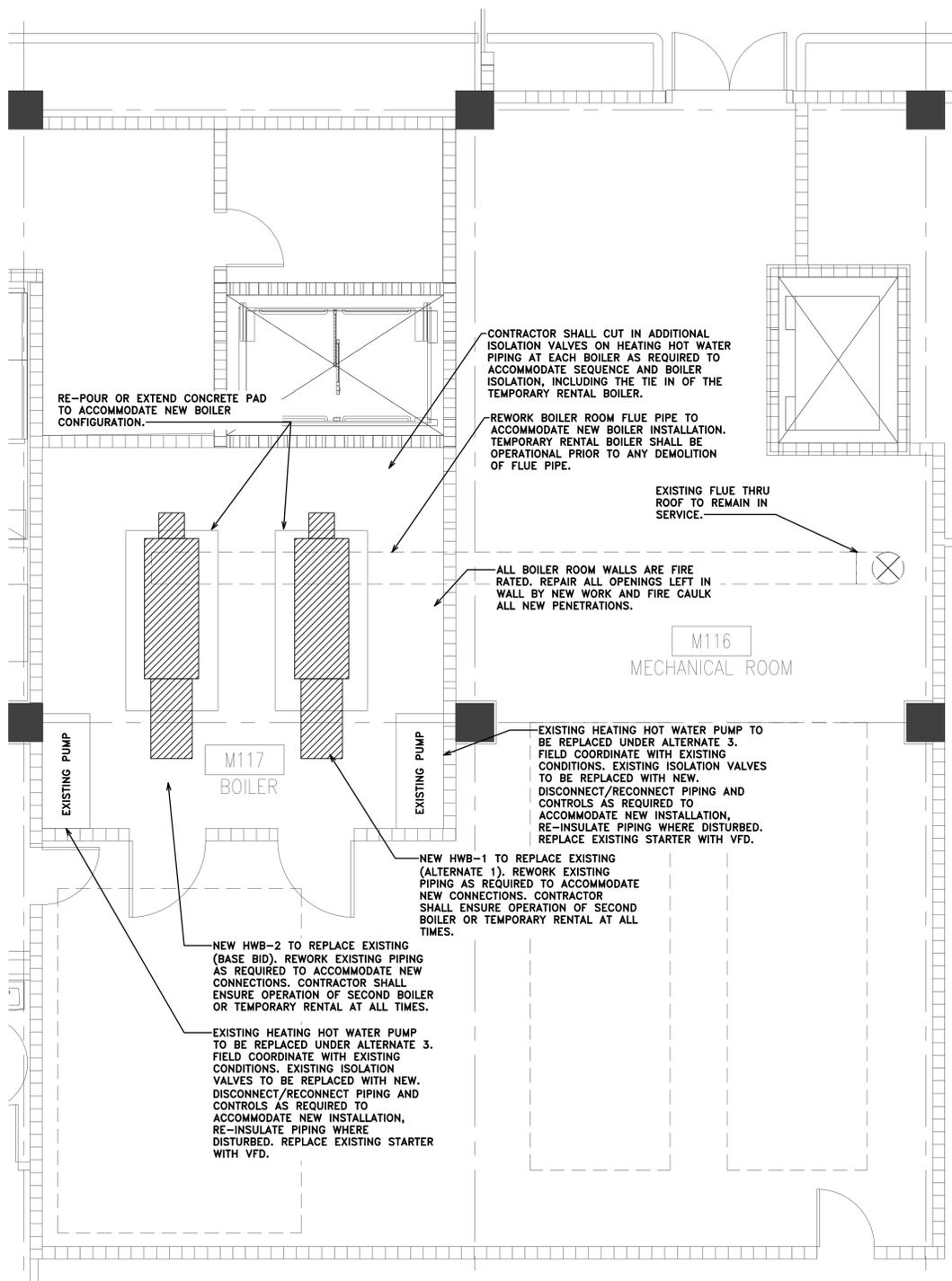
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3. THE CONTRACT SUM AND CONTRACT TIME MAY BE CHANGED ONLY BY CHANGE ORDER TO THE CONTRACT. CHANGES TO THE CONTRACT SHALL BE MADE BY THE ARCHITECT IN WRITING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND REVIEWING ALL CONTRACT DOCUMENTS AND ADDENDUMS. ANY CHANGES TO THE CONTRACT DOCUMENTS SHALL BE MADE BY THE ARCHITECT IN WRITING.
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M1.01



1 HVAC NEW BOILER PLAN - BASE BID/ALTERNATE 1
M2.00 3/32"=1'-0"

2 HVAC BOILER REORIENTATION PLAN - ALTERNATE 2
M2.00 3/32"=1'-0"

HEATING HOT WATER BOILER SCHEDULE							
NO.	MIN. INPUT BTUH CAP	LOCATION	WATER TEMP.		GPM	FUEL	REMARKS
			MAX IN (°F)	MAX OUT (°F)			
HWB-1	3,500,000	BOILER ROOM	180	160	350	NAT. GAS	CLEAVER BROOKS FLX OR LES HW
HWB-2	3,500,000	BOILER ROOM	180	160	350	NAT. GAS	CLEAVER BROOKS FLX OR LES HW

WATER PUMP SCHEDULE							
NO.	SERVICE	TOTAL G.P.M.	HEAD (FT) OF H2O	MAX. R.P.M.	MOTOR H.P.	ELECTRICAL SERVICE	REMARKS
CP-1, CP-2	PRIMARY HW	350	80	1750	15	480-3-60	B&G 1510, TACO OR EQUAL WITH TEFC MOTOR (ALTERNATE 3)

- BOILER NOTES:**
- CONTRACTOR SHALL PROVIDE AND INSTALL EMERGENCY GAS SHUT-OFF VALVES, (1) FOR EACH BOILERS. THE GAS SHUT-OFF VALVES SHALL BE INTERLOCKED WITH ONE (1) MANUALLY OPERATED REMOTE SHUT-OFF SWITCH/CIRCUIT BREAKER LOCATED JUST INSIDE THE BOILER ROOM DOOR AND MARKED FOR EASY IDENTIFICATION. AT ACTIVATION OF THE MANUAL SHUT-OFF SWITCH, ALL INSTALLED GAS SHUT-OFF VALVES SHALL CLOSE AND THE BOILER CONTROL PANEL SHALL BE POWERED OFF. SHUT-OFF SWITCH SHALL REQUIRE A KEY TO RESET. ELECTRICAL SERVICE SHALL BE 120-1-60. COORDINATE LOCATION OF MANUAL SHUT-OFF SWITCH WITH THE OWNER PRIOR TO INSTALLATION.
 - INSTALL BOILERS FOLLOWING MANUFACTURER'S RECOMMENDATIONS MAKING SURE TO MAINTAIN ALL OPERATIONAL AND MAINTENANCE CLEARANCES. ALL PIPING AND CONDUIT SHALL BE RUN OVERHEAD AS HIGH AS POSSIBLE AND SHALL DROP VERTICALLY AT ASSOCIATED TIE IN POINT. KEEP SPACE IN FRONT OF BOILERS CLEAR FOR MAINTENANCE.
 - BOILER START UP TO BE PERFORMED BY FACTORY AUTHORIZED PERSONNEL. COPY OF START UP REPORT TO BE INCLUDED WITH O&M MANUALS.
 - ALL BOILERS SHALL BE PROVIDED WITH DRAIN VALVES AT THE LOWEST PART OF THE BOILER FOR DRAINING OF THE UNIT. ALL DRAINS SHALL BE SEPARATE AND SHALL BE RUN FULL SIZE TO EXISTING FLOOR DRAIN. ROUTE DRAIN LINES SUCH THAT THEY DO NOT PRESENT A TRIP HAZARD OR BLOCK SERVICE CLEARANCE/ACCESS.
 - CONTRACTOR SHALL DETERMINE THAT EQUIPMENT SHALL FIT IN THE PROVIDED SPACE. CONFIRMATION OF COORDINATION OF ALL NEW EQUIPMENT SHALL BE INCLUDED WITH SHOP DRAWING SUBMITTALS. ANY EQUIPMENT WHICH DOES NOT FIT WILL BE REJECTED.
 - CONTRACTOR SHALL PROVIDE AND INSTALL ON BOILER ROOM WALL A GLASS ENCLOSED FRAMED BOILER CERTIFICATE FOR EACH BOILER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTIONS REQUIRED.
 - EXISTING GAS PIPING TO BOILER SHALL BE REWORKED AS REQUIRED FOR CONNECTIONS TO NEW BOILERS.
 - CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF WORK REQUIRED. OFFSET PIPING IN THE FIELD TO AVOID CONFLICT WITH EXISTING CONDITIONS.
 - ALL NEW PIPING SHALL BE SUPPORTED FROM STANDS OR HANGERS. DO NOT BLOCK EQUIPMENT ACCESS WITH PIPING OR SUPPORTS.
 - BOILERS SHALL BE RECONNECTED TO EXISTING BMS SYSTEM, CONTRACTOR SHALL ENSURE PROPER COMMUNICATION.

HVAC GENERAL NOTES:

- EXISTING EQUIPMENT/PIPING LOCATIONS ARE BASED UPON EXISTING DRAWINGS AS FURNISHED BY THE OWNER. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION.
- COORDINATE EXACT ROUTING OF NEW PIPING WITH EXISTING CONDITIONS. REWORK EXISTING PIPING AS REQUIRED TO ACCOMMODATE NEW WORK. ANY ADDITIONAL RE-CONFIGURATION OF EXISTING PIPING TO ACCOMMODATE MANUFACTURER'S SPECIFIC INSTALLATION REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND SHALL BE INCLUDED IN HIS BID.
- IF EXISTING EQUIPMENT, DEVICES, ETC. ARE REQUIRED TO BE REMOVED TO FACILITATE PIPING OR EQUIPMENT DEMOLITION/NEW INSTALLATION, THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THEM AND SHALL REINSTALL AS REQUIRED. ALL DEVICES REMOVED AND REINSTALLED SHALL BE TESTED UPON COMPLETION OF WORK.
- WHERE FIRE ALARM DEVICES ARE TO BE REMOVED AND REINSTALLED TO AVOID CONFLICT WITH NEW INSTALLATION AND DEMOLITION WORK, THE WORK SHALL BE DONE BY A LICENSED FIRE ALARM CONTRACTOR. ANY SUBMITTALS REQUIRED BY THE STATE FIRE MARSHAL SHALL BE PREPARED BY THE FIRE ALARM CONTRACTOR, INCLUDING REVIEW FEES. FURNISH OWNER WITH A COPY OF ALL REVIEWS. REFER TO ARCH PLANS FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL PROTECT ALL EXISTING SURFACES FROM DAMAGE INCLUDING BUT NOT LIMITED TO WALLS, FLOORS, DOORS, WINDOWS, PIPING, INSULATION, EQUIPMENT AND ANY OTHER OWNER PROPERTY REMAINING IN THE AREA OF WORK DURING CONSTRUCTION. DAMAGE AND ASSOCIATED REPAIR/REPLACEMENT AS A RESULT OF THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THIS SHALL INCLUDE REPAIRS TO WALLS AT PIPING PENETRATIONS, ANYWHERE PIPING IS REMOVED, CONTRACTOR SHALL PATCH WALL TO MATCH EXISTING CONDITIONS INCLUDING MAINTAINING ANY FIRE RATINGS.
- TEST AND BALANCE CONTRACTOR SHALL TAKE PRELIMINARY TEMPERATURE AND WATER FLOW READINGS AT EXISTING BOILERS AND PUMPS PRIOR TO DEMOLITION.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXACT EXTENT OF HIS WORK. COORDINATION WITH EXISTING CONDITIONS IS REQUIRED AND NO EXTRA SHALL BE ALLOWED FOR OFFSETS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
- EXISTING TEMPERATURE CONTROL DEVICES DISCONNECTED AND REMOVED TO FACILITATE THE WORK SHALL BE REPLACED WITH NEW.
- CUT BACK PIPING AND INSULATION AT BOILER AS REQUIRED FOR NEW BOILER INSTALLATION. RE-INSULATE ALL PIPING AFFECTED WITH NEW TO MATCH EXISTING CONDITIONS.
- REPAIR EXISTING HOUSEKEEPING PAD IF REQUIRED TO ACCOMMODATE NEW BOILER INSTALLATION. EXISTING HOUSEKEEPING PAD SHALL BE ENLARGED AS REQUIRED TO ACCOMMODATE NEW EQUIPMENT FOOTPRINTS.
- INSTALL BOILERS FOLLOWING MANUFACTURER'S RECOMMENDATIONS MAKING SURE TO MAINTAIN ALL OPERATIONAL AND MAINTENANCE CLEARANCES. ALL PIPING AND CONDUIT SHALL BE RUN OVERHEAD WHERE POSSIBLE TO MAINTAIN CLEAR WORK SPACE.
- ALL BOILER DRAINS SHALL BE RUN SEPARATE TO NEAREST EXISTING FLOOR DRAIN. DO NOT CONSOLIDATE TO A SINGLE DRAIN LINE. ROUTE DRAIN LINES SUCH THAT THEY DO NOT PRESENT A TRIP HAZARD OR BLOCK SERVICE ACCESS/CLEARANCES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BOILER INSPECTIONS AND SHALL PROVIDE A FRAMED TEST CERTIFICATE ON WALL ADJACENT TO NEW BOILERS.
- ALL NEW PIPING SHALL BE SUPPORTED FROM HOT DIPPED GALVANIZED OR STAINLESS STEEL HANGERS AND PIPE SUPPORTS. DO NOT BLOCK EQUIPMENT ACCESS WITH SUPPORTS.
- ALL NEW PIPING SHALL BE HUNG AT AN ELEVATION NOT TO CONFLICT WITH SERVICE ACCESS OR OPENINGS OF NEW AND EXISTING DOORWAYS.

NOTE:
THE CONTRACTOR MAY SCALE THESE DRAWINGS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, PLAN SCALE, AND SITE CONDITIONS BEFORE BIDDING AND DURING CONSTRUCTION.

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2. BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE CONTRACTOR REPRESENTS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS, AND THAT THE CONSTRUCTION DOCUMENTS OF THE PROJECT IS COMPLETE. THE CONTRACTOR REPRESENTS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES.

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Checked By: ABM
Revisions:

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**CONSTRUCTION SPECIFICATIONS
FOR
JUSTICE CENTER BOILERS
701 COLUMBIA ST
COVINGTON, LA 70433**

BID NO. 26-13-2

**RCLA PROJECT No. 22507
OWNER PROJECT NO. FM24000137
DATE: December 23, 2025 – BID DOCUMENTS**

OWNER: ST. TAMMANY PARISH GOVERNMENT
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PROJECT LOCATION: ST. TAMMANY PARISH JUSTICE CENTER
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Certification of Responsibility for Document Preparation

JUSTICE CENTER BOILERS

Architectural Specifications:

THE FOLLOWING SPECIFICATION SECTIONS INCLUDED IN THIS PROJECT MANUAL WERE PREPARED BY OR UNDER THE RESPONSIBLE SUPERVISION OF THE COMPANY LISTED BELOW:

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Division 02 – Existing Conditions

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Division 03 – 4 - NOT USED

Division 05 – Metals

055000	Metal Fabrications	055000 - 1-4
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Division 06 – NOT USED

Division 07 – Thermal and Moisture Protection

078413	Fire Stopping and Smoke Stopping	078413 - 1-4
079200	Joint Sealants	079200 - 1-6

Division 08 – Openings

081113	Hollow Metal Doors and Frames	081113 - 1-10
083323	Upward Coiling Fire Doors	083323 - 1-4
087100	Door Hardware	087100 - 1-18

CERTIFICATION OF RESPONSIBILITY FOR

DOCUMENT PREPARATION

Justice Center Boilers

Bid No.: 26-13-2

MECHANICAL SPECIFICATIONS

THE FOLLOWING SPECIFICATION SECTIONS INCLUDED IN THIS PROJECT MANUAL WERE PREPARED BY OR UNDER THE RESPONSIBLE SUPERVISION OF THE COMPANY LISTED BELOW:

22 05 00	GENERAL PROVISIONS FOR PLUMBING
22 05 03	BASIC MATERIALS AND METHODS FOR PLUMBING
22 07 00	PLUMBING INSULATION
22 11 00	WATER SUPPLY
22 16 00	NATURAL GAS PIPING/DISTRIBUTION
23 05 00	GENERAL PROVISIONS FOR HVAC
23 05 03	BASIC MATERIALS AND METHODS FOR HVAC
23 05 93	TESTING, ADJUSTING, AND BALANCING
23 07 00	MECHANICAL INSULATION
23 09 00	TEMPERATURE CONTROLS
23 70 00	AIR CONDITIONING

Andrea Manceaux

2/24/26

Andrea B. Manceaux, P.E.
Ritter Consulting Engineers Ltd.



SECTION 011000 – SUMMARY OF WORK

PART 1 GENERAL

1.0 PROJECT INFORMATION:

- A. Project Identification: **Justice Center Boilers, 701 Columbia Street, Covington, LA 70433**
- B. Owner: St. Tammany Parish Government, 21454 Koop Drive, suite 2F, Mandeville, LA 70471.
- C. Architect: RCL Architecture, L.L.C.
- D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:
 - 1. Ritter Consulting Engineers – Mechanical Engineering

1.1 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS:

- A. Includes the furnishings of all labor, equipment and materials necessary for the Base Bid to include the removal of (2) existing hot water heating boilers with (1) new boiler to be replaced in a configuration similar to existing. Piping for the 2nd boiler shall be stubbed out and capped for future replacement. A rental boiler shall be included to maintain building heating during the project. A new opening and roll door in the boiler room wall to be installed to accommodate boiler removal and installation as well as future service. The door to the loading dock area will be replaced with a pair of 3'-0" x 8'-0" Hollow Metal doors and Hardware to accommodate boiler replacement. See Section 012300 – "Alternates" for a list of alternates for this project.

1.2 CONTRACTOR'S DUTIES

- A. Contractor shall verify all field and job conditions prior to preparing his bid. Any conditions not described in these drawings and specifications shall be brought to the attention of the Design Professional prior to bid date. Failure to do so shall render the Contractor responsible for correction of this condition should he be awarded the contract.
- 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. Pay all costs and fees for utility connections.
- C. Check all specifications and all drawings and bring to attention any conflicts or variations as shown or noted.
- D. For any points which are not clear, or from items and/or details which the Contractor feels are in need of clarification, consult the Design Professional before submission of a Bid proposal in writing. The Design Professional will answer all questions in writing by Addendum to the Contract Documents prior to Bid.
- E. In case of discrepancies and/or ambiguities in the drawings and/or in the specifications, the Design Professional shall be consulted prior to submission of a Bid 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 Design Professional's decision in such matters.

- F. Except as specifically noted, provide and pay for:
 - 1. Labor, materials and equipment
 - 2. Tools, construction equipment and machinery.
 - 3. Temporary facilities required for construction.
 - 4. Other facilities and services necessary for proper execution and completion of work.
 - 5. Pay legally required sales, consumer, and use taxes.

- G. Secure and pay for, as necessary for proper execution and completion of Work, and as applicable at time of receipt of bids:
 - 1. Permits.
 - 2. Government Fees.
 - 3. Licenses.

- H. Give required notices.

- I. Comply with codes, ordinances, rules, regulations, and other legal requirements of public authorities which bear on performance of Work.

- J. Promptly submit written notice to Design Professional of observed variance of Contract Documents from legal requirements.
 - 1. Appropriate Modifications to Contract Documents will adjust necessary changes.

- K. Enforce strict discipline and good order among employees. Do not employ on Work:
 - 1. Unfit persons.
 - 2. Persons not skilled in assigned task.

- L. Work by Others:
 - 1. Independent Testing Laboratory Services will be employed and paid for by the

- M. Contractor use of Premises:
 - 1. Confine operations at site to areas permitted by:
 - a. Law
 - b. Ordinance
 - c. Permits
 - d. Contract Documents
 - e. Design Professional
 - f. Owner

- N. Do not reasonably encumber site with materials or equipment.

- O. Assume full responsibility for protection and safekeeping of products stored on premises.

- P. Move any stored products which interfere with operations of Owner or other Contractors.

- Q. Do not load structures with weight that will endanger structures.

- R. Maintain "As-Built" Records of all work documenting any changes, revisions or varying field conditions.

1.3 PROJECT PHASING

A. Phasing General Notes:

- 1. Phasing of all work shall be carefully coordinated with owner representatives and architect.

2. Refer to specifications for work restrictions and coordination requirements for certain work tasks by phasing.
3. Refer to all plans for complete scope of work across the site - it will be incumbent on the contractor to provide a workable schedule that will meet with the owner's approval.

1.4 CONTRACTS

- A. Construct the Work under a single lump sum or unit price contract as stated for each item in the bid form.

1.5 WORK SEQUENCE

- A. All work to be done under this Contract shall be done with minimum inconvenience to the private property owners adjacent to this project.
- B. Construct the Work in stages to provide for owner and public convenience.
- C. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the site.
- D. Move any stored products, under Contractor's control, which interfere with operations of the Owner or separate contractor.
- E. Obtain and pay for the use of additional storage or work areas needed for operations.
- F. Roadway closures shall be avoided, but if necessary, must have prior approval by Washington Parish Government.
- G. A project schedule and equipment lead time will be required within the first week by the awarded contractor.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

JUSTICE CENTER BOILERS
RCLA PROJECT NO. 22507
BID NO. 26-13-2

SUMMARY OF WORK
SECTION 011000

SECTION 011000.01 – CONTROL OF WORK

PART 1: GENERAL

1.1 WORK PROGRESS

The Contractor shall furnish personnel and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the work within the time stipulated in the Proposal. If at any time such personnel or equipment appears to the Design Professional to be inefficient, inappropriate, or insufficient for securing the quality of work required for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character, or increase the personnel and equipment, and the Contractor shall conform to such order. Failure of the Design Professional to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

1.2 PRIVATE LAND

The Contractor shall be aware that his work will be performed within the property of an operating facility.

1.3 WORK LOCATIONS

Work shall be located substantially as indicated on the Drawings, but the Design Professional reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons. Where fittings are noted on the Drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

1.4 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property.
- B. Contractor shall be responsible for supplying materials, services, and labor necessary to provide sheeting, shoring and bracing or supports as required to provide a safe working condition for Contractor's personnel and to provide for protection of utilities, buildings, and structures. It shall be the sole responsibility of the Contractor to comply with these requirements.
- C. Where excavation is required adjacent to existing power poles or other structures, the Contractor has the responsibility to maintain the integrity of the structure by bracing or other means subject to the approval of the Project Design professional.

1.5 DISTRIBUTION SYSTEMS AND SERVICES

- A. The Contractor shall not interrupt telephone, Cable TV, or other related utility services and disrupt the normal functioning of the system as little as possible. He shall notify the Design Professional well in advance of any requirement for dewatering, isolating, or relocating a section of a utility, so that necessary arrangements may be made with the appropriate agency.
- B. If it appears that utility service will be interrupted for an extended period, the Design Professional may order the Contractor to provide temporary service lines. Inconvenience of the users shall be the minimum, consistent with existing conditions. The safety and

integrity of the system is of prime importance in scheduling work.

- C. Private utilities located on public right-of-way which are required to be permanently relocated at the job site or removed entirely from the jobsite to accommodate the project will be indicated on the plans and will be done so at the expense of the utility owner.
- D. Private utilities located on public right-of-way which the contractor requests to be temporarily relocated, disconnected or de-energized for the convenience of construction or for safety reasons shall be done so at the contractor's expense.
- E. Disposition of Utilities: Follow rules and regulations of the authority having jurisdiction in executing all Work under this article. Adequately protect active utilities shown on the Drawings from damage and remove or relocate only as indicated or specified. Where active utilities are encountered, but are not shown on the Drawings, advise the Design Professional. Adequately protect, support, or relocate the Work as directed. Remove, plug or cap inactive and abandoned utilities encountered in excavating and grading operations.

1.6 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to building utilities, in the street gas pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the contractor's operation shall be repaired by him at his expense.
- B. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines and sewers). Services to buildings shall be maintained and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit prices established in the Proposal.
- D. If, in the opinion of the Design Professional, permanent relocation of a utility owned by the parish or City is required, he may direct the Contractor in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 10 of the General Conditions. If relocation of a privately owned utility is required, the Contractor will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Parish, City and Utility and shall have no claim for delay due to such relocation. The Contractor shall notify public utility companies in writing at least 48 hours (excluding Saturdays, Sundays and legal holidays) before excavating near their utilities. Cost of relocation utilities shall be included in the various unit prices of the work to be done or as otherwise provided in these contract documents.

1.7 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of this Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make

good the damage in another manner acceptable to the Design Professional.

- B. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the Proposal.

1.8 DRAINAGE

- A. Contractor shall impede drainage only in the event such impediment is necessary for the implementation of the work. When impeding drainage is necessary, Contractor shall take the necessary steps to protect life and property.

1.9 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public water supply is available, the Contractor may purchase water for all construction purposes.
- B. The express approval of the Water Utility Company shall be obtained in writing. Hydrants shall only be operated under the supervision of the Water Utilities personnel.

1.10 MAINTENANCE OF FLOW

- A. The Contractor shall at his own cost, provide for the flow of sewers, drains, and water courses interrupted during the progress of the Work, and shall immediately cart away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Design Professional well in advance of the interruption of any flow. Pavement removal and replacement which, in the opinion of the Contractor, is necessitated by placement of temporary flow control facilities shall be considered as an item for convenience to the Contractor. Such costs for pavement removal and replacement shall, therefore, be borne by the Contractor at his own cost as required for other flow control measures. The intent of this Specification is that pavement removal be limited to the least amount possible and the Contractor shall investigate alternate methods for flow control which require the least amount of pavement removal.

1.11 CLEANUP

- A. During the course of the Work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the Work in a neat and orderly condition.

1.12 COOPERATION WITHIN THIS CONTRACT

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with the Building General Contractor and his subcontractors or trades.
- B. Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Design Professional.

1.13 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from injury in any way.
- B. It is the responsibility of the contractor to provide protection of all structures. Should any of the work become heaved, cracked, or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by this Contractor at his own expense and to the satisfaction of the Design Professional. If in the final inspection of the Work any defects, faults, or omissions are found, this Contractor shall cause the same workmanship without extra compensation for the materials and labor required. Further the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the Contract.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

3.1 Schedule of Alternates

- A. Add Alternate No. 1: includes the replacement of a second hot water heating boiler not replaced under the Base Bid. Rental boiler requirements shall apply to this Alternate similar to Base Bid, if required.
- B. Add Alternate No. 2: Includes the replacement of the (2) existing hot water heating boilers with a new configuration turned 90 degrees to the original to accommodate future service and replacement. Renter boiler requirements shall apply to this Alternate similar to the Base Bid, if required.

- C. Add Alternate No. 3: Includes the replacement of the (2) existing heating hot water pumps, with new pumps including new isolation valves and all piping modifications required for the replacement.

END OF SECTION

SECTION 012600 - PAYMENT, MODIFICATION, AND COMPLETION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Schedule of values.
 - 2. Payment procedures.
 - 3. Modification procedures.
 - 4. Completion procedures.

1.2 CONTRACT CONDITIONS

- A. The Total Bid Price shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, sheeting, bracing, supplies, and appurtenances; providing all construction equipment, and tools; and performing all necessary labor and supervision to fully complete the work, shall be included in the lump sum prices bid.
- B. See the conditions of the contract for additional requirements.
- C. Progress payments will be made monthly.
- D. The Architect will act upon the contractor's application for payment within 10 business days after receipt.
- E. The Owner shall make payment to the contractor within 30 days after receipt of the certificate for payment.
- F. The Owner will retain from each progress payment an amount equal to (5) five percent of the value of the work covered by the progress payment.
 - 1. If the work is 50 percent complete and the character and progress of the work have been satisfactory, the owner may determine that as long as the character and progress of the work remain satisfactory no additional retainage will be withheld.
 - 2. At substantial completion the contractor may bill for 95 percent of the contract sum, less those amounts that are withheld to cover incomplete or incorrect work and unsettled claims, as defined elsewhere.
- G. No payment will be made for materials or equipment stored off site.
- H. Payments may be withheld if the contractor fails to make dated submittals within the time periods specified.

1.3 DEFINITIONS

- A. Change Proposal Request: Any written request from the owner or architect to the contractor for a quotation, price, or breakdown on a change proposed but not ordered.
- B. Final Completion: The stage at which all incomplete and incorrect work has been completed or corrected in accordance with the contract documents.
- C. List of Incomplete Work: A comprehensive list prepared by the contractor, of items to be completed and/or corrected for the purpose of obtaining certification of substantial

completion. The Contractor's punch list will be reviewed by the Design Professional and elaborated upon if necessary. This list is also referred to as a "punch list."

- D. Modifications: Written amendments to the contract signed by both the Owner and the contractor, change orders, construction change directives, and written orders for a minor change in the work issued by the architect.
- E. Schedule of Values: A detailed breakdown of the contract sum into individual cost items, materials and labor which will serve as the basis for evaluation of applications for progress payments during construction. The format for the schedule of values is to follow attached Owner prepared document.
- F. Substantial Completion: The time at which the work, or a portion of the work which the owner agrees to accept separately, is sufficiently complete in accordance with the contract documents so that the owner can occupy or use the work for its intended purpose.
- G. Time and Material Work: Work which will be paid for on the basis of the actual cost of the work, including materials, labor, equipment, and other costs as defined elsewhere, as documented by detailed records. This basis is also referred to using the terms "cost-plus," "cost of the work," "force account," and similar terms.

1.4 SUBMITTALS

- A. Schedule of Values: First application for payment will not be reviewed without schedule of values. Use AIA G702 / 703 - Application & Certificate for Payment document.
 - 1. Submit in size not larger than 8-1/2 by 11 inches.
 - 2. Submit 1 Digital Copy.
 - 3. Identify with:
 - a. Project name.
 - b. Project number.
 - c. Architect's name.
 - d. Owner's name.
 - e. Contractor's name and address.
 - f. Submittal date.
- B. Applications for Progress Payments: Submit sufficiently in advance of date established for the progress payment to allow for the processing indicated.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF VALUES

- A. Prepare a schedule of values prior to the first application for payment on attached document. Provide separate schedule for each building.
- B. Schedule of Values: Break costs down into line items which will be comparable with line items in applications for payment.
 - 1. Coordinate line items in the schedule of values with portions of the contract documents which identify units or subdivisions of work; provide cross-referencing if necessary, to clarify.
 - a. Specifically, correlate with the project manual table of contents.

2. Divide major subcontracts into individual cost items.
 3. Where applications for payment are likely to include products purchased or fabricated but not yet installed, provide individual line items for material cost, installation cost, and other applicable phases of completion.
 4. Include in each line item its proportional share of overhead and profit.
 5. Include the following information for each line item, using A detailed schedule of values that includes, at a minimum, a line item for each all-major components of General Conditions, a line item for each trade section of the Project Manual (Divisions 2 thru 30) and for each separately identifiable activity or project component within each trade section.
 - a. Item name.
 - b. Applicable specification section.
 - c. Dollar value, rounded off to the nearest whole dollar (with the total equal to the contract sum).
 - d. Proportion of the contract sum represented by this item, to the nearest one-hundredth percent (with the total adjusted to 100 percent).
 6. Provide the following supporting data for each line item:
 - a. Subcontractor's name.
 - b. Manufacturer or fabricator's name.
 - c. Supplier's name.
- C. Submit schedule of values with post bid documents. Any revisions need to be submitted to the Architect 30 business days prior to submittal of first application for payment.
- D. The architect will notify the contractor if schedule is not satisfactory; revise and resubmit acceptable schedule.
- E. Submit a revised schedule of values when modifications change the contract sum or change individual line items.
 1. Make each modification a new line item.
 2. Show the following information for each line item:
 - a. All information required for original submittal.
 - b. Identification of modifications which have affected its value.
 3. Submit prior to next application for payment.

3.2 APPLICATIONS FOR PAYMENT

- A. Application for Payment Forms: Use AIA original current editions of G702, Application and Certificate for Payment, and AIA G703, Continuation Sheet.
- B. Preparation of Applications for Payment: Complete form entirely.
 1. Make current application consistent with previous applications, certificates for payment, and payments made.
 2. Base application on current schedule of values and contractor's construction schedule.
 3. Include amounts of modifications issued before the end of the construction period covered by the application.
 4. Include signature by person authorized by the contractor to sign legal documents.
 5. Notarize each copy.
 6. Submit in 3 copies.
 7. Attach waivers of lien.
 8. Attach revised schedule of values, if changes have occurred, unless application forms

already show entire schedule of values.

9. Also attach:
 - a. Receipts for bond payments, and updated Project Progress Report.
 - b. Updated contractor's construction schedule.
- C. Provide the following information with every application for payment which involves work completed on a time and material basis:
 1. Detailed records of work done, including:
 - a. Dates and times work was performed, and by whom.
 - b. Time records and wage rates paid.
 - c. Invoices and receipts for products.
 2. Provide similar detailed records for subcontracts.
- D. Transmit application for payment with a transmittal form itemizing supporting documents attached.
 1. Transmit to the architect.

3.3 WAIVERS OF LIEN

- A. Submit, with each application for payment, a waiver of lien from the contractor covering the work performed during the period covered by the previous application for payment.
- B. With final application for payment, submit complete waivers of lien from every entity who may be legally entitled to file a mechanic's or other lien against the work.
- C. Waiver of Lien Forms: Use forms acceptable to the owner.

3.4 FIRST PAYMENT PROCEDURE

- A. The first application for payment will not be reviewed until the following submittals have been received:
 1. Certificates of insurance.
 2. Performance and payment bonds.
 3. Schedule of values.
 4. List of subcontractors, principal suppliers, and fabricators.
 5. Contractor's construction schedule.
 6. Submittal schedule.
 7. Schedule of products.
 8. Copies of building permit and other authorizations from governing authorities.
 9. All submittals specified to occur prior to first application for payment or prior to first payment.

3.5 MODIFICATION PROCEDURES

- A. Designate a single individual authorized to receive change documents and who will be responsible for informing others of changes to the work.
- B. Changes in cost resulting from modifications shall include only those costs not specified elsewhere in the contract documents.
- C. When requested in writing, the contractor shall provide sufficient information for evaluation of proposed changes within 14 calendar days.

- D. Provide the following information for every change proposal request:
 - 1. The amount of change in the contract sum, if any.
 - 2. The amount of change in the contract time, if any, with explanation.
 - 3. Cost breakdown, using schedule of values line items, separated into material and labor costs, additions and deletions, and with overhead and profit handled in the same manner as specified for the schedule of values.
 - 4. The period of time within which the proposed changes in contract sum or time will be valid.
 - 5. A statement describing the effect the change may have on the work of other prime contractors.
 - 6. Upon request, provide the following information:
 - a. Quantities and unit costs of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
- E. When changes are performed on a time and material basis, identify the applicable modification on the application for payment.
- F. Provide the following information with every claim for additional costs:
 - 1. Origin and date of claim.
 - 2. Detailed records as specified for time and material work.
- G. The contractor may propose changes.
 - 1. Do not use change order form.
 - 2. Provide the information required for change proposal requests.
 - 3. Describe reasons for change.
 - 4. Document proposed substitutions as specified elsewhere.

3.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Request for inspection and application for payment may coincide.
- B. The architect will perform one inspection for substantial completion, upon request by the contractor.
 - 1. If the architect is unable to issue the certificate of substantial completion because the work is not considered to be substantially complete, the contractor shall pay all subsequent inspection costs, including compensation for the architect's services and expenses.
 - 2. Only one certificate of substantial completion will be issued, for the entire project.
- C. Submit the following with application for payment following substantial completion:
 - 1. Contractor's affidavit of release of liens.
 - 2. Request for reduction or release of retainage.
 - 3. Consent of surety to reduction in or partial release of retainage.
 - 4. Final list of incomplete work.
 - 5. Other data required by the contract documents.

3.7 FINAL COMPLETION PROCEDURES

- A. Request for final inspection and final application for payment may coincide.

- B. The Architect will perform one inspection for final completion, upon request of the contractor.
 - 1. Submit the following with request for inspection:
 - a. Previous inspection lists indicating completion of all items.
 - b. If any items cannot be completed, obtain prior approval of such delay.
 - 2. If the architect is unable to issue the certificate for final payment because the work is not complete, the contractor shall pay all subsequent inspection costs, including compensation for the architect's services and expenses.

- C. Submit the following with the final application for payment:
 - 1. Certified copy of the previous list of items to be completed or corrected, stating that each has been completed or otherwise resolved for acceptance.
 - 2. Updated final statement, accounting for final changes to the contract sum.
 - 3. Consent of surety to final payment.
 - 4. Certification that financial obligations to governing authorities and public utilities have been fulfilled.
 - 5. Description of unsettled claims.
 - 6. Other data required by the contract documents.

END OF SECTION

SECTION 013100 – PROJECT COORDINATION

PART 1 – GENERAL

1.1 REQUIREMENTS

Contractor shall plan, schedule, and coordinate his operations in a manner that will facilitate the simultaneous progress of the work included under other contracts outside the scope of these Contract Documents. Contractor shall plan, schedule and coordinate with all utilities in a manner conducive to timely and efficient progress in the execution of the contract.

1.2 NOTICES TO OWNERS AND AUTHORITIES

Contractor shall, as provided in the General Conditions, notify owners of adjacent property and utilities when prosecution of the Work may affect them.

When it is necessary to temporarily deny the access of owners or tenants to their property, or when any utility service connections must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruptions and instructions on how to limit their inconvenience.

Utilities and other concerned agencies shall be contacted at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or poles lines.

1.3 NOTICE TO POWER AND LIGHT COMPANY

The Contractor shall review with the Power and Light Company the construction methods to be used in the vicinity of power lines. This review shall establish which lines, if any, need temporary relocation or de-energizing work being required. The Contractor shall be responsible for notifying and coordinating with the Power and Light Company officials prior to and during the construction of all facilities within the project limits. The Contractor shall schedule work activities in cooperation with Power and Light personnel to ensure uninterrupted electrical service to the public. The Contractor shall coordinate construction activities which impact Power and Light facilities through the local representative of the local Power and Light Company. There will no direct compensation for any of this work.

1.4 NOTICE TO GAS COMPANY

The Contractor shall review with the Gas Company any work to be done in the vicinity of gas lines. Where temporary relocation of gas lines or reinforcement of coating is required, the Contractor shall meet with the Gas Company as soon as possible, but no less than thirty (30) days in advance of when relocation is required. For the temporary shutdown of gas mains and notification as required by the company when working in the vicinity of gas mains at least 48 hours notice is required.

1.5 CONNECTIONS TO EXISTING FACILITIES

Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractors shall protect facilities against deleterious substances and damage.

Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock if necessary) to complete connections in the minimum time. Operation of valves of other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the utility owner.

1.6 OPERATION OF EXISTING FACILITIES

All existing facilities must be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service provided. Provided permission is obtained from Owner in advance, portions of the existing facilities may be taken out of service for short periods corresponding with periods of minimum service demands.

Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.

1.7 MECHANICAL AND ELECTRICAL

Contractor shall coordinate all details of the equipment with other related parts of the Work, including verification that all structures, piping, wiring, and equipment components are compatible. Contractor shall be responsible for all structural and other alterations in the Work required to accommodate equipment differing in dimension or other characteristics from that contemplated in the Contract Documents or Specifications.

1.8 COOPERATION WITHIN THIS CONTRACT

All firms or persons authorized to perform any Work under this Contract shall cooperate with the General Contractor and his subcontractors or trades, and shall assist in incorporating the Work of other trades where necessary or required.

Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

PART 2 - PRODUCTS (NOT USED)

PART 3 - (NOT USED)

END OF SECTION

SECTION 013200 - PROGRESS DOCUMENTATION AND PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Progress documentation requirements:
 - a. Contractor's construction schedule.
 - b. Progress photographs.
 - 2. Progress procedures:
 - a. Progress meetings.
- B. Contract time is indicated elsewhere.

1.2 SUBMITTALS

- A. Contractor's Construction Schedule.
 - 1. Submit within 10 days of completed contract signing.
 - 2. Submit revised schedule with application for payment.
 - 3. Submit schedule for each construction phase.
- B. Progress Photographs: Submit with each application for payment.
- C. Minutes of Progress Meetings.

1.3 FORM OF SUBMITTALS

- A. Schedules - General:
 - 1. Provide legend of symbols and abbreviations for each schedule.
 - 2. Use the same terminology as that used in the contract documents.
 - 3. Submit a minimum of 3 hard copies or 1 electronic copy via email to the architect.
- B. CPM:
 - 1. Provide individual horizontal bars representing the duration of each major activity.
 - 2. Coordinate each element on the schedule with other construction activities.
 - 3. Show activities in proper sequence.
 - 4. Show percentage of completion of each activity.
 - 5. Include cost bar at top of chart, showing estimated and actual costs of work performed at the date of each application for payment.
 - 6. Use vertical lines to mark the time scale at not more than one week intervals.
 - 7. Use sheets of sufficient number and width to show the full schedule clearly.
- C. Reports - General:
 - 1. Submit 1 electronic copy via email to the architect.
- D. Photographs: Digital copies of photographs.
 - 1. Size: Min. 2400 dpi for selected views as identified in paragraph 3.2.A.4.a.
 - 2. JPG format
 - 3. Identify each digital file with project name and date taken
 - 4. Take photographs for each application for payment as follows, but not limited to:
 - a. Existing site conditions prior to construction.:
 - b. Existing Interior.
 - c. Existing Exterior.

- d Existing roof deck.
- e Phases of building envelope.
- f Interior framing.
- g Interior finishing.
- h Final completion.

1.4 COORDINATION

- A. In preparation of schedules, take into account the time allowed or required for the architect's administrative procedures.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Prepare and submit a construction schedule. The work shall be executed with such progress as may be required to prevent any delay to the general completion of the work. The work shall be executed at such times and in or on such parts of the project, and with such forces, materials and equipment to assure completion of the work in the time established by the Contractor within the limits designated in the Contract Documents.
- B. Provide construction schedule in the form of CPM:
 - 1. Where related activities must be performed in sequence, show relationship graphically.
 - 2. Incorporate the submittal schedule specified elsewhere.
 - 3. Incorporate the quality control activities schedule specified elsewhere.
 - 4. Show dates of:
 - a. Each activity that influences the construction time.
 - b. Substantial and final completion, with time frames for the architect's completion procedures.
 - c. Show projected percentage of completion for each item, as of the first day of each month.
- C. The architect will notify the contractor if schedule is not satisfactory in detail; revise and resubmit.
 - 1. Resubmit within 7 days.
- D. Make and distribute copies of schedule to the architect, to the owner, to subcontractors, and to other entities whose work will be influenced by schedule dates.
 - 1. Hang a copy of the schedule up in each field office or meeting room.
- E. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.
- F. Update the schedule whenever changes occur or are made, or when new information is received, but not less often than at the same intervals at which applications for payment are made.
 - 1. Indicate changes made since last issue; show actual dates for activities completed.
 - 2. Submit updated schedule with application for payment.
 - 3. Issue updated schedule with report of meeting at which revisions are made.
 - 4. Issue updated schedule in same manner as original schedule.

3.2 PROGRESS REPORTS

- A. Progress Photographs:
1. Take 10 photos of site before start of construction.
 2. Take a minimum of 10 photos of the work for each submission of progress payments.
 3. Take photos not more than one week prior to submittal of application for payment.
 4. Take photos from positions chosen to show the current status of completion and progress since previous photos were taken.
 - a. Select 2 views which will show overall status during entire construction period; take photographs of these views each time through completion.

3.3 PROGRESS MEETINGS

- A. Schedule and conduct periodic progress meetings during construction period.
1. Have meetings at least monthly, and preferably every other week.
 2. Notify the architect and the owner at least one week in advance of date of meeting; the architect and the owner may attend.
- B. The following are required to attend:
1. Project superintendent.
 2. Major subcontractors and suppliers.
 3. Others who have an interest in the agenda.
- C. Prepare and distribute agenda prior to meetings; cover the following topics when applicable:
1. Review minutes of previous meeting.
 2. Status of submittals and impending submittals.
 3. Actual progress of activities in relation to the schedule.
 4. Actual and anticipated delays, their impact on the schedule, and corrective actions taken or proposed.
 5. Actual and potential problems.
 6. Status of corrective work ordered by the architect.
 7. Progress expected to be made during the next period.
 8. Coordination and requests for Owner provided equipment.
- D. Record minutes and distribute copies within 5 days to the architect, to the owner, to all participants, and to all entities affected by decisions made.

END OF SECTION

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SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparing and processing of submittals for review and action.
 - 2. Preparing and processing of informational submittals.
- B. Submit the following for the architect's review and action:
 - 1. Shop drawings.
 - 2. Product data.
 - 3. Samples.
 - 4. Submittals for which procedures are not defined elsewhere.
- C. Submit the following as informational submittals:
 - 1. Structural design information required by the contract documents.
 - 2. Certificates.
 - 3. Coordination drawings.
 - 4. Reports.
 - 5. Qualification statements for manufacturers/installers.
- D. Specific submittals required are described in individual sections.

1.2 DEFINITIONS

- A. Shop Drawings: See General Conditions.
- B. Product Data: See General Conditions.
 - 1. Product data submittals also include:
 - a. Performance curves, when issued by the manufacturer for all products of that type.
 - b. Selection data showing standard colors.
 - c. Wiring diagrams, when standard for all products of that type.
- C. Samples: See General Conditions.
- D. Informational Submittals: Submittals identified in the contract documents as to be submitted for information only.

1.3 FORM OF SUBMITTALS

- A. Sheets Larger Than 8-1/2 by 14 Inches:
 - 1. Maximum sheet size: 36 by 48 inches.
 - a. Exception: Full size pattern or template drawings.
 - 2. Number of copies:
 - a. Submittals for review:
 - 1. One electronic copy
 - 2. Electronic copy will be marked-up and returned via email.
 - b. Informational submittals:
 - 1. One electronic copy
 - 2. Electronic copy will be marked-up and returned via email.

- B. Small Sheets or Pages:
 - 1. Minimum sheet size: 8-1/2 by 11 inches.
- C. Submittals maybe be submitted electronically in high quality.pdf format in lieu of paper copies and will be returned electronically.
- D. Samples: 2 sets of each.
 - 1. 1 set will be returned.
 - 2. Submit actual sample of material to be provided following initial selection if required.
- E. If additional sets are needed by other entities involved in work represented by the samples, submit with original submittal.

1.4 COORDINATION OF SUBMITTALS

- A. Coordinate submittals and activities that must be performed in sequence, so that the architect has enough information to properly review the submittals.
- B. Coordinate submittals of different types for the same product or system so that the architect has enough information to properly review each submittal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TIMING OF SUBMITTALS

- A. Transmit each submittal at or before the time indicated on the approved schedule of submittals.
 - 1. Prepare and submit for approval a schedule showing the required dates of submittal of all submittals.
 - 2. Organize the schedule by the applicable specification section number.
 - 3. Incorporate the contractor's construction schedule specified elsewhere.
 - 4. Incorporate the quality control activities schedule specified elsewhere.
 - 5. Submit within 45 days after commencement of the work.
 - 6. Revise and resubmit the schedule for approval when requested.
 - 7. Submit items requiring State Fire Marshal review as soon as possible to avoid delays while waiting on required agency reviews.
- B. Deliver each submittal requiring approval in time to allow for adequate review and processing time, including re-submittals if necessary; failure of the contractor in this respect will not be considered as grounds for an extension of the contract time.
- C. Deliver each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of the work; submit promptly.
- D. If a submittal must be processed within a certain time in order to maintain the progress of the work, state so clearly on the submittal.
- E. If a submittal must be delayed for coordination with other submittals not yet submitted, the architect may at his option either return the submittal with no action or notify the contractor of the other submittals which must be received before the submittal can be reviewed.

3.2 SUBMITTAL PROCEDURES - GENERAL

- A. Notify the architect, in writing and at time of submittal, of all points upon which the submittal does not conform to the requirements of the contract documents, if any.
- B. Do not commence work which requires review of any submittals until receipt of returned submittals with an acceptable action.
- C. Do not allow submittals without an acceptable action marking to be used for the project.
- D. Do not submit substitute items that have not been approved by means of the procedure specified elsewhere.
- E. Do not include requests for substitution (either direct or indirect) on submittals; comply with procedures for substitutions specified elsewhere.
- F. Preparation of Submittals:
 - 1. Label each copy of each submittal, with the following information:
 - a. Project name.
 - b. Date of submittal.
 - c. Contractor's name and address.
 - d. Architect's name and address.
 - e. Subcontractor's name and address.
 - f. Supplier's name and address.
 - g. Manufacturer's name.
 - h. Specification section and article where the submittal is specified.
 - i. Numbers of applicable drawings and details.
 - j. Other necessary identifying information.
 - k. Indicate whether manufacturer or other source is listed on the owner's preferred vendor list.
 - l. Contractor's review stamp with wording as approved by the architect and their insurer.
 - 2. Pack submittals suitably for shipment.
 - 3. Submittals to receive architect's action marking: Provide blank space on the label or on the submittal itself for action marking; minimum 4 inches wide by 5 inches high adjacent to Contractor's stamp.
 - 4. Contractor to coordinate electrical requirements (wire size, voltage, disconnect switches, breaker sizes, etc.) for mechanical and electrical items at time of submittal to ensure the equipment will be ordered properly.
- G. Transmittal of Submittals:
 - 1. Submit all submittals to the architect.
 - 2. Submittals will be accepted from the contractor only. Submittals received from other entities will be returned without review or action.
 - 3. Submittals received without a transmittal form will be returned without review or action.
 - a. Project name.
 - b. Submittal date.
 - c. Transmittal number.
 - d. Specification section number.
 - e. To:
 - f. From:

- g. Contractor's name.
 - h. Subcontractor's and supplier's names.
 - i. Manufacturer's name.
 - j. Submittal type (shop drawing, product data, sample, informational submittal).
 - k. Description of submittal.
 - l. Records of distribution.
 - m. Action marking.
 - n. Comments.
4. Fill out a separate transmittal form for each submittal; also include the following:
 - a. Other relevant information.
 - b. Requests for additional information.
 5. Submit required submittals of each specification section in their entirety at one time.
 - a. Incomplete submittals for a specific section will be grounds for delaying review by the Architect until all required information is obtained for the given specification section.

3.3 SHOP DRAWINGS

- A. Content: Include the following information:
 1. Dimensions, at accurate scale.
 2. All field measurements that have been taken, at accurate scale.
 3. Names of specific products and materials used.
 4. Details identified by contract document sheet and detail numbers.
 5. Show compliance with the specific standards referenced.
 6. Coordination requirements; show relationship to adjacent or critical work.
 7. Name of preparing firm.
 8. Contractor's review stamp with wording as approved by the architect.
- B. Preparation:
 1. Reproductions of contract documents are not acceptable as shop drawings.
 2. Copies of standard printed documents are not acceptable as shop drawings.
 3. Identify as indicated for all submittals.
 4. Space for architect's action marking shall be adjacent to the title block.

3.4 PRODUCT DATA

- A. Submit all product data submittals for each system or unit of work as one submittal.
- B. Content:
 1. Submit manufacturer's standard printed data sheets.
 2. Identify the product being submitted; submit only pertinent pages.
 3. Show compliance with properties specified.
 4. Identify which options and accessories are applicable.
 5. Include recommendations for application and use.
 6. Show compliance with the specific standards referenced.
 7. Show compliance with specified testing agency listings; show the limitations of their labels or seals, if any.
 8. Identify dimensions which have been verified by field measurement.
 9. Show special coordination requirements for the product.

3.5 SAMPLES

- A. Samples:

1. Provide samples that are the same as proposed product.
- B. Preparation:
1. Attach a description to each sample.
 2. Attach name of manufacturer or source to each sample.
 3. Where compliance with specified properties is required, attach documentation showing compliance.
 4. Where there are limitations in availability, delivery, or other similar characteristics, attach description of such limitations.
 5. Where selection is required, the first submittal may be a single set of all options; after return of submittal with selection indicated, submit standard number of sets of selected items.
- C. Keep final sample set(s) at the project site, available for use during progress of the work.

3.6 REVIEW OF SUBMITTALS

- A. Submittals for approval will be reviewed, marked with appropriate action, and returned.
- B. Informational submittals: Submittals will be reviewed.
1. "Approved": No action required
 2. "Approved as Noted": Make corrections, resubmittal not required.
 3. "Not Approved": Revise the submittal and resubmit. or prepare a new submittal
 4. "Revise and Resubmit": Revise the submittal complying with the comments made.
 5. Transmittal form, only, will be returned if submittal is unsatisfactory.

3.7 RETURN, RE-SUBMITTAL, AND DISTRIBUTION

- A. Submittals will be returned to the contractor electronically.
- B. Perform re-submittals in the same manner as original submittals; indicate all changes other than those requested by the architect., and review revision number.
- C. Distribution:
1. Distribute returned submittals to all subcontractors and suppliers involved in work covered by the submittal.
 2. Make one copy for project record documents.
 3. Record distribution on transmittal form with copy to the architect.

END OF SECTION

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SECTION 014100 - REGULATORY REQUIREMENTS

PART 1 - GENERAL

- 1.01 The Contractor shall, without additional expense to the Owner, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State and municipal laws, codes and regulations, in connection with the prosecution of the Work. He shall take proper safety and health precautions to protect the Work, the workers, the public and the property of others. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the Work.
- 1.02 The Contractor is hereby advised that any delay in the project as a result of review of any regulatory authority will not be a cause for additional compensation except for possible extension of project time.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 014200 – REFERENCE STANDARDS

PART I GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Schedule of references.

1.2 RELATED SECTIONS

- A. Document GC - General Conditions: Reference Standards.

1.3 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 SCHEDULE OF REFERENCES

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AABC	Associated Air Balance Council 1000 Vermont Avenue, N.W. Washington, DC 20005
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, DC 20001
ACI	American Concrete Institute Box 19150 Redford Station Detroit, MI 48219
ADC	Air Diffusion Council 230 North Michigan Avenue Chicago, IL 60601
AGC	Associated General Contractors of America 1957 E Street, N.W. Washington, DC 20006
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740

AIA	American Institute of Architects 1735 New York Avenue, N.W. Washington, DC 20006
AISC	American Institute of Steel Construction 400 North Michigan Avenue Eighth Floor Chicago, IL 60611
AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, DC 20036
AITC	American Institute of Timber Construction 333 W. Hampden Avenue Englewood, CO 801 1 0
AMCA	Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute 1430 Broadway New York, NY 1001 8
APA	American Plywood Association Box 11700 Tacoma, WA 98411
ARI	Air-Conditioning and Refrigeration Institute 1501 Wilson Boulevard Arlington, VA 22209
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tuilie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 1001 7
ASPA	American Sod Producers Association 4415 West Harrison Street Hillside, IL 60162
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWI	Architectural Woodwork Institute 2310 South Walter Reed Drive Arlington, VA 22206
AWPA	American Wood-Preservers' Association 7735 Old Georgetown Road

	Bethesda, MD 20014
AWS	American Welding Society 550 LeJeune Road, N.W. Miami, FL 33135
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
BIA	Brick Institute of America 11490 Commerce Park Drive Reston, VA 22091
CDA	Copper Development Association 57th Floor, Chrysler Building 405 Lexington Avenue New York, NY 10174
CLFMI	Chain Link Fence Manufacturers Institute 1101 Connecticut Avenue, N.W. Washington, DC 20036
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60195
CSI	Cast Stone Institute 813 Chestnut Street, PO Box 68 Lebanon, PA 17042
DHI	Door and Hardware Institute 7711 Old Springhouse Road McLean, VA 22102
EJCDC Engineers' Joint Contract Documents Committee	American Consulting Engineers Council 1015 15th Street, N.W. Washington, DC 20005
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591
FGMA	Flat Glass Marketing Association 3310 Harrison White Lakes Professional Building Topeka, KS 66611
FM	Factory Mutual System 1151 Boston-Providence Turnpike P.O. Box 688 Norwood, MA 02062

FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, DC 20407
GA	Gypsum Association 1603 Orrington Avenue Evanston, IL 60201
ICBO	International Conference of Building Officials 5360 S. Workman Mill Road Whittier, CA 90601
IEEE	Institute of Electrical and Electronics Engineers 345 East 47th Street New York, NY 10017
IMIAC	International Masonry Industry All-Weather Council International Masonry Institute 815 15th Street, N.W. Washington, DC 20005
MBMA	Metal Building Manufacturees Association 1230 Keith Building Cleveland, OH 44115
MUSFA	Metal Lath/Steel Framing Association 221 North LaSalle Street Chicago, IL 60601
NAAMM	National Association of Architectural Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601
NCMA	National Concrete Masonry Association P.O. Box 781 Herndon, VA 22070
NEBB	National Environmental Balancing Bureau 8224 Old Courthouse Road Vienna, VA 22180
NEMA	National Electrical Manufacturers' Association 2101 'L' Street, N.W. Washington, DC 20037
NFPA	National Fire Protection Association Battery March Park Quincy, MA 02269

NFPA	National Forest Products Association 161 9 Massachusetts Avenue, N.W. Washington, DC 20036
NSWMA	National Solid Wastes Management Association 1730 Rhode Island Ave., N.W. Washington, DC 20036
NWMA	National Woodwork Manufacturers Association 205 W. Touhy Avenue Park Ridge, IL 60068
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077
PS	Product Standard U. S. Department of Commerce Washington, DC 20203
SDI	Steel Deck Institute P.O. Box 9506 Canton, OH 44711
SDI	Steel Door Institute 712 Lakewood Center North 14600 Detroit Avenue Cleveland, OH 44107
SIGMA	Sealed Insulating Glass Manufacturers Association 111 East Wacker Drive Chicago, IL 60601
Sil	Steel Joist Institute 1205 48th Avenue North Suite A Myrtle Beach, SC 29577
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association 8224 Old Court House Road Vienna, VA 22180
SSPC	Steel Structures Painting Council 4400 Fifth Avenue Pittsburgh, PA 15213
TCA	Tile Council of America, Inc. Box 326 Princeton, NJ 08540
UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062
WCLIB	West Coast Lumber Inspection Bureau

JUSTICE CENTER BOILERS
RCLA PROJECT NO. 22507
BID NO. 26-13-2

REFERENCE STANDARDS
SECTION 014200

6980 S.W. Varns Road
Box 23145
Portland, OR 97223

WWPA Western Wood Products Association
1500 Yeon Building
Portland, OR 97204

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 014500 - QUALITY CONTROL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General quality control activities.
 - 2. Procedures for the following:
 - a. Preparation and maintenance of schedule of quality control activities.
 - b. Design performed by contractor.
 - c. Testing and evaluation of test results.
 - d. Inspections.
 - e. Manufacturers' field services.
 - 3. Procedures for quality control activities performed by:
 - a. Independent testing agencies.
 - b. Contractor.
 - c. Manufacturers' representatives.
 - 4. Procedures for submittal of quality control documentation.
- B. Quality control activities required are specified in other sections.
- C. See General Conditions for additional requirements for testing, inspections, and approvals.
- D. The cost of quality control activities specified to be paid for by the owner is not to be included in the contract sum.

1.2 CONTRACT CONDITIONS

- A. Independent testing agencies, whether employed by the owner or the contractor, may not change the requirements of the contract documents and may not approve any portion of the work.
- B. Employment of testing agencies, by the contractor or the owner, shall not relieve the contractor of his obligation to perform the work in accordance with the contract documents.

1.3 DEFINITIONS

- A. Certificate: A written statement that a portion of the work as accomplished or a particular product conforms to the requirements of the contract documents.
- B. Installer: Any entity who performs a construction activity, whether an employee, subcontractor, or sub-subcontractor of the contractor.
- C. Testing Agency: Approved independent testing and inspection agency employed by the contractor and approved by the Owner to perform certain quality control activities. Refer to approved list at the end of Section 01410.
- D. Reference Standard: Any document incorporated into the specification by reference rather than by inclusion of complete text; including, but not limited to, voluntary specifications prepared by standards organizations and industry organizations.

1.4 REFERENCE STANDARDS

- A. Reference Standards - General:
 - 1. Comply with edition of standard in effect as of:
 - a. Date of contract documents.
 - 2. Compliance with standards which are revised or reissued after that date will not be required unless incorporated into the contract documents by modification.
 - 3. Where applicable codes, laws, or regulations require editions of different dates, obtain instructions from the governing authorities as to which edition is required.
- B. The requirements of reference standards are binding on the contractor, just as if they were copied into the contract documents, but no provisions of reference standards shall alter the contractual relationship of the parties to the contract.

1.5 SUBMITTALS

- A. Schedule of Quality Control Activities:
 - 1. Submit as part of the contractor's construction schedule.
 - 2. Revise as required by the owner, to coordinate with the testing agency activities.
 - 3. Distribute to:
 - a. The Owner.
 - b. The Architect.
 - c. Each entity performing work for which quality control activities are specified.
- B. Design Data: As specified in individual sections.
 - 1. Unless otherwise indicated, submit for information only.
- C. Reports: Provide certified copies of reports.
 - 1. Unless otherwise indicated, submit for information only.
 - 2. Submit reports not later than the date of application for payment for the work to which the quality control activity relates.
 - 3. Reports shall be prepared by the entity performing the quality control activity.
 - 4. Submit copies directly to governing authorities when so directed.
 - 5. When the contractor employs an independent testing agency, submit copies directly to the architect.
 - 6. Include the following information in all types of reports:
 - a. Date of report.
 - b. Project name (and number, if applicable).
 - c. Description of the quality control activity.
 - d. Name, address, and telephone number of entity performing activity.
 - e. Date quality control activity was performed.
 - f. Specification section(s) involved.
 - g. Basis for evaluation (test method, etc.).
 - h. Results or conclusions, including evaluations and interpretations.
 - i. Title, name, and signature of person performing activity.
 - 7. Include the following information in all test reports:
 - a. Locations from which samples were taken, if any.
 - b. Ambient conditions at time of activity.
 - c. Recommendations for retesting, if any.
- D. Certificates: Submit for information only, unless otherwise indicated.
 - 1. Certificates shall be signed by the product manufacturer, unless otherwise specified or not applicable.
 - 2. Include the following information:
 - a. Date of certificate.
 - b. Project name (and number, if applicable).
 - c. Description of the product or system certified.
 - d. Specification section(s) involved.

- e. When actual materials to be used are to be certified, include lot identification markings, destination or shipment, and quantity in shipment.
- f. Title, name, and signature of person authorized to make certification.

- E. Qualification Statements: Submit for information only, unless otherwise indicated.
- F. Manufacturers' Instructions: Submit for information only, unless otherwise indicated; identify conflicts with contract documents.

1.6 QUALITY ASSURANCE

- A. Qualifications of Structural Design Personnel: As indicated in individual sections; if not indicated, provide services of a professional engineer licensed in the state in which the project is located for required services.
- B. Qualifications of Manufacturers: As indicated in individual sections.
- C. Qualifications of Installers: As indicated in individual sections.
- D. Qualifications of Manufacturers' Field Personnel: Employed directly by the manufacturer and normally performing the activities specified.
- E. Qualifications of Testing and Inspection Personnel:
 - 1. As indicated in individual sections.
- F. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either the National Bureau of Standards (NBS) standards or to accepted values of natural physical constants.

1.7 COORDINATION WITH OTHER ENTITIES

- A. Cooperate with other entities performing quality control activities.
- B. Provide samples of materials and design criteria as indicated and when requested.
- C. Provide other assistance, equipment, tools, and storage facilities as specified.
- D. If desired, make arrangements with those entities and pay for additional similar or related testing or inspection required for the contractor's use or convenience.

1.8 SEQUENCING AND SCHEDULING

- A. Prepare a schedule of quality control activities required.
 - 1. Include activities of the contractor's testing agencies.
 - 2. Provide the following information for each activity:
 - a. Specification section number.
 - b. Description of the activity.
 - c. Identification of test or inspection methods.
 - d. Enumeration of results required.
 - e. Number of tests required.
 - f. Number and type of samples to be taken, if any.
 - g. Starting time of activity.
 - h. The date that the work will be ready for the testing agency access.
 - i. Elapsed time required for activity.
 - j. Entity responsible.
 - k. Special requirements for activity.

- B. Coordinate quality control activities to avoid delay and to make it unnecessary to uncover work for testing or inspection.
- C. Notify the testing agencies 5 working days prior to commencement or completion of work which is to be tested or inspected, whichever is applicable.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide work of the specified quality; where quality level is not indicated, provide work of quality customary in similar types of work.
 - 1. Where codes, laws, or regulations require work of higher quality or performance, provide work complying with those codes, laws, and regulations.
 - 2. Where two or more quality provisions of the contract documents conflict, comply with the most stringent requirement; where requirements are different but apparently equal, and where it is uncertain which requirement is most stringent, obtain clarification from the architect before proceeding.
 - 3. Actual quality may exceed the specified quality; verify that such differences are acceptable to the owner (other criteria may make excessive quality undesirable).
- B. Where the contractor is required to complete the design, use accepted methods and procedures resulting in work of the specified quality.
- C. Control products, suppliers, manufacturers, site conditions, installers, and workmanship in such a manner as to produce work of the specified quality.
- D. Comply with manufacturers' instructions and recommendations.
 - 1. Keep a record of instructions and recommendations which supplement or conflict with the manufacturer's written instructions.
 - 2. When manufacturers' instructions and recommendations conflict with the contract documents, obtain clarification from the architect before proceeding.
- E. Use installers who are capable of producing work of the specified quality.
- F. Perform all quality control activities specified unless indicated to be performed by other entities.

3.2 TESTING

- A. Perform tests specified.
- B. When results of tests are unsatisfactory, make whatever changes or repairs are necessary and retest.
- C. Submit written report of each original test and of each retest.

3.3 INSPECTING

- A. Perform inspections specified.
- B. When inspections reveal unsatisfactory work, make whatever changes or repairs are necessary and reinspect.

- C. Submit written report of each original inspection and each reinspection.

3.4 MANUFACTURERS' FIELD SERVICES

- A. Manufacturers' field services required are specified in other sections.
- B. Give the architect timely notice of site visits so that the architect may be present.
- C. Submit a report of each site visit, including records of:
 - 1. Site conditions, installer procedures, and related activities which are not as recommended by the manufacturer.
 - 2. Instructions and recommendations given which differ from the manufacturer's standard printed instructions.

3.5 PROTECTION AND REPAIR

- A. When work is uncovered during quality control activities, provide protection from damage.
- B. Correct work damaged by quality control activities; where repair is indicated as an unacceptable method, replace the work.

END OF SECTION

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SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.
- C. Construction Facilities: Access roads and parking.
- D. Progress cleaning.
- E. Field Office and temporary buildings.

1.2 RELATED SECTIONS

- A. Section 01700 – Construction Procedures: Final cleaning.

1.3 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 5 watt/sq ft.
- B. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.
- D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtailed, and lamps as required.
- E. Maintain lighting and provide routine repairs.
- F. Permanent building lighting may not be utilized during construction until Substantial Completion.

1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. At end of construction, return facilities to same or better condition as originally found.

1.5 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.6 WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water.

1.7 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.8 SECURITY

- A. Provide security and facilities to protect work, and from unauthorized entry, vandalism, or theft.

1.9 ACCESS ROADS

- A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.
- B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Existing on-site roads may be used for construction traffic.
- F. Maintain public access to parking lots to remain and public ways.

1.10 PARKING

- A. Temporarily maintain hard surface parking areas sufficient to support automobile and truck traffic, and to accommodate construction personnel.
- B. When site space is not adequate, provide additional off-site parking.
- C. Do not allow vehicle parking on new pavement.

1.11 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.12 FIELD OFFICES AND SHEDS

- A. Construction Field Office: Weather tight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture, drawing rack, and drawing display table, and a space for meetings
- B. Locate offices and sheds a minimum distance of 30 feet from existing and new structures.
- C. Maintain field offices until temporary power is available in newly constructed buildings. Contractor has the option of relocating facilities to permanent structure thereafter.

1.13 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2. PRODUCTS

This Section Not Used.

PART 3. EXECUTION

This Section Not Used.

END OF SECTION

JUSTICE CENTER BOILERS
RCLA PROJECT NO. 22507
BID NO. 26-13-2

CONSTRUCTION FACILITIES AND
TEMPORARY CONTROLS
SECTION 015000

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SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General product requirements, including:
 - a. General specification requirements for all products.
 - b. Product options; Prior Approvals; Substitutions.
 - 2. General requirements for product documentation, including:
 - a. Requirements and procedures for schedule of products.
 - b. General requirements for operation and maintenance data.
 - c. General requirements for warranties.

1.2 SUBMITTALS

- A. Schedule of Products: Submit for approval.
- B. Final Schedule of Products: Submit for project record.
- C. Operation and Maintenance Data: Submit for information only.
- D. Warranties: Submit for project record.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Components required to be supplied in quantity within a specification section shall be identical, interchangeable, and made by the same manufacturer.
- B. Do not use products removed from existing construction, unless specifically permitted by the contract documents or approved by the owner.
- C. **PRIOR APPROVALS:** The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality but do not restrict bidders to the specific brand, manufacturer, or specification named. No substitution will be considered unless written request of approval has been submitted at least 10 days prior to bid date in proper format. See Substitution Request Form Section 01631. The burden of proof of the merit of the proposed substitute is upon the proposer. Approval by the Design Professional will not modify or lessen the requirements of the specifications. The Design Professional's decision of approval or disapproval shall be final. If the Design Professional approves any proposed substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

PART 3 - EXECUTION

3.1 PRODUCT OPTIONS

- A. It is the contractor's responsibility to select products which comply with the contract documents and which are compatible with one another, with existing work, and with products selected by other contractors.

1. Verify that electrical characteristics of products are compatible with electrical systems; notify architect of all discrepancies.
 2. Where visual matching to an established physical sample is required, the architect's decision will be final.
- B. Do not use any substitute products which have not been prior approved in accordance with the requirements of the contract documents; formal substitution request is required.
- C. Definition of Substitute Product: Any product or manufacturer not listed in the individual specification section is to be considered a substitute.
- D. Product Options: Where products are specified using more than one method, such as description with a manufacturer list, use a product meeting the requirements of both specification methods.
- E. Products Specified by Reference Standard: Use any product meeting the specification. Provisions of reference standards shall not modify the responsibilities of the owner or architect as defined in the contract documents.
- F. Products Specified by Description: Use any product meeting the specification.
- G. Products Specified by Performance Requirements: Use any product meeting the specification.
- H. Products Covered by an Allowance Included in the Contract Documents: Provide products of types and in quantity as directed by the architect.
1. At the earliest possible date after execution of the contract, inform the architect of the latest date by which the final selection of the product is required in order to avoid delay of the work.
 2. When requested, provide information for use in making selections.
- I. Products Specified to Match a Physical Sample: Use any product that matches; obtain the architect's approval.
- J. Products Specified by Listing a Brand Name Product as the "Basis of Design": Provide a product equivalent to the product specified within the limits of variation specified; submit substitution request for all products other than that listed in specifications.
- K. Products Specified by Listing Brand Name(s): Provide a product at least equal to the brand name product, or products, listed; submit substitution request for any brand name product not listed.
- L. Products Specified by Listing Manufacturer(s): Provide a product meeting the specification; submit substitution request for any manufacturer not listed.

3.2 SUBSTITUTIONS AFTER AWARD OF THE CONTRACT

- A. Substitutions after award of the contract will only be considered under one or more of the following conditions;
1. Required for compliance with interpretation of code requirements or insurance regulations then existing;
 2. Unavailability of specified products through no fault of the Contractor;
 3. Subsequent information discloses inability of specified products to perform properly or to fit in designated space;
 4. Or manufacturers/ fabricator refuses to certify or guarantee performance of specified

product as required.

- B. The contractor will be notified in writing within a reasonable time; verbal acceptance will not be valid.
- C. Acceptable substitutions will be added to the contract documents by change order.

3.3 SUBSTITUTION PROCEDURE

- A. Submission of request for substitution shall constitute a representation by the contractor that he:
 - 1. Has investigated the proposed product and determined that it is equal to or better than the specified product. Absence of an explicit comparison of any characteristic of the proposed product to the specified product shall constitute a representation that the proposed product is equal to or better than the specified product with regard to that characteristic.
 - 2. Will provide the same warranty for the proposed product as for the specified product.
 - 3. Will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including:
 - a. Redesign.
 - b. Additional components and capacity required by other work affected by the change.
 - 4. Waives all claims for additional costs and time extensions which subsequently may become apparent and which are caused by the change.
- B. Substitution Request Procedure: Submit written request with complete data substantiating compliance of the proposed product with the requirements of the contract documents.
 - 1. Submit substitution request at least 10 days prior to date when the product needs to be ordered for review by the Architect.
 - 2. Properly complete Form in Section 016000.10, Substitution Request Form.
 - 3. Form is to be submitted through the General Contractor.
- C. Data Required with Substitution Request: Provide at least the following data:
 - 1. Identify product by specification section and paragraph number.
 - 2. Manufacturer's name and address, trade name and model number of product (if applicable), and name of fabricator or supplier (if applicable).
 - 3. Complete product data.
 - 4. Description of changes that will be required in other work or products if the substitute product is approved.
- D. When the proposed substitution is not accepted, provide the product (or one of the products) specified.

3.4 SCHEDULE OF PRODUCTS

- A. Prepare a complete schedule of products used, including the following for each product:
 - 1. Manufacturer's name.
 - 2. Brand or trade name.
 - 3. Model number, if applicable.
 - 4. Reference standard, if more than one is applicable.
 - 5. Arrange products in the schedule by specification sections; indicate paragraph where specified.
- B. Prepare and submit a preliminary schedule within 30 days after award of contract; resubmit when revised; submit final schedule prior to final payment.

- C. Schedule of products shall not be used to obtain approval of substitute products; make separate request for substitutions.

3.5 OPERATION AND MAINTENANCE DATA

- A. Provide operation and maintenance data as specified in individual product sections.
1. Provide data sufficient for operation and maintenance by owner without further assistance from the manufacturer.
 2. Provide completed data in time for use during owner instruction.
- B. Data Required For Products - General:
1. Name of manufacturer and product.
 2. Name, address, and telephone number of subcontractor or supplier.
 3. Local source of replacements.
 4. Local source of replaceable parts and supplies.
- C. Product Data: Where product data is specified for inclusion in operation and maintenance data provide manufacturer's data sheets marked to indicate specific product and product options actually installed; delete inapplicable data.
- D. Finish Materials: Manufacturer's product data, color/texture designations, and manufacturer's instructions for care, cleaning, and maintenance.
- E. Equipment: Provide at least the following information:
1. Product data giving equipment and function description, with normal operating characteristics and limiting conditions.
 2. Starting, operating, and troubleshooting procedures.
 3. Cleaning and maintenance requirements and procedures.
 4. External finish maintenance requirements.
 5. List of maintenance materials required.
 6. List of special tools required.
 7. Parts list: List all replaceable parts, with ordering data.
 8. Recommended quantity of spare parts to be maintained in storage.
- F. Systems: Provide overall function description, with diagrams, prepared especially for this project.
- G. Form of Data: Prepare data in the form of an instructional manual.
1. Arrange content logically, using section numbers and sequence of sections indicated on the table of contents of this project manual.
 2. When multiple volumes are used, arrange by related subjects; identify contents in cover title.
 3. Assemble into 3-ring binders with maximum 2-inch ring size.
 - a. Hardback, cleanable plastic covers.
 - b. Identify each book with title "Operation and Maintenance Instructions" and project name.
 - c. Page size 8-1/2 by 11 inches, maximum.
 - d. Prepare special typewritten data on minimum 20-pound paper.
 - e. Provide tabbed divider for each product and system.
 - f. Drawings: Bind in with other data; provide reinforced binding edge; fold larger drawings to size of pages.
 1. Do not use pockets or loose drawings.
 4. Provide table of contents for each volume listing:

- a. Name of the project.
 - b. Name, address, telephone number, and contact name of:
 1. Architect.
 2. Contractor.
 - c. Index of products and systems included in volume.
5. Provide digital copy of all Data on a flash drive or CD media.

3.6 WARRANTIES

- A. Provide warranties as specified in individual product sections. At time of submittal provide sample warranty filled out for this specific project with all information required and label "Sample Warranty".
- B. Manufacturer Warranties: Manufacturer's standard product warranty running for the manufacturer's standard term, unless otherwise indicated.
 1. Submit copies of all manufacturer warranties which extend beyond the end of the contract correction period.
- C. Special Project Warranties: Written warranty commencing at date of substantial completion, running for the term indicated, and signed by the entities specified.
 1. Where completion of warranty item is materially delayed beyond the date of substantial completion, provide warranty commencing on date of acceptance.
 2. Submit each special project warranty.
- D. Provide 2 notarized copies of each executed warranty.
- E. Show actual date of commencement on each warranty.

END OF SECTION

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SUBSTITUTION REQUEST FORM

TO: RCL Architecture, LLC
900 West Causeway Approach
Mandeville, LA 70471

PROJECT: JUSTICE CENTER BOILERS
701 COLUMBIA STREET, COVINGTON, LA 70433
BID NO. 26-13-2

SPECIFIED ITEM:

DWG/ Specification Section _____ Paragraph _____

Product Description _____

The undersigned requests consideration of the following: _____

PROPOSED SUBSTITUTION:

Upon submitting this Request for Substitution, the undersigned certified that the following paragraphs are correct, unless otherwise modified on attachments:

1. Contractor has investigated the proposed substitution and believes that it is equal to or superior in all respects to specified item and will conform to design requirements and artistic effect.
2. Cost saving to Owner for accepting substitution: None _____ \$ _____
3. Contractor will pay the Architect and/or Engineers for additional studies, investigations, submittal reviews, redesign and/or analysis caused by the requested substitution and at not additional cost to Owner.
4. Substitution requires dimensional changes or redesign of Structural:
No. _____ Yes _____ (If yes, attach complete data).
5. Substitution requires dimensional changes or redesign of Mechanical:
No. _____ Yes _____ (If yes, attach complete data).
6. Substitution requires dimensional changes or redesign of Electrical:
No. _____ Yes _____ (If yes, attach complete data).
7. Substitution requires dimensional changes or redesign of Plumbing:
No. _____ Yes _____ (If yes, attach complete data).
8. Contractor will waive future claims for added cost to Contract caused by substitution.
9. Changes in contract time caused by substitution: No _____ Yes _____ Add/Deduct days.
10. Adverse affect on other Trades caused by substitution:
None _____ Yes _____ (If yes, explain on attachment).
11. Contractor will modify other parts of the work as may be required to make all parts of work complete and functioning.
Not Required _____ Yes _____ (If yes, explain on an attached page if necessary).

12. Same type of warranty for specified product or system will be furnished for proposed substitution.
No _____ Yes _____ (If no, explain on an attached page).
13. Maintenance Service Available:
No _____ Yes _____ (If no, explain on an attached page).
Where? _____ Spare Parts Source: _____
14. Contractor has complied with requirements of Division 01, General Conditions and Contract Documents as part of the request for substitution, and has completely filled-in this form.
No _____ Yes _____

REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEM:

See attached _____ Not required _____

Submitted by:

Signature: _____

Firm: _____

Address: _____

For use by Architect:

_____ Approved _____ Approved as Noted (Correct & resubmit for record)

_____ Revise & Resubmit _____ Rejected

Reviewed only for conformance with Design Concept of project and with information given in Contract Documents.

Signature: _____

Date: _____

ATTACHMENTS TO THIS FORM:

1. Manufacturer's Product Data for Specified Item: Clearly marked to indicate full compliance with spec section and Contract Documents: _____ Attached
2. Manufacturer's Product Data for Substitution: Clearly marked for adequate evaluation and comparison with data submitted for specified item: _____ Attached
3. Samples: Attached _____ Not Required _____
4. Cost Data and Implications of Substitution: Attached _____ Not Required _____
5. Contractor's Comments: Attached _____ Not Required _____
6. Other: _____

SECTION 017300 - CONSTRUCTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General construction and installation procedures.
 - 2. Cleaning during construction.
 - 3. Instruction of the owner's personnel.
 - 4. Project completion procedures.

1.2 DEFINITIONS

- A. Concealed Spaces: Spaces which are not accessible after completion of construction.
- B. Cutting: Removal of material by cutting, sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation.
- C. Damage: Any sort of deterioration whether due to weather, normal wear and tear, accident, or abuse, resulting in soiling, marring, breakage, corrosion, rotting, or impairment of function.
- D. Debris: Rubbish, waste materials, litter, volatile wastes, and similar materials, with the exception of surplus materials which are to become the property of the owner.
- E. Patching: Restoration to completed condition by patching, repairing, refinishing, finishing, filling, closing up, and similar operations.

1.3 SUBMITTALS

- A. Instruction Reports:
 - 1. Submit within 7 days after each instruction period.
 - 2. Include the following information:
 - a. Description of instruction provided, cross-referenced to the contract documents.
 - b. Date(s) and duration of instruction.
 - c. Names and titles of persons performing instruction.
 - d. Names, titles, and signatures of persons receiving instruction.

1.4 QUALITY ASSURANCE

- A. Cleaning: Perform cleaning in accordance with the recommendations of the manufacturer or fabricator of the product or system. Use only cleaning materials and tools which are specifically recommended, which are not hazardous to health or property, and which will not damage finishes.

1.5 PROJECT CONDITIONS

- A. Take precautions to prevent fires and to facilitate fire-fighting operations.
 - 1. Keep flammable materials in non-combustible containers; store away from potential fire sources; remove flammable waste regularly.
 - 2. Keep temporary and permanent fire fighting facilities readily accessible; keep fire fighting routes open.
 - 3. Do not allow smoking in areas where highly combustible or explosive materials are

- present.
4. Carefully supervise the operation of potential fire sources, including heating units.
 5. Conduct welding operations in manner to prevent fire; comply with local regulations.
- B. Take precautions to prevent accidents due to physical hazards:
1. Provide barricades, warning lights, or signs as required to inform personnel and the public of the hazard being protected against.
 2. Safety barricades: Comply with regulations.
 3. Provide temporary walkways where walking surfaces are hazardous.
 4. Notify the owner before beginning work that involves hazardous operations, including use of explosives and the like.
- C. Take care to prevent pollution of air, water, and soil.
1. Comply with environmental protection regulations.
 2. Limit effluent and rainwater runoff into waterways as required by regulations.
 3. Do not dump contaminants in areas that will result in contamination of waterways.
- D. Minimize discharge of effluent and rainwater runoff into sewers.
1. Control sediment discharge into sewers; filter out construction debris, soil, and contaminants.
 2. Comply with regulations and orders of public utilities regarding use of sewers.
 3. Where disposal of effluent or rainwater by means of sewers is not lawful or is not possible, provide alternative methods of disposal.
- E. Prevent erosion due to rainwater runoff.
- F. Control windblown dust; prevent erosion to site and nuisance to neighbors.
- G. Prevent flooding of excavations, below-grade construction, and adjacent properties due to rainwater runoff.
- H. Protect existing property indicated to remain, including:
1. Plants and trees, as indicated on the drawings.
 2. Existing property, as indicated on the drawings.
- I. Do not use tools or equipment which produce harmful levels of noise.
- J. Keep the site and adjacent public ways free of hazardous and unsanitary conditions and public nuisances.
- K. Control rodents and other pests; prevent infestation of adjacent sites and buildings due to pests on this site.
- L. Keep public streets free of debris due to this work.
- M. Provide adequate traffic control by means of signs, signals, and flagmen, as necessary.
- N. Provide temporary means of draining roofs where required.
- O. Conduct construction operations so that no part of the work is subjected to damaging operations or influences which are in excess of those to be expected during normal occupancy conditions.
- P. Conduct construction operations so that waste of power, water, and fuel is avoided.

- Q. Provide temporary supports as required to prevent movement and structural failure.
- R. Install products only during environmental conditions which will ensure the best possible results.

1.6 SEQUENCING AND SCHEDULING

- A. Install products only at the time and in the sequence, which will ensure the best possible results.
- B. Coordinate required administrative activities with related construction activities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Patching Materials: Identical to the materials of the work to be cut, unless indicated as specific materials specified in other sections.

PART 3 - EXECUTION

3.1 GENERAL EXAMINATION REQUIREMENTS

- A. Prior to performing work, examine the applicable substrates and the conditions under which the work is to be performed.
- B. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding.
- C. Conditions which could have been discovered by examination will not be allowed as cause for claims for extra work.
 - 1. In particular, verify the following:
 - a. Underground utilities.
 - b. Other underground construction.
 - c. Location and invert elevation of points of connection to piped utilities.
- D. Verify that utility requirements of operating equipment are compatible with building utilities.
- E. Verify space requirements of items which are shown diagrammatically on the drawings.

3.2 GENERAL PREPARATION REQUIREMENTS

- A. Take field measurements as required to fit the work properly.
- B. Recheck measurements prior to installing each product.

3.3 GENERAL INSTALLATION PROCEDURES

- A. Accurately locate the work and components of the work; make vertical work plumb; make horizontal work level.
- B. See sections describing specific parts of the work for additional requirements.

- C. Where space is limited, install components to maximize space available for maintenance and to maximize ease of removal for replacement.
- D. In finished areas, conceal pipes, ducts, and wiring within the construction, unless otherwise indicated.
- E. Coordinate exact locations of fixtures and outlets with finish elements.
- F. Install work in such manner and sequence as to preclude, if possible, or at least to minimize, cutting and patching.

3.4 CLEANING AND PROTECTION

- A. Remove debris from concealed spaces prior to enclosing the space.
- B. Keep the site and the work free of waste materials and debris.
 - 1. Remove waste from site periodically.
 - 2. When temperature exceeds or is expected to exceed 80 degrees F, remove waste at frequency necessary to prevent development of health hazards and nuisance odors.
 - 3. Keep hazardous and unsanitary materials in containers separate from other waste.
- C. Clean areas in which work is to be done to level of cleanliness necessary for proper execution of that work.
 - 1. Where dust would impair execution of work, broom- and vacuum-clean the entire interior area and keep clean.
- D. Keep installed work clean, and clean again when soiled by other operations.
 - 1. Provide periodic cleaning as required to prevent damage due to soiling.
 - 2. Remove liquid spills promptly.
- E. Protect installed work from soiling and damage.
 - 1. Provide protective coverings as required.
 - 2. Provide protective coverings for work which may be damaged by subsequent operations.
 - 3. Where heavy abuse is expected, use minimum of plywood for protection.
 - 4. Maintain protective coverings until substantial completion.

3.5 INSTALLATION OF COMPONENTS

- A. Install all products in accordance with manufacturer's instructions and recommendations, whether conveyed in writing or not.
- B. Mounting Heights: Where mounting heights are not indicated, mount at heights directed by the architect.
- C. Separate incompatible materials with suitable materials or spacing.
 - 1. Prevent cathodic corrosion.
- D. Provide all anchors and fasteners required and use methods necessary to securely fasten work.
 - 1. Allow for thermal expansion and contraction, and for building movement.
- E. Joints in Exposed Work:

1. Make joints of uniform widths.
2. Where joint locations are not indicated, arrange joints for the best visual effect.
 - a. When in doubt, obtain the architect's instructions.

F. After installation, adjust operating components to proper operation.

3.6 INSTRUCTION OF THE OWNER'S PERSONNEL

- A. Instruct personnel designated by the owner in the operation and maintenance of equipment and systems, prior to substantial completion.
1. Explain all modes of operation and types of maintenance required.
 2. Demonstrate all functions, including startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown.
 3. Review terms of warranties and procedures for obtaining warranty service.
 4. Review maintenance agreements and other similar commitments which extend past final completion.
 5. Have operating and maintenance data available for use during instruction.
 - a. Review contents in detail.
 - b. Prepare and insert additional data when need for such becomes apparent during instruction.
- B. Arrange times and places of instruction with the owner.
- C. Provide instruction by qualified personnel of the contractor, unless otherwise specified.
- D. For equipment and systems which have different operation at different seasons, provide instruction during subsequent seasons until all modes of operation have been covered.

3.7 FINAL CLEANING

- A. Dispose of debris in a lawful manner.
1. Do not burn debris on the site.
 2. Inorganic debris may be buried on the site in a location designated by the owner.
 3. Do not dispose of volatile wastes in storm or sanitary drains.

3.8 PROJECT COMPLETION PROCEDURES

- A. Complete the work, prior to substantial completion, as required to obtain consent to occupancy from the governing authorities.
- B. Arrange for final inspections by governing authorities to be accomplished prior to substantial completion.
- C. If temporary locking systems differ from permanent locking systems, change over to permanent systems prior to substantial completion.

END OF SECTION

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SECTION 017300.01 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes procedural requirements for cutting and patching.
- B. Definition: Cutting and patching includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and repair required to restore surfaces to their original condition.
- C. Refer to other sections for other requirements and limitations applicable to cutting and patching individual parts of the Work.
- D. Coordinate cutting and patching with demolition requirements specified in Division 2 Section 024119 "Selective Demolition".

1.2 SUBMITTALS

- A. Cutting and Patching Plan: Review with Architect the description of procedures at least 14 calendar days in advance of the time cutting and patching will initially be performed.
 - 1. Describe the following information, as applicable:
 - a. Description of the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - b. Description of the anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in appearance and other significant visual elements.
 - c. List of products to be used and entities that will perform work.
 - d. Compatibility and cohesion characteristics of patching compounds with adjacent materials.
 - 2. Approval by the Architect to proceed with cutting and patching does not waive the right to later require complete removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 - 1. The cutting and patching plan shall include but not be necessarily limited to work required at the following structural elements:
 - a. Bearing and retaining walls.
 - b. Structural concrete.
 - c. Structural steel.
 - d. Lintels.
 - e. Primary wood framing.
 - f. Structural decking.
 - g. Miscellaneous structural metals.
 - h. Masonry support walls.
 - i. Equipment supports.
 - j. Piping, ductwork, vessels, and equipment.
- B. Operational Limitations: Do not cut and patch operating elements, safety related systems, or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements, safety related systems

or related components in a manner that would result in increased maintenance or decreased operational life or safety.

- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching.
1. Engage a Specialist who is specifically experienced in the work.
 2. The cutting and patching plan shall include but not be necessarily limited to work required at the following visual elements:
 - a. Processed concrete finishes.
 - b. Stonework and stone masonry.
 - c. Ornamental metal.
 - d. Matched-veneer woodwork.
 - e. Preformed metal panels.
 - f. Fire stopping.
 - g. Window wall system.
 - h. Stucco and ornamental plaster.
 - i. Acoustical ceilings.
 - j. Carpeting.
 - k. Wall covering.
 - l. Mechanical system enclosures, cabinets, or covers.

1.4 EXISTING WARRANTIES

- A. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to avoid any existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Use materials identical to existing materials to the maximum extent available.
- B. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
- C. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Before cutting, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding
- B. Before proceeding with cutting and patching involving two or more trades, meet at the Project site with the entities providing or affected by the cutting and patching. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Provide temporary support of work to be cut.
- B. Protect existing conditions during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Bypass in-service existing pipe, conduit, or ductwork scheduled to be removed or relocated before cutting.

3.3 PERFORMANCE

- A. Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained and adjoining construction. Where possible, review proposed procedures with the original installer and comply with the original installer's recommendations.
 - 1. In general, use hand or small power tools designed for sawing or grinding, not for hammering and chopping.
 - 2. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 3. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 4. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
 - 5. Comply with requirements of applicable Division 2 sections where cutting and patching requires excavating and backfilling.
 - 6. After utility services are bypassed, cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 3. Where removed walls or partitions extends one finished area into another finished area, patch and repair floor and wall surfaces to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 4. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface that contains the patch after the area has received primer and other undercoats.
 - 5. Patch, repair or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items.
- B. Thoroughly clean piping, conduit, and similar features before applying paint, restored pipe coverings, or other finishing materials.

END OF SECTION

SECTION 017400 - CLEANING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Execute cleaning, during progress of the work, and at completion of the work, as required by General conditions.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Each Specification Section: Cleaning for specific products or work.

1.03 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled, workmen for final cleaning.
- B. Rake the surfaces of the grounds clean.
- C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed exterior surfaces, and all work areas, to verify that the entire work is clean.

END OF SECTION

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SECTION 017416 - MISCELLANEOUS WORK AND CLEANUP

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This section includes operations, which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent of work involved. The Contractor shall furnish all labor, materials, equipment and incidentals to complete the work under this section.
- B. The work of the section includes, but is not limited to, the following:
 - 1. Restoring of fences
 - 2. Crossing utilities
 - 3. Restoring easements (servitudes) and rights-of-way
 - 4. Cleaning up
 - 5. Incidental work

1.02 WORK SPECIFIED UNDER OTHER SECTIONS

All work shall be completed in a workmanlike manner by competent workmen in full compliance with all applicable sections of these specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

Materials required for this section shall be of at least the same type and quality as materials which are to be restored. Where possible, the Contractor shall reuse existing materials which are removed and then replaced, with the exception of paving.

PART 3 - EXECUTION

3.01 RESTORING OF FENCES

It may be necessary for the Contractor to remove, store and replace existing fences during construction. Only the section directed by the Engineer shall be removed. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced with fencing equal to or better than that damage at no cost to the Owner, and the work shall be satisfactory to the Engineer.

3.02 CROSSING UTILITIES

This item shall include any extra work required in crossing culverts, water courses, drains, water mains, and other utilities, including all sheeting and bracing, extra excavation and backfill, or any other work required for the crossing, whether or not shown on the drawings.

3.03 CROSSING OR WORKING ADJACENT TO EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, AND CABLE TV LINES

The Contractor shall notify the proper authority of the utility involved when work adjacent to these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered. Contractor is to notify the utility company at least 48 hours in advance.

3.04 RESTORING THE EASEMENTS (SERVITUDES) AND RIGHTS-OF-WAY

- A. Portions of the construction occur in easements through private property. The Contractor shall be responsible for all damage to private property due to his operations. He shall protect from injury all walls, fences, cultivated shrubbery, pavement, underground facilities, such as water pipe, or other utilities which may be encountered along the easement. If removal and replacement are required, it shall be done in a workmanlike manner so that the replacement is equivalent to that which existed prior to construction.
- B. Existing lawn surfaces damaged by construction shall be regraded and resodded. These areas shall be maintained until all work under this contract has been completed and accepted.

3.05 CLEANING UP

The Contractor shall remove all construction material, excess excavation, buildings, equipment and other debris remaining on the job as a result of construction operations and shall render the site of the work in a neat and orderly condition.

3.06 INCIDENTAL WORK

Do all incidental work not otherwise specified, but obviously necessary, for the proper completion of the contract as specified and as shown on the drawings.

END OF SECTION

SECTION 017836 – WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
 - 1. Refer to the Owner's Contract / General Conditions for terms of the Contractor's period for correction of the Work.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals" specifies procedures for submitting warranties.
 - 2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
 - 3. Divisions 2 through 32 Sections for specific requirements for warranties on products and installations specified to be warranted.
 - 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. **Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor. Manufacturer's disclaimers and limitations on product warranties do not alter the Contractor's requirements of the Contract Documents.**
- D. Separate Prime Contracts: Each prime Contractor is responsible for warranties related to its own Contract.

1.3 DEFINITIONS

- A. Standard products warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
 - 1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.
- B. When the Contract Documents require the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.
- C. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Architect, for approval prior to final execution.
 - 1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- D. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual as described in Div 016000, Product Requirements.
- E. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (115-by-280-mm) paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used – see individual Specification Section for warranty Requirements)

END OF SECTION

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SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Project record documents consisting of:
 - a. Record drawings.
 - b. Record project manual (specifications).
 - c. Record submittals:
 - 1. Shop drawings.
 - 2. Product data.
 - 3. Samples.
 - 4. All other submittals.
 - 2. Exceptions: The following are not required as project record documents:
 - a. Informational submittals, and manufacturers' and installers' qualifications statements.
- B. Related Sections:
 - 1. Operation and maintenance data: Elsewhere in Division 1.
 - 2. Warranties: Elsewhere in Division 1.

1.2 SUBMITTALS

- A. Project Record Documents: Submit after substantial completion, but prior to final completion.
 - 1. Record drawings: Submit in form of opaque prints and scanned .pdf files on CD or flash drive.
 - a. Sets shall include all drawings and specifications, whether changed or not.
 - 2. Other record documents: Submit 1 set of originals or good quality photocopies and digital copy on CD or flash drive.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 MAINTENANCE OF PROJECT RECORD DOCUMENTS

- A. Do not use record documents of any type for construction purposes.
- B. Maintain record documents in a secure location at the site while providing for access by the contractor and the architect during normal working hours; store in a fire-resistive room or container outside of normal working hours.
- C. Record information as soon as possible after it is obtained.
- D. Assign a person or persons responsible for maintaining record documents.
- E. Record the following types of information on all applicable record documents:
 - 1. Dimensional changes.
 - 2. New and revised details.
 - 3. Depths of foundations.
 - 4. Locations and depths of underground utilities.
 - 5. Actual routings of piping and conduits.
 - 6. Revisions to electrical circuits.

7. Actual equipment locations.
8. Sizes and routings of ducts.
9. Locations of utilities concealed in construction.
10. Particulars on concealed products which will not be easy to identify later.
11. Changes made by modifications to the contract; note identification numbers if applicable.
12. New information which may be useful to the owner, but which was not shown in either the contract documents or submittals.

3.2 RECORD DRAWINGS

- A. Maintain a complete set of opaque prints of the contract drawings, marked to show changes.
- B. Where the actual work differs from that shown on the drawings, mark this set to show the actual work.
 1. Mark location of concealed items before they are covered by other work.
 2. Mark either record contract drawings or shop drawings, whichever are best suited to show the change.
 3. Where changes are marked on record shop drawings, mark cross-reference on the applicable contract drawing.
- C. When the contractor is required by a provision of a modification to prepare a new drawing, rather than to revise existing drawings, obtain instructions from the architect as to the drawing scale and information required.
- D. Keep drawings in labeled, bound sets.
 1. Mark with red pencil.
 2. Mark work of separate contracts with different colors of pencils.
 3. Incorporate new drawings into existing sets, as they are issued.
- E. Where record drawings are also required as part of operation and maintenance data submittals, copy marks to another opaque print obtained from the architect.

3.3 RECORD PROJECT MANUAL

- A. Maintain a complete copy of the project manual, marked to show changes.
- B. Where the actual work differs from that shown in the project manual, mark the record copy to show the actual work.
 1. Include a copy of each addendum and modification to the contract.

3.4 RECORD SUBMITTALS

- A. Maintain a complete set of all submittals made during construction, marked to show changes.
 1. Maintain submittals in cardboard file boxes, labeled to show contents.
 2. Sort submittals by applicable specification section and file in order of submittal identification number.
 3. Include manufacturer's recommended maintenance instructions by applicable specification section and file in order of submittal identification number with each section.
- B. Record Shop Drawings: Record the types of information specified for all record documents.
 1. Mark changes on record shop drawings only when contract drawing would not be capable of showing the change clearly or completely.
 2. Mark changes in manner specified for record drawings.

- C. Record Product Data Submittals: Record the types of information specified for all record documents.
 - 1. In addition, record the following types of information:
 - a. Changes in the products as delivered to the site.
 - b. Changes in manufacturer's instructions or recommendations for installation.

3.5 TRANSMITTAL TO OWNER

- A. Collect, organize, label, and package ready for reference.
 - 1. Provide cardboard file boxes for submittals.
 - 2. Bind print sets with durable paper covers.
 - 3. Label each document (and each sheet of drawings) with "PROJECT RECORD DOCUMENTS - This document has been prepared using information furnished by _____" [insert the contractor's name], and the date of preparation.
- B. Submit to the Architect for transmittal to the owner, unless otherwise indicated.

END OF SECTION

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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes the following:
 - 1 Demolition and removal of selected portions of a building.
 - 2 Repair procedures for selective demolition operations.
- B. Definitions:
 - 1 Remove: Detach items from existing construction and legally dispose of them.
 - 2 Existing to Remain: Existing items of construction that are not to be removed.

1.2 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be salvaged, reinstalled or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at Contractor's option.

1.3 SUBMITTALS

- A. Qualification Data: List of demolition firm's completed projects with project addresses, and contact information.
- B. Proposed dust-control measures.
- D. Schedule of Selective Demolition Activities: Indicate the following:
 - 1 Detailed sequence of selective demolition work, with starting and ending dates for each activity.
 - 2 Interruption of utility services.
 - 3 Coordination for shutoff, capping, and continuation of utility services.
- E. Photographs or Videotape: Before work begins, submit sufficiently detailed photographs or videotapes showing existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations.

1.4 QUALITY ASSURANCE

- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with NFPA 241 and ANSI A10.6.
- D. Pre-Demolition Conference: Conduct conference at Project site to comply with requirements in Division 1, Section 013100 – Project Coordination Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1 Inspect and discuss condition of construction to be selectively demolished.
 - 2
 - 3 Review and finalize demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4 Review requirements of work performed by other trades that rely on substrates exposed by demolition operations.

- E. In company with the Architect, visit the site prior to demolition work and verify the extent and location of selective demolition required. Carefully identify limits of selective demolition, prior to meeting. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
- F. Prepare and follow an organized plan for demolition and removal of items. Submit to Architect for review and approval.

1.5 PROTECTION

- A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures.
- B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights and other similar items that are required for protection of all personnel during demolition and removal operations.
- C. Prevent spread of flying particles and dust on pavements. Sprinkle rubbish and debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to; ice, flooding or pollution. Sweep the work area daily. Sweep pavements as often as necessary to control the spread of debris.
- D. In addition to previously listed fire and safety rules to be observed in performance of work include the following:
 - 1 No wall or part of wall shall be permitted to fall outwardly from structures.
 - 2 Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in the use of fire extinguishers.
 - 3 Keep hydrants clear and accessible at all times. Prohibit debris from accumulating within a radius of 15 feet of fire hydrants.
- E. Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused, or to remain the property of the Owner any damaged items shall be repaired or replaced as approved by the Architect. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal works. Repairs, reinforcement or structural replacement must have Architect's approval.
- G. Temporary Roofing: Install temporary roofing and flashing as necessary to maintain a watertight condition throughout the course of the work. Remove temporary work prior to installation of permanent roof system materials unless approved otherwise by the Architect.
- H. Demolition contractor to install filter media (MERV 7) securely over all intake trills and duct openings before starting any demolition work. Inspect and maintain all filter media on a daily basis.

1.6 PROJECT CONDITIONS

- A. Maintain access to existing walkways, corridors and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the Owner.
- B. On-site storage or sale of removed items or materials will not be permitted.
- C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
- D. Fire Protection: Maintain fire-protection services during selective demolition operations.

1.7 WEATHER PROTECTION

- A. For portions of the building to remain, protect building interior and materials and equipment from the weather at all times. Where removal of existing roofing is necessary to accomplish work, have materials and workmen ready to provide adequate and temporary covering of exposed areas.

1.8 WARRANTIES

- A. Existing Special Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials that do not void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Where available and appropriate for use, provide repair materials that are identical to existing materials.
- B. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
- C. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities to be removed have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When encountering unanticipated mechanical, electrical or structural elements that conflict with the intended function or design, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.
- D. Survey the condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- E. Perform surveys as the selective demolition progresses to detect hazards resulting from the activities.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by the Owner.
 - 1 Provide temporary services during interruptions to existing utilities, as acceptable to the Owner.
 - 2 Provide not less than 72 hours notice to the Contracting Officer's Representative if shutdown of service is required during changeover.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving areas to be selectively demolished.
 - 1 Owner will arrange to shut off indicated utilities when requested by Contractor.
 - 2 Arrange to shut off indicated utilities with utility companies.
 - 3 Where utility services are required to be removed, relocated or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
 - 4 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit after bypassing.
 - 5 Do not start selective demolition work until utility disconnection, preconstruction cleaning, and sealing have been completed and verified.

3.3 PREPARATION

- A. Dangerous Materials: Drain, purge or otherwise remove, collect and dispose of chemicals, gases, explosives, acids, flammables or other dangerous materials before proceeding with selective demolition operations.
- C. Temporary Site Control: Remove debris and conduct demolition operations in a manner to ensure minimum interference with roads, streets, walks, walkways, corridors, and other adjacent occupied or used facilities.
 - 1 Do not close or obstruct streets, walks, walkways, corridors, or other adjacent occupied or used facilities without permission from the Owner and the City.
 - 2 Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- D. Temporary Facilities: Conduct demolition operations in a manner to prevent injury to people and damage to adjacent building and facilities to remain. Provide for safe passage of people around selective demolition area.
 - 1 Erect temporary protection, such as walks, fences, railings, canopies and covered passageways, where required by authorities having jurisdiction.
 - 2 Protect existing site improvements, appurtenances and landscaping to remain.
 - 4 Provide temporary weather protection, during interval between demolition and removal of existing construction, on exterior surfaces and new construction to prevent water leakage or damage to structure or interior areas.
 - 5 Protect walls, ceilings, floors and other existing finish work that are to remain and are exposed during selective demolition operations.
 - 6 Cover and protect furniture, furnishings and equipment that have not been removed.
- E. Temporary Enclosures: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
- F. Temporary Shoring: Provide and maintain shoring, bracing or other structural support to preserve stability and prevent movement, settlement or collapse of building to be selectively demolished. Strengthen or add new supports when required during the progress of selective demolition.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use temporary enclosures and other suitable methods complying with governing environmental protection regulations to limit the spread of dust and dirt.
 - 1 Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding or pollution.
 - 2 Wet mop floors to eliminate trackable dirt, and wipe down walls and doors of demolition enclosure.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- C. Cleaning: Clean adjacent structures and site improvements of dust, dirt and debris caused by selective demolition operations. Return adjacent areas to the condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent required by new construction and as indicated on the drawings. Use methods required to complete selective demolition within limitations of governing regulations and as follows:
 - 1 Proceed with selective demolition systematically. Conduct work in an order that avoids transporting removed items and debris through areas with completed selective demolition work, and that allows for removal of items before supports for those items are removed in another area.
 - 2 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage adjoining construction to remain. Use hand or small power tools designed for sawing or grinding, not for hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3 Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations, and maintain adequate ventilation when using cutting torches.
 - 5 Remove decayed, vermin-infested and other dangerous or unsuitable materials, and promptly dispose of these materials off-site.
 - 6 Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors or framing.
 - 7 Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.
- B. Existing Facilities: Protect stairs, walkways, loading docks, building entries and other building facilities during selective demolition operations.
- C. Protection of Salvaged Items: Pack or crate salvaged materials and equipment after removal. Identify contents of containers. Protect items from damage during transport and storage.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Owner, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

- E. Concrete and Masonry: Demolish concrete and masonry in small sections. At junctures with construction to remain, cut concrete and masonry using power-driven masonry saw or hand tools; do not use power-driven impact tools.
- F. Resilient Floor Coverings: Remove floor coverings and adhesive, and prepare substrate for new floor covering, according to recommendations of the Resilient Floor Covering Institute (RFCI).
- G. Roofing: Remove no more existing roofing than can be covered in one day by new roofing. Refer to applicable Division 7 Section for new roofing requirements.
- H. Air-Conditioning Equipment: Remove equipment without releasing refrigerants. Contractor to provide a crane for removal of existing HVAC equipment. Coordinate with the installation of new HVAC unit.

3.6 PATCHING AND REPAIRS

- A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
 - 1 Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material, applied according to the manufacturer's written recommendations.
- C. Finishes: Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.
- D. Floor and Wall Surfaces: Patch and repair floor and wall surfaces in each space where demolished walls or partitions result in extending one finished area into another. Provide a flush and even surface of uniform color and appearance.
 - 1 Closely match texture and finish of existing adjacent surface.
 - 2 Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 3 Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the patched surface has received primer and other specified undercoats.
 - 4 Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
 - 5 Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner property and legally dispose of them.

END OF SECTION

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Miscellaneous metal fabrications.
 2. Shop coatings.

1.2 SUBMITTALS

- A. Shop Drawings: For each fabricated item, show the following:
1. Plans and elevations.
 2. Jointing and connections.
 - a. Indicate welded connections using standard AWS symbols; indicate net weld length.
 3. Profiles of sections and reinforcing.
 4. Fasteners and anchors.
 5. Accessories.
 6. Location of each finish.
- B. Product Data: Manufacturer's specifications and installation instructions. Submit for:
1. All manufactured products used in fabrications.

1.3 JOB CONDITIONS

- A. Fit fabrications accurately to actual construction. If it is not practical or possible to take field measurements before fabrication, allow adequate fabrication tolerances and trim to fit.
- B. All supporting steel, plates, angles, and lintels in contact with Precast Concrete to be galvanized.

PART 2 - PRODUCTS

2.1 MATERIALS - METALS

- A. Steel Shapes:
1. Plates, bars, angles, channels, and H-sections: ASTM A 36.
 2. Galvanizing: Hot-dip galvanizing after fabrication in accordance with ASTM A 123.
 3. Tube:
 - a. Cold-formed: ASTM A 500.
 1. Galvanizing: Hot-dip galvanizing after fabrication in accordance with ASTM A 123.
- B. Steel Sheet:
1. For nonstructural uses: Cold-rolled, ASTM A 366; hot-rolled, ASTM A 569.
- C. Galvanizing for Steel Rough Hardware Fabrications: Hot-dip galvanizing in accordance with ASTM A 153.

2.2 MATERIALS - MISCELLANEOUS

- A. Concrete: Normal weight ready-mix concrete as specified in Division 3.
 - 1. Compressive strength: 2500 pounds per square inch, minimum, at 28 days, unless otherwise indicated.
- B. Concrete Inserts: Style as required for application.
- C. Fasteners: Use fasteners suitable for the material being fastened and for the type of connection required.
 - 1. For exterior use or built into exterior walls: Nonferrous stainless steel, zinc coated or cadmium plated.
 - 2. Use fasteners of same material as items being fastened unless otherwise indicated.
 - 3. Bolts and studs: ASTM A 307.
 - 4. Nuts: ASTM A 563.
 - 5. Machine screws: FS FF-S-92.
 - 6. Plain washers: FS FF-W-92.
 - 7. Lock washers: FS FF-W-84.
 - 8. Expansion shields: FS FF-S-325.
- D. Galvanizing Repair Paint: Zinc dust paint complying with SSPC-Paint 20 or MIL P-21035B, Type I or II.
- E. Shop Primer: Fabricator's standard primer.

2.3 FABRICATION - GENERAL

- A. Fabricate and shop-assemble in largest practical sections for delivery to site.
 - 1. Prepare and reinforce fabrications as required to receive applied items.
 - 2. Fabricate items with joints tightly fitted and secured.
 - 3. Make exposed joints tight, flush, and hairline.
- B. Fasteners: Use concealed fasteners if possible.
 - 1. Exposed fasteners: Flathead, countersunk type unless otherwise indicated.
- C. Anchors: Fabricate to suit conditions indicated; use anchors of same material and finish as item except where specifically indicated otherwise.
- D. Welding:
 - 1. Provide continuous welds at welded corners and seams.
 - 2. Exposed welds: Grind flush and smooth.

2.4 FABRICATION - SHEET METAL

- A. Comply with general fabrication requirements.
- B. Bend sheet metal corners to smallest possible radius.
- C. Welding Steel Sheet: Comply with AWS D1.3 recommendations.

2.5 FABRICATION - SHOP COATINGS

- A. Shop prime all iron and steel fabrications, except:
 - 1. Galvanized fabrications.

2. Fabrications embedded in concrete or mortar.
- B. Prepare surfaces to be coated as follows:
 1. Solvent-clean in accordance with SSPC-SP 1.
 2. Interior fabrications: Clean in accordance with SSPC-SP 3, SSPC-SP 5, SSPC-SP 6, SSPC-SP 8, or SSPC-SP 10.
- C. Shop Priming: Comply with SSPC-PA 1.
 1. Apply primer immediately following surface preparation.
 2. Do not prime surfaces to be welded.
 3. Do not prime surfaces in direct contact bond with concrete.
 4. Apply extra coat to corners, welds, edges, and fasteners.
- D. Shop Painting: Comply with SSPC-PA 1.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

- A. Anchor metal fabrications to substrates indicated; provide all fasteners required.
- B. Perform all field fabrication required for installation.
 1. Fit joints tightly.
 2. Weld joints as indicated.
 - a. Weld in accordance with AWS code.
 - b. Exposed welds: Grind flush and smooth.
- C. Do not cut or weld items galvanized after fabrication that are indicated for bolted or screwed connections.
- D. Install items in correct location, plumb and level, without rack or warp.
- E. Provide temporary supports and bracing as required.

3.2 CLEANING AND TOUCH-UP

- A. Touch up damage to galvanized surfaces using galvanizing repair paint in accordance with ASTM A 780.
- B. Touch up shop paint immediately after erection.
 1. Clean field welds, bolted joints, and areas where primer is damaged.
 2. Paint with material used for shop painting, minimum 2 mils dry film thickness.

END OF SECTION

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SECTION 078413 - FIRESTOPPING AND SMOKESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Firestopping of all penetrations through fire barriers, including:
 - a. Voids around:
 - 1. Pipes.
 - 2. Ducts.
 - 3. Conduit.
 - 4. Cables and wires not in conduit.
 - b. Other openings, as required by authorities having jurisdiction.
 - 2. Smokestopping of all penetrations through smoke barriers, including:
 - a. Voids around:
 - 1. Pipes.
 - 2. Ducts.
 - 3. Conduit.
 - 4. Cables and wires not in conduit.
 - b. Joints between smoke barriers and other construction.
 - c. Other joints and openings, as required by authorities having jurisdiction.
 - d. Other joints and openings indicated.
- B. Extent of fire and smoke barriers is indicated on drawings.
- C. All work of this section shall be performed by a single firm.
- D. Work Not Included: Repairing penetrations made in error and repairing penetrations which are too large to be sealed by the methods indicated; these are to be repaired using the original material of the construction.
- E. Products Furnished but Not Installed:
 - 1. Sleeves which are an integral part of the firestopping assembly but which must be set by installer of other construction.

1.2 DEFINITIONS

- A. Fire Barrier: Any wall, floor, ceiling, or roof which is indicated as having a fire-resistance rating.
- B. Smoke Barrier: Any wall, floor, ceiling, or roof which is indicated as being designed to prevent passage of smoke and gases; may be indicated as "smoke barrier," "smoke partition," "smoke wall," etc.

1.3 SUBMITTALS

- A. Preinstallation Inspection Report: Identify penetrations which need to be repaired using the original material of the assembly.
- B. Schedule of Firestopping: Complete list of each type of penetration to be sealed, fire rating of penetrated assembly, identification of penetration seal to be used, fire rating of penetration seal, and firestopping test or design number.
- C. Schedule of Smokestopping: Complete list of each type of penetration to be sealed,

construction of penetrated assembly, and identification of penetration seal to be used and smokestopping test or design number.

- D. Product Data: Complete product and system description including tested assembly details, installation instructions, and limitations on use.
- E. Maintenance Data: Include detailed instructions for repair and for modification due to changes in penetrating items.

1.4 QUALITY ASSURANCE

- A. Testing Requirements: Provide tested assemblies of designs which provide the scheduled fire ratings when tested in accordance with methods indicated.
 - 1. Valid evaluation report published by ICC Evaluation Service, Inc. (ICC-ES) at www.icc-es.org will be considered as constituting an acceptable test report.
 - 2. The listing of the assembly to be used in the current edition of one of the following classification guides will be considered evidence of acceptable testing:
 - a. Underwriters Laboratories Inc. "Fire Resistance Directory." UL
 - b. Warnock Hersey "Certification Listings." ITS
 - c. Factory Mutual, FM.
 - 3. Submission of actual test reports is required for assemblies for which none of the above substantiation exists.
- B. Installer Qualifications: Approved by the firestopping material manufacturer and able to provide evidence thereof.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery of products to minimize storage time at site.
- B. Deliver products to project site in original unopened containers bearing the name of the manufacturer, product name, type, and testing agency's identification mark.
- C. Store products in accordance with manufacturer's instructions.

1.6 SEQUENCING AND SCHEDULING

- A. Perform firestopping and smokestopping work after completion of work which penetrates fire and smoke barriers, but prior to covering up or eliminating access to the penetration. Coordinate with installers of such other work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Firestopping Materials:
 - 1. Manufacturers: Provide products complying with requirements of the contract documents and made by one of the following:
 - a. Bio Fireshield, Inc.
 - b. The Carborundum Company.
 - c. Chase Technology Corporation.
 - d. GE Silicones.

- e. Hilti, Inc.
- f. 3M Ceramic Materials Department.
- g. Tremco, Inc.

2.2 MATERIALS

- A. Firestopping Materials: Provide penetration seal assemblies whose fire-resistance ratings have been determined by testing (NFPA 251 Criteria) in the configurations required and which have fire-resistance ratings at least as high as that of the fire-rated assembly in which they are to be installed.
 - 1. It is the contractor's responsibility to determine the types of penetrations to be sealed and to select appropriate firestopping assemblies.
 - 2. If a tested assembly is not available for a particular penetration configuration, modify the penetration configuration to suit available assemblies; do not modify assembly configuration except as specifically stated in the test report or as approved by the authority having jurisdiction.
 - 3. Provide products which:
 - a. Allow normal expansion and contraction movement of the penetrating item without failure of the penetration seal.
 - b. Emit no hazardous, combustible, or irritating by-products during installation or curing period.
 - c. Do not require special tools for installation.
- B. Smokestopping: Use any gunnable or pourable joint sealant suitable for the application; use only fully curing types where accessible in the finished work. Provide products which:
 - 1. Allow normal expansion and contraction movement of the penetrating item without failure of the penetration seal.
 - 2. Emit no hazardous, combustible, or irritating by-products during installation or curing period.
 - 3. Do not require special tools for installation.
- C. Labels: Red, permanent marking using the words "Fire-Rated Assembly - Do not disturb - See maintenance instructions" and the testing agency designation, or equivalent as approved by the authority having jurisdiction.
 - 1. For marking firestopping and smokestopping assemblies, use self-adhesive tape or wired-on labels.
 - 2. For marking fire and smoke barriers themselves, use letters at least 2 inches high.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Preinstallation Inspection: Inspect all fire and smoke barriers for penetrations of any type; mark or otherwise identify all penetrations indicating action required: 1) repair; 2) firestopping; or 3) smokestopping.
 - 1. Conduct inspection prior to covering up or enclosing walls or ceilings.
 - 2. Submit a report detailing findings of inspection to the Architect.
- B. If the configuration of a particular penetration does not conform to the configuration necessary for the required firestopping assembly, notify the installer of the penetration for modification of the configuration to suit the assembly; do not use the firestopping assembly in other configurations except as specifically stated in the test report or as approved by the authority having jurisdiction.

3.2 PREPARATION

- A. Installation Meeting: Prior to start of work, conduct a meeting to verify that the installation instructions and procedures required are understood by installers.
 - 1. The following shall attend this meeting:
 - a. General contractor.
 - b. Installers of firestopping.
 - c. Installers of smokestopping.
 - d. Firestopping manufacturers' representatives.
- B. Prepare penetrations in accordance with the material manufacturer's instructions.

3.3 INSTALLATION

- A. Install firestopping materials in exact accordance with manufacturer's instructions and the conditions of the testing; provide all accessory materials required.
- B. Remove combustible forming materials, unless they are a required component of the tested assembly.

3.4 PERMANENT IDENTIFICATION OF PENETRATIONS

- A. Near fire and smoke barriers, mark each exposed penetration with label identifying it as a fire-stopped or smoke-stopped assembly.
- B. Mark each fire and smoke barrier above lay-in ceilings with words identifying it as a fire or smoke barrier at intervals required by authorities having jurisdiction, but not less than 20 feet.

3.5 FIELD QUALITY CONTROL

- A. Inspect completed installations for completeness and correct installation.
 - 1. If installed work is to be covered in completed work, inspect and obtain approval prior to covering.
 - 2. Obtain the approval of the authority having jurisdiction.
 - 3. Submit report of inspection to the Architect.

3.6 CLEANING

- A. Clean up excess material adjacent to penetrations promptly; use methods and materials approved by the manufacturers of the penetration seals and of surfaces to be cleaned.

3.7 PROTECTION

- A. Protect installed work during curing period.
- B. Protect installed work from damage from construction operations using substantial barriers if necessary.
- C. Repair damaged materials in accordance with manufacturer's instructions.

END OF SECTION

SECTION 079200 - JOINT SEALANTS

PART 1: GENERAL

1.1 SUMMARY

A. Section Includes:

1. The sealing of joints indicated on schedule at the end of this section.
2. The sealing of joints in floors, and pedestrian paving.
3. The sealing of penetrations through exterior walls, and roofs by pipes, ducts and conduit.
4. The sealing of other joints indicated on drawings.

B. Joints of a nature similar to that of joints indicated on the schedule shall be sealed with same sealer, whether indicated on drawings to be sealed or not.

1.2 REFERENCES

A. ASTM C834 – Latex Sealing Compounds.

B. ASTM C919 – Practice for Use of Sealants in Acoustical Applications.

C. ASTM C920 – Elastomeric Joint Sealants.

D. ASTM C1193 – Guide for Use of Joint Sealants.

E. ASTM D1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.

F. ASTM D1565 – Flexible Cellular Materials – Vinyl Chloride Polymers and Copolymers (Open-Cell Foam).

G. ASTM D1667 – Flexible Cellular Materials – Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).

H. ASTM D2628 – Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.

1.3 DEFINITIONS

A. Substrates:

1. M-type substrates: Concrete, concrete masonry units, brick, mortar, natural stone. The term "masonry" means brick, stone, and concrete masonry work.
2. G-type substrates: Glass and transparent plastic glazing sheets.
3. A-type substrates: Metals, porcelain, glazed tile, and smooth plastics.
4. O-type substrates: Wood, unglazed tile; substrates not included under other categories.

1.4 SUBMITTALS

A. Product Data: Manufacturer's data on each joint sealer, with instructions for substrate preparation and installation.

B. Samples for Color Selection: Cured samples of actual products showing manufacturer's full range of colors. (Products exposed to view only.)

C. Samples for Color Verification: Cured samples of each color of each product used, prepared

to simulate actual joints minimum 3 inches long; use substrates similar in appearance to actual substrates. (Products exposed to view only.)

- D. Substrate Test Report for Each Sealer.
- E. Field Installation Test Reports.
- F. Installer's Preconstruction Inspection Report: List all conditions detrimental to performance of joint sealer work.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Execution of at least 50 sealer installations of similar size and scope.
 - 2. Similar installations completed within 5 years before start of this project.
 - 3. Lead mechanic assigned from among those experienced on previous similar projects.
- B. Substrate Tests: Have samples of actual substrate materials tested by manufacturer(s) of sealer products.
 - 1. Test to determine what preparation procedures (if any) are necessary to make sealers adhere properly under environmental conditions that may occur during installation.
 - 2. Test to determine compatibility with substrates, backers, and secondary seals, if any.
 - 3. Use manufacturer's standard test methods.
 - 4. Report the sealer manufacturer's recommendations for substrate preparation and sealer installation and identify specific primer(s) required.
 - 5. The requirement for testing for this project will be waived if test reports based on previous testing of the products and substrates to be used are acceptable to the Architect.
- C. Field Installation Tests: Before installation, test the adhesion of all sealers to actual substrates.
 - 1. Seal at least 5-foot lengths of joints and cure properly. Try to pull sealer out of joint by hand, by method recommended by sealer manufacturer.
 - 2. Select test joints representative of joints to be sealed by the product to be tested.
 - 3. Perform tests for each type of sealer used on exterior.
 - 4. Do tests in the presence of the Architect and the technical representative of sealer manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original containers or bundles with labels showing manufacturer, product name or designation, color, shelf life, and installation instructions.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install sealers if any of the following conditions exist:
 - 1. Air or substrate temperature exceeds the range recommended by sealer manufacturer or is below 40 degrees F (4.4 degrees C).
 - 2. Substrate is wet, damp, or covered with snow, ice, or frost.
- B. Dimensional Limitations: Do not install sealers if joint dimensions are less than or greater than that recommended by sealer manufacturer; notify the Architect and get sealer manufacturer's recommendations for alternative procedures.

1.8 WARRANTY

- A. Submit written warranty signed by Contractor and installer guaranteeing to correct failures in sealer work that occur within 5 years after substantial completion, without reducing or otherwise limiting any other rights to correction which the Owner may have under the Contract Documents. Failure is defined as failure to remain weathertight due to faulty materials or workmanship. Correction is limited to replacement of sealers.

PART 2: PRODUCTS

2.1 MATERIALS - GENERAL

- A. General: Provide only products which are recommended and approved by their manufacturer for the specific use to which they are put and which comply with all requirements of the Contract Documents.
 - 1. For each generic product, use only materials from one manufacturer.
 - 2. Provide only materials which are compatible with each other and with joint substrates.
 - 3. Colors of exposed sealers: As selected by the Architect from manufacturer's standard colors.
- B. Manufacturers: Provide products complying with requirements of the Contract Documents and made by one of the manufacturers listed.
 - 1. Silicone sealants:
 - a. Dow Corning Corporation.
 - b. Pecora Corporation.
 - c. Tremco, Inc.
 - 2. Butyl sealants:
 - a. Pecora Corporation.
 - b. Koch Protective Treatments, Inc.
 - c. Tremco, Inc.
 - 3. Acrylic-latex emulsion sealant:
 - a. Bostik Inc.
 - b. Pecora Corporation.
 - c. Sonneborn Building Products Division/ChemRex, Inc.

2.2 ELASTOMERIC SEALANTS

- A. Elastomeric Sealants - General: Chemically curing elastomeric sealants of types indicated, complying with ASTM C 920, including specific Type, Grade, Class, and Uses indicated, as well as all other requirements specified.
 - 1. Where movement capability exceeding that measured by ASTM C 920 is specified, sealant shall withstand the total movement indicated while remaining in compliance with the other requirements specified, when tested in accord with ASTM C 719, with base joint width measured at the time of application.
 - 2. For M-type substrates: Comply with requirements for Use M.
 - 3. For G-type substrates: Comply with requirements for Use G.
 - 4. For A-type substrates: Comply with requirements for Use A.
 - 5. For O-type substrates: Comply with requirements for Use M (minimum) and Use O for the particular substrate.
- B. High Movement Silicone Sealant: One- or two-part, non-acid-curing, Grade NS, Class 25, Use NT, plus movement capability of at least 50 percent in both extension and compression.
- C. Mildew-Resistant Silicone Sealant: One-part, Type S, Grade NS, Class 25, Use NT, formulated with fungicide, for interior use on nonporous substrates.

- D. Silicone Sealant for Use T: One-part, non-acid curing, Type S, Grade NS, Class 25, Use T, Use M, plus movement capability of 50 percent in both extension and compression.

2.3 SOLVENT-RELEASE-CURING SEALANTS

- A. Butyl Sealant: Nonsag, one part, solvent-release-curing; complying with FS A-A-272, Type III; nonstaining; paintable.

2.4 LATEX SEALANTS

- A. Acrylic-Latex Emulsion Sealant: One-part, nonsag, mildew-resistant, paintable; complying with ASTM C 834.

2.5 SEALANT BACKERS

- A. Backers - General: Nonstaining; recommended or approved by sealant manufacturer for specific use.
- B. Backer Rods: Flexible, nonabsorbent, compressible polyurethane foam, either open-cell or non-gassing closed-cell, unless otherwise restricted by sealant manufacturer; preformed to appropriate size and shape.
- C. Bond-Breaker Tape: Self-adhesive, polyethylene or other plastic tape, unless otherwise restricted by sealant manufacturer; suitable for preventing sealant adhesion.

2.6 MISCELLANEOUS MATERIALS

- A. Primers: Use primers determined to be required by substrate tests.
- B. Cleaners: As recommended by sealer manufacturer and not damaging to substrates.
- C. Masking Tape: Nonabsorbent, nonstaining.
- D. Tooling Agents: Approved by sealant manufacturer; nonstaining to sealant and substrate.

PART 3: EXECUTION

3.1 EXAMINATION

- A. Examine joints for characteristics that may affect sealer performance, including configuration and dimensions.
- B. Do not begin joint sealer work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Cleaning: Just before starting sealer installation, clean out joints in accord with recommendations of sealer manufacturers and as follows:
 1. Remove all material that could impair adhesion, including dust, dirt, coatings, paint, oil, and grease. Exception: Materials tested to show acceptable adhesion and compatibility.
 2. Dry out damp and wet substrates thoroughly.
 3. Clean M-type and O-type substrates by suitable mechanical or chemical methods.
 4. Remove loose particles by vacuuming or by blowing with oil-free compressed air.
 5. Concrete: Remove laitance and form-release coatings.
 6. Clean A-type and G-type substrates by chemical or other methods which will not damage

the substrate.

7. Use methods which will not leave residues that will impair adhesion.
- B. Priming: Prime substrates as recommended by sealer manufacturer.
- C. Masking Tape: Use masking tape to keep primers and sealers off of adjacent surfaces which would be damaged by contact or by cleanup. Remove tape as soon as practical.
- D. Install fillers where needed to provide proper joint depth or support for sealant backers.

3.3 INSTALLATION

- A. Comply with sealer manufacturers' installation instructions and recommendations, except where more restrictive requirements are specified.
- B. Gunnable and Pourable Sealants: Comply with recommendations of ASTM C 1193.
- C. Backers:
1. Install backers at depth required to result in shape and depth of installed sealant which allows the most joint movement without failure.
 - a. Make backers continuous, without gaps, tears, or punctures.
 - b. Do not stretch or twist backers.
 2. Use bond-breaker tape where indicated and wherever it is necessary to keep sealant from adhering to back or third side of joint.
 3. If backers become wet or damp before installation of sealant, dry out thoroughly before proceeding.
 4. For Precast concrete at office building, equipment rooms, and occupiable spaces, repeat above process and provide (2), two continuous layers of sealant and backers from exterior side of panel consecutively. First layer to inside of building is to have (2) backer rods placed at about 25 percent of the panel depth behind the first .
- D. Sealants: Use methods recommended by manufacturer; completely fill the joint; make full contact with bond surfaces; tool nonsag sealants to smooth surface eliminating air pockets.
1. Use concave joint shape shown in Figure 5A in ASTM C 1193, where not otherwise indicated.
 2. Use flush joint shape shown in Figure 5B in ASTM C 1193, where indicated.

3.4 PROTECTION AND CLEANING

- A. Clean surfaces adjacent to joints as work progresses and before sealants set using methods and materials approved by manufacturers of sealers and of surfaces to be cleaned.
- B. Protect joint sealers from contamination and damage.
- C. Remove and replace damaged sealers.

3.5 SCHEDULE OF JOINT SEALERS

- A. Exterior Joints for Which No Other Sealer Is Indicated:
1. Use one of the following sealants:
 - a. High movement silicone sealant.
 2. Backer: Closed cell neoprene sponge Backer rod conforming to ASTM C509 or as

recommended by mfg..

3. Joint shape: Concave joint configuration.
- B. Interior Joints for Which No Other Sealer Is Indicated:
1. Use one of the following sealants:
 - a. Acrylic-emulsion latex sealant.
 2. Backer: Backer rod as recommended by mfg...
 3. Joint shape: Concave joint configuration.
- C. Exterior Joints Well Protected from Weather and Not Subject to Movement:
1. Use one of the following sealants:
 - a. Butyl sealant.
 2. Backer: Backer rod as recommended by mfg...
- D. Joints around Pipes, Ducts, and Conduit Penetrating Exterior Walls and Roofs:
1. Use one of the following sealants:
 - a. Same as used for adjacent substrates.

END OF SECTION

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Standard and custom hollow metal doors and frames.
2. Steel sidelight, borrowed lite and transom frames.
3. Louvers installed in hollow metal doors.
4. Light frames and glazing installed in hollow metal doors.

B. Related Sections:

1. Division 08 Section "Door Hardware".
2. Division 09 Sections "Exterior Painting" and "Interior Painting" for field painting hollow metal doors and frames.

C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
10. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
11. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
12. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
13. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
14. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.

15. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
16. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.
- B. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
- C. Shop Drawings: Include the following:
 1. Elevations of each door design.
 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 4. Locations of reinforcement and preparations for hardware.
 5. Details of anchorages, joints, field splices, and connections.
 6. Details of accessories.
 7. Details of moldings, removable stops, and glazing.
 8. Details of conduit and preparations for power, signal, and control systems.
- D. Samples for Verification:
 1. Samples are only required by request of the architect and for manufacturers that are not current members of the Steel Door Institute.
- E. Informational Submittals:
 1. Hurricane Resistant Openings: Exterior hurricane opening assemblies to be tested according to ASTM E330, ASTM E1886, ASTM E1996 standards, and certified by a qualified independent third party testing agency acceptable to authority having jurisdiction, with labeling indicating compliance with the wind load and design pressure level requirements specified for the Project.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.
- B. Quality Standard: In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".
- C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL10C (neutral pressure at 40" above sill) or UL 10C.
 1. Oversize Fire-Rated Door Assemblies Construction: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.

2. Temperature-Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
 3. Smoke Control Door Assemblies: Comply with NFPA 105.
 - a. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.
 - D. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material.
 - E. Hurricane Resistant Exterior Openings: Provide exterior hollow metal doors and frames as complete and tested assemblies, or component assemblies, including approved hardware specified under Section 087100 "Door Hardware", to meet the wind loads, design pressures, debris impact resistance, and glass and glazing requirements applicable to the Project.
 1. Test units according to ASTM E330, ASTM E1886, ASTM E1996 standards, certified by a qualified independent third party testing agency acceptable to authority having jurisdiction, and bearing a third party certification agency permanent label indicating windstorm approved product.
 - F. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.
 - B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
 - C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.
 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.
- 1.6 PROJECT CONDITIONS
- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
- B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide steel doors and frames from a SDI Certified manufacturer:
 - 1. CECO Door Products (C).
 - 2. Curries Company (CU).
 - 3. Steelcraft (S).

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
- C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 HOLLOW METAL DOORS

- A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.
- B. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 - 1. Design: Flush panel.
 - a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
 - 2. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), minimum 16 gauge (0.053-inch - 1.3-mm) thick steel, Model 2.
 - 3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.

4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Manufacturers Basis of Design:

1. CECO Door Products (C) Honeycomb Core - Regent Series.

2.4 HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Thermal Break Frames: Subject to the same compliance standards and requirements as standard hollow metal frames. Tested for thermal performance in accordance with NFRC 102, and resistance to air infiltration in accordance with NFRC 400. Where indicated provide thermally broken frame profiles available for use in both masonry and drywall construction. Fabricate with 1/16" positive thermal break and integral vinyl weatherstripping.
- C. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.
1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
 2. Frames: Minimum 14 gauge (0.067-inch -1.7-mm) thick steel sheet.
 3. Manufacturers Basis of Design:
 - a. CECO Door Products (C) – SQSeries.
- D. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.
1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
 2. Frames: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
 3. Manufacturers Basis of Design:
 - a. CECO Door Products (C) - BQ Series.
 - b. CECO Door Products (C) - SQ Series.
- E. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.
- F. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.

- B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.
- C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.6 LOUVERS

- A. Metal Louvers: Unless otherwise indicated provide louvers to meet the following requirements.
 - 1. Blade Type: Vision proof inverted V or inverted Y.
 - 2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.
- B. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.
 - 1. Manufacturers: Subject to compliance with requirements, provide louvers to meet rating indicated.
 - 2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

2.7 LIGHT OPENINGS AND GLAZING

- A. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lites each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.
- B. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.
- C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames.
- D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.

2.8 ACCESSORIES

- A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.
- B. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.9 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.
- C. Hollow Metal Doors:
 - 1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
 - 2. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
 - 3. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
 - 4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
- D. Hollow Metal Frames:
 - 1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.
 - 3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
 - 4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
 - 5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
 - 6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
 - 7. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
 - 8. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
 - 9. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Two anchors per jamb up to 60 inches high.

- 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
- b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
- 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - 5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.
- c. Severe Storm Shelter Openings: Provide jamb, head, and sill anchors in accordance with manufacturer's tested and approved assemblies.
10. Door Silencers: Except on weatherstripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".
11. Bituminous Coating: Where frames are fully grouted with an approved Portland Cement based grout or mortar, coat inside of frame throat with a water based bituminous or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow-up service procedure.
- E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.10 STEEL FINISHES

- A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.
1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.
- C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.
 - 1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
 - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
 - 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
 - 4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
 - 1. Non-Fire-Rated Standard Steel Doors:

- a. Jams and Head: 1/8 inch plus or minus 1/16 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
 - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
 - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
- D. Field Glazing: Comply with hollow metal manufacturer's written instructions.
- 3.4 ADJUSTING AND CLEANING
- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
 - B. Remove grout and other bonding material from hollow metal work immediately after installation.
 - C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

END OF SECTION

**SECTION 083323
UPWARD COILING FIRE DOORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Upward coiling fire doors.

1.02 RELATED REQUIREMENTS

- A. Section 079200 - Joint Sealants: Sealing joints between frames and adjacent construction.
- B. Section 087100 - Door Hardware: Cylinder cores and keys.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- C. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- D. FBC TAS 201 - Impact Test Procedures; Testing Application Standard; 1994.
- E. FBC TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure; Testing Application Standard; 1994.
- F. ICC (IECC)-2018 - International Energy Conservation Code; 2018.
- G. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- H. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's standard literature showing materials and details of construction and finish.
- B. Shop Drawings: Indicate rough and actual opening dimensions, anchorage methods, hardware locations, and installation details.
- C. Manufacturer's Instructions: Indicate installation sequence and installation, adjustment, and alignment procedures.
- D. Manufacturer's qualification statement.
- E. Installer's qualification statement.
- F. Operation and Maintenance Data: Indicate modes of operation, lubrication requirements and frequency, and periodic adjustments required.
- G. Specimen warranty.
- H. Project Record Documents: Include as-built electrical diagrams for electrical operation.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing work of this section with minimum of 5 years documented experience in fabrication and installation of security closures.
- B. Installer Qualifications: Company specializing in performing work of this section with minimum of 3 years documented experience and approved by manufacturer.
- C. Products Requiring Electrical Connection: Listed and classified by UL (DIR) OR testing firm acceptable to authorities having jurisdiction as suitable for purpose specified.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture.
- C. Store materials in dry, warm, ventilated, weathertight location.

1.07 WARRANTY

- A. Manufacturer Door-Only Warranty: Provide manufacturer warranty for door assembly for duration indicated under individual doors. Complete forms in **Owner's** name and register with manufacturer.
- B. Manufacturer Door and Operator Warranty: Provide manufacturer's limited warranty for door and operator system free from material and workmanship defects for duration and cycles indicated under individual doors; counterbalance spring and finish not covered by warranty.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Basis of Design: Wayne Dalton; www.wayne-dalton.com; 1 (800) 827-3667.
- B. Equal products by:
 - 1. Cookson Overhead Door
 - 2. Raynor
 - 3. Others, with prior approval of Architect prior to bid in accordance with Division 01 requirements.

2.02 UPWARD COILING FIRE DOORS

- A. Wayne Dalton; FireStar Model 700C.
 - 1. Slats: Interlocking, roll-formed, metal slats with insulation.
 - 2. Width: 8 feet.
 - 3. Height: 8 feet.
 - 4. Mounting: Surface-mounted on side indicated on drawings.
 - 5. Closing Speed: Door to operate at variable speed up to 12 inches (305 mm) per second.
 - 6. Operation Cycles: Capable of operating for minimum 10,000 cycles. One operation cycle is complete when door is opened from closed position to fully open position and returned to closed position.
 - 7. Required Warranty:
 - a. Door Only: Two years.
 - b. Door and Operator Warranty: Three years or 20,000 cycles, whichever comes first.
 - 8. Fire Rating: Design door assembly to comply with 1.5-hour fire rating.
 - 9. Curtain Material:
 - a. Galvanized Steel: 18 gauge, 0.0516 inch (1.31 mm).
 - 1) Finish:
 - (a) Standard polyester base coat; color finish to be selected from manufacturing standard color selections by Architect.
 - b. Slat Profile: No.34, 3-inch flat slat.
 - c. Slat R-Value: R-value of 5 (RSI-value of 0.88).
 - d. Flame Spread: 0.
 - e. Smoke Development: 0.
 - f. Vision Lites: Not required.

10. Bottom Bar: Galvanized steel.
 - a. Profile: Double angle.
 - b. Finish: Hot-dip galvanized.
 - 1) Color: Match curtain.
11. Locking Options to Include: None.
12. Weatherstripping and Seals:
 - a. Bottom Seal Astragal: Not required.
 - b. Exterior Guide Seal: Not required.
 - c. Flame Baffle: Not required.
 - d. Lintel Brush Seal: Not required.
 - e. UL-Listed Brush-Type Full Perimeter Smoke Seals: Required.
13. Side Guides, Channels: Constructed of steel with members fully bolted together.
 - a. Finish: Hot-dip galvanized.
 - 1) Color: Black.
14. Brackets: Steel to support counterbalance and curtain.
 - a. Finish: Hot-dip galvanized.
 - 1) Color: Black.
15. Counterbalance: Helical torsion spring type, housed in steel tube or pipe barrel and supporting curtain with deflection limited to 0.03 inch per foot (1:400 mm/sec) of span. Adjustable spring tension required.
16. Hood: 24 gauge, 0.028 inch galvanized steel (0.63 mm galvanized steel).
 - a. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
 - b. Finish: Powder coat, Match door color.
17. Standard Fire Door Automatic Closure: Release mechanism equipped with 165-degree fusible link listed and labeled in accordance with UL (DIR) for purpose specified and indicated on drawings.
 - a. Doors equipped with chain hoist release mechanism, requiring only one sash chain routed to operated side. Sash chain not required on adjusting wheel side.
 - 1) Release mechanism includes planetary gear differential system.
 - 2) Door closes by thermally actuated link rated at 165 degrees F (74 degrees C).
 - 3) When release mechanism is activated, counterbalance spring tension is maintained.
 - 4) Door is resettable by one person from one side of door after closing release handle manually. No tools required to reset release mechanism.
 - b. Governor: If required by size of chain hoist doors, provide viscous governor to regulate rate of descent of door in quiet manner. Use engagement type not engaged during normal door operation, but after cable release, retard speed during automatic door closure to maximum 24 inches (610 mm) per second and minimum 6 inches (152 mm) per second in accordance with NFPA 80.
18. Manual Operation: Floor resettable chain hoist.
19. Motor Operation: Not required.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions and meet manufacturer's requirements before starting work.
- B. Verify opening sizes, tolerances, and conditions are acceptable.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's written instructions.

- B. Use anchorage devices to securely fasten assembly to wall construction and building structure without distortion or stress.
- C. Fit and align assembly, including hardware. Level and plumb to provide smooth operation.
- D. Install enclosure and perimeter trim.

3.03 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation from Plumb: 1/16 inch (1.6 mm).
- C. Maximum Variation from Level: 1/16 inch (1.6 mm).
- D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 feet (3.2 mm per 3 m).

3.04 ADJUSTING

- A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

- A. See Section 017400 – Cleaning for additional requirements.
- B. Clean installed components.
- C. Remove labels and visible markings.

3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch up damaged finishes after Date of Substantial Completion.

END OF SECTION

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section "Hollow Metal Doors and Frames".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series.
 - 2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
 - 3. ANSI/UL 294 - Access Control System Units.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
 - b. Complete (risers, point-to-point) access control system block wiring diagrams.
 - c. Wiring instructions for each electronic component scheduled herein.
 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:

1. Hurricane Resistant Openings: Exterior hurricane opening assemblies to be tested according to ASTM E330, ASTM E1886, ASTM E1996, TAS 201, TAS 202, TAS 203 standards, and certified by a qualified independent third party agency acceptable to authority having jurisdiction, with labeling indicating compliance with the design pressure and debris impact resistance level requirements specified for the Project.
2. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Hardware Supplier and Hardware Installer must obtain a license with the Louisiana Office of State Fire Marshall in accordance to RS 40:1464 and RS 40:1664.

B. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

C. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

D. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

E. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

F. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

G. Hurricane Resistant Exterior Openings: Provide exterior door hardware as complete and tested assemblies, or component assemblies, including approved doors and frames specified under Section 081113 "Hollow Metal Doors and Frames", to meet the design pressures, debris impact resistance, and glass and glazing requirements applicable to the Project.

1. Test units according to ASTM E330, ASTM E1886, ASTM E1996, TAS 201, TAS 202, and TAS 203 standards, certified by a qualified independent third party listing agency

acceptable to authority having jurisdiction, and bearing a third party certification agency permanent label indicating windstorm approved product.

- H. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.
- I. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- J. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- K. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 BUTT HINGES

- A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 5. Manufacturers:
 - a. Hager Companies (HA) - BB Series, 5 knuckle.
 - b. Ives (IV) - 5BB Series, 5 knuckle.
 - c. McKinney (MK) - TA/T4A Series, 5 knuckle.

2.3 CONTINUOUS HINGES

- A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Manufacturers:.

- a. Ives (IV).
- b. Pemko (PE).
- c. Select Hinges (SL).

2.4 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Continuous Geared Transfer Hinges: Provide electrified transfer continuous geared hinges with a removable service panel cutout accessible without de-mounting door from the frame. Furnish with Molex™ standardized plug connectors with sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

- a. Ives (IV) - Connect.
- b. Pemko (PE) - SER-QC (# wires) Option.

- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Provide one each of the following tools as part of the base bid contract:

- a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
- b. McKinney (MK) - Connector Hand Tool: QC-R003.

2. Manufacturers:

- a. McKinney (MK) - QC-C Series.
- b. Schlage (SC) - Connect.
- c. Von Duprin (VD) - Connect.

2.5 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
5. Manufacturers:

- a. Ives (IV).
 - b. Rockwood (RO).
 - c. Trimco (TC).
- B. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
 4. Pulls, where applicable, shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
 5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
 6. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Trimco (TC).

2.6 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
1. Threaded mortise cylinders with rings and cams to suit hardware application.
 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
 4. Tubular deadlocks and other auxiliary locks.
 5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 6. Keyway: Manufacturer's Standard.
- C. Small Format Interchangeable Cores: Provide small format interchangeable cores (SFIC) as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer's United States patents.
1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.
 2. Manufacturers:

a. Medeco (MC) - X4.

E. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).
4. Construction Control Keys (where required): Two (2).
5. Permanent Control Keys (where required): Two (2).

G. Construction Keying: Provide temporary keyed construction cores.

H. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.7 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).

2.8 MORTISE LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all features and functionality as specified herein.

1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ML2000 Series.
 - b. Sargent Manufacturing (SA) - 8200 Series.
 - c. Schlage (SC) - L9000 Series.

2.9 AUXILIARY LOCKS

- A. Mortise Deadlocks, Small Case: ANSI/BHMA A156.36, Grade 1, small case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. Steel or stainless steel bolts with a 1" throw and hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - DL4000 Series.
 - b. Sargent Manufacturing (SA) - 4870 Series.
 - c. Schlage (SC) - L460 Series.

2.10 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 4. Dustproof Strikes: BHMA A156.16.

2.11 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. Exit devices shall have a five-year warranty.
 2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
 12. Hurricane and Storm Shelter Compliance: Devices to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or storm shelter products that have been independently third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.
 - c. Von Duprin (VD) - 35A/98 XP Series.

2.12 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Heavy duty surface mounted door closers shall have a 30-year warranty.
 2. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - DC6000 Series.
 - b. LCN Closers (LC) – 4040XP Series.
 - c. Sargent Manufacturing (SA) - 351 Series.

2.13 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other

types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

- a. Ives (IV).
- b. Rockwood (RO).
- c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

1. Manufacturers:

- a. Norton Rixson (RF).
- b. Sargent Manufacturing (SA).

2.15 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. National Guard Products (NG).
2. Pemko (PE).
3. Zero (ZE).

2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
1. Manufacturers:
 - a. Sargent Manufacturing (SA) - 3280 Series.
 - b. Securitron (SU) - DPS Series.
- B. Switching Power Supplies: Provide power supplies with either single or dual voltage configurations at 12 or 24VDC. Power supplies shall have battery backup function with an integrated battery charging circuit and shall provide capability for power distribution, direct lock control and Fire Alarm Interface (FAI) through add on modules. Power supplies shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs.
1. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 2. Manufacturers:
 - a. Securitron (SU) - AQD Series.
 - b. Altronix (AS) - Maximal 3.

2.17 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
 - 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
 - 1. Quantities listed are for each pair of doors, or for each single door.
 - 2. The supplier is responsible for handing and sizing all products.
 - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
- B. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SA - SARGENT
4. MC - Medeco
5. RO - Rockwood
6. RF - Rixson
7. SU - Securitron
8. OT - Other

Set: 1.0

Doors: 102

Description: Ext Pr HM Mech Rm

2	Continuous Hinge	CFM__HD1		PE
1	Dust Proof Strike	570	US26D	RO
2	Flush Bolt	555 / 557 12" / 72" AFF	US26D	RO
1	Storeroom Lock	LC- 8204 LNL	US26D	SA
1	Cylinder	As Required		SA
1	Coordinator	2672	US28	RO
2	Mounting Bracket	2601AB	US28	RO
2	Surface Closer w/stop arm	351 CPS	689	SA
1	Astragal Set (2)	303AS		PE
1	Rain Guard	346C		PE
1	Gasketing	2891APK		PE
2	Sweep	3452AV		PE
1	Threshold*	2005AT		PE

*Threshold may not be required with ramp existing

END OF SECTION

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SECTION 099100
EXTERIOR HIGH-PERFORMANCE PAINTS AND COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Exterior paint and coating systems including surface preparation.

1.2 RELATED SECTIONS

- A. Division 05 - Metal Fabrications
- B. Division 08 - Hollow Metal Doors and Frames.

1.3 REFERENCES

- A. Steel Structures Painting Council (SSPC):
 1. SSPC-SP 1 - Solvent Cleaning.
 2. SSPC-SP 2 - Hand Tool Cleaning.
 3. SSPC-SP 3 - Power Tool Cleaning.
 4. SSPC-SP5/NACE No. 1, White Metal Blast Cleaning.
 5. SSPC-SP6/NACE No. 3, Commercial Blast Cleaning.
 6. SSPC-SP7/NACE No. 4, Brush-Off Blast Cleaning.
 7. SSPC-SP10/NACE No. 2, Near-White Blast Cleaning.
 8. SSPC-SP11, Power Tool Cleaning to Bare Metal.
 9. SSPC-SP12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating.
 10. SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete.
- B. Material Safety Data Sheets / Environmental Data Sheets: Per manufacturer's MSDS/EDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.
- C. California Department of Public Health (CDPH):
 1. CDPH v1.1-2010 and V1.2-2017

1.4 SUBMITTALS

- A. Submit under provisions of Section 013300 - Submittals.
- B. Product Data: For each paint system indicated, including.
 1. Product characteristics.
 2. Surface preparation instructions and recommendations.
 3. Primer requirements and finish specification.
 4. Storage and handling requirements and recommendations.
 5. Application methods.
 6. Cautions for storage, handling and installation.
- C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's standard products, colors and sheens available.
- D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

- E. Coating Maintenance Manual: Upon conclusion of project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams, "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.
- F. Only submit complying products based on project requirements (i.e. LEED). One must also comply with the regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.
- G. USGBC LEED V4 Submittals:
 - 1. MRc2 Environmental Product Declaration Product Language: Products shall be selected with a preference to products that have product-specific environmental product declaration documentation.
 - 2. EQc2 Low Emitting Materials: The VOC content of all adhesives, sealants, paints and coatings in this Section shall not exceed the VOC limits established in Division 01 Sustainable Design sections.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentioned, Architect will select from standard products, colors and sheens available.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish surfaces for verification of products, colors and sheens.
 - 2. Finish area designated by Architect.
 - 3. Provide samples that designate primer and finish coats.
 - 4. Compatibility and Adhesion: Check after one week of drying and curing by testing in accordance with ASTM D3359; Adhesion by tape test. If coating system is incompatible, additional surface preparation up to and including complete removal may be required.
 - 5. Do not proceed with remaining work until the Architect approves the mock-up.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
 - 1. Product name, and type (description).
 - 2. Application and use instructions.
 - 3. Surface preparation.
 - 4. VOC content.
 - 5. Environmental handling.
 - 6. Batch date.
 - 7. Color number.

- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- B. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Sherwin-Williams, which is located at: 101 Prospect Ave.; Cleveland, OH 44115; ASD Toll Free Tel: 800-524-5979; Tel: 216-566-2000; Fax: 440-826-1989; Email: request info specifications@sherwin.com; Web: www.swspecs.com.
- B. Equal paint products made by one of the following manufacturers are acceptable:
 - 1. Benjamin Moore
 - 2. PPG Paints
 - 3. Others, with prior-approval of Architect, in accordance with Division 01 requirements.
- C. Requests for substitutions will be considered in accordance with provisions of Section 016000 - Product Requirements.

2.2 APPLICATIONS/SCOPE

- A. Exterior Paint and Coating Systems:
 - 1. Concrete: Concrete Masonry Units
 - 2. Metal: Hollow Metal Doors and Frames, Miscellaneous Steel.
 - 3. Structural Steel

2.3 PAINT MATERIALS - GENERAL

- A. Paints and Coatings:
 - 1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
 - 2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow

manufactures product instructions for optimal color conformance.

- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.
- D. Color: To be selected by Architect; Refer to Finish Schedule.
- E. LEED Requirements: LEED V4 and V4.1 EQ Credit: Indoor Environmental Quality-Low Emitting Materials.

2.4 EXTERIOR PAINT AND COATING SYSTEMS

2.5 HIGH PERFORMANCE EXTERIOR PAINT AND COATING SYSTEMS

2.6

- A. CMU– (To be painted to match existing surroundings).
 - 1. System:
 - a. Finish: Match Existing
 - 1) 1st Coat: S-W Loxon Concrete and masonry Primer/Sealer, LX2W50
 - 2) 2nd Coat: S-W Loxon Self Cleaning Acrylic Coating, LX14
 - 3) 3rd Coat: S-W Loxon Self Cleaning Acrylic Coating, LX14
- B. Metal: Miscellaneous Steel, Hollow Metal Doors & Frames.
 - 1. Alkyd Systems; Waterbased:
 - a. Semi-Gloss Finish:
 - 1) 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils wet, 2.0 mils dry).
 - 2) 2nd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss, B53-1150 Series.
 - 3) 3rd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss, B53-1150 Series (4.0-5.0 mils wet, 1.4 - 1.7 mils dry per coat).

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- C. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

- A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.

1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
 2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply solution and scrub the mildewed area. Allow solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
 3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
 4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.
- B. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.
- C. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments.
- D. Steel: Structural, Plate, And Similar Items: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
1. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
 2. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
 3. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill

- scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
 5. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
 6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
 7. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
 8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
 9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
 10. Water Blasting, SSPC-SP12/NACE No. 5: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

3.3 INSTALLATION

- A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.
- B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or

morning fog or dew.

- C. Apply coatings using methods recommended by manufacturer.
- D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.
- F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.
- G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

3.4 PROTECTION

- A. Protect finished coatings from damage until completion of project.
- B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

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SECTION 22 05 00 - GENERAL PROVISIONS FOR PLUMBING

A. GENERAL

A. DIVISION OF SPECIFICATIONS

1. For Bidder's convenience only, this Division of the Specifications is divided into the following parts:

22 05 00	GENERAL PROVISIONS FOR PLUMBING
22 05 03	BASIC MATERIALS AND METHODS FOR PLUMBING
22 07 00	PLUMBING INSULATION
22 11 00	WATER SUPPLY
22 16 00	NATURAL GAS PIPING/DISTRIBUTION

B. GENERAL CONDITIONS

1. The General Conditions of the Architectural Specifications along with supplementary conditions, special conditions, information to bidders, and any other pertinent information and documents shall apply the same as if repeated herein. The contractor shall review Architectural General Conditions. Where the requirements of Architectural General Conditions and these specs conflict for the contractor, the most stringent shall be applied.
2. Plumbing subcontractor shall be the sole source responsible party to furnish and install the plumbing system. Plumbing contractor shall be properly licensed to perform this work.
3. Wherever the word contractor is mentioned in Division 22 of these specifications, it is intended to mean the Plumbing Contractor as appropriate. These are sub-contractors to the General Contractor who has the contract with the owner. It is the General contractor who bears the responsibility to fulfill this part of the project (Division 22 – Plumbing) under the contract with the owner. The General Contractor shall be responsible for all costs associated with any and all bidding errors and omissions of the sub-contractor.

C. SCOPE OF WORK

1. Furnish labor, materials and equipment necessary to provide and install the complete plumbing portion of this contract, as called for herein and on accompanying drawings. Parts of the plumbing division may be bid separately or in combination at the contractor's option; however, it shall be the responsibility of the General Contractor to assure himself that all items

covered in the Plumbing Division have been included if he chooses to accept separate bids.

2. Contractor shall refer to the Architectural, Structural, and Mechanical drawings and install all equipment, piping, etc., to meet building and space requirements. **No equipment shall be bid on or submitted for approval if it will not fit in space provided or coordinated with other trades involved on the project.**
3. It is the intention of these Specifications that all plumbing systems shall be furnished complete with all necessary valves, controls, insulation, piping, devices, equipment, etc., necessary to provide a satisfactory installation in working order and in accordance with all Federal, State and Local codes and ordinances.
4. Contractor shall visit the site and acquaint himself thoroughly with all existing facilities and conditions which would affect his portion of the work. Failure to do so shall not relieve the contractor from the responsibility of installing his work to meet conditions.
5. Lack of coordination shall not be acceptable and shall not be a reason for poorly installed work or additional cost to this trade or others on the project. All associated extra cost shall be borne by the contractor. The General contractor shall be responsible for all costs, time and liquidated damages associated with lack of coordination or poor coordination.

D. LOCAL CONDITIONS

1. Location and elevation of all services is based on information obtained from the Owner. However, this shall serve as a general guide only and the contractor shall visit the site and verify the location and elevation of this service to his own satisfaction in order to determine the amount of work required for the execution of the contract.
2. Contractor shall contact the various utility companies, determine the extent of their requirements and cooperate with the utility company in reaching a finished product. Contractor shall pay charges by Utility Company for extensions, connections, meter fees, street patching, etc.
3. In case major changes are required, this fact, together with the reasons therefore, shall be submitted to the Architect, in writing, not less than seven days before the date of bidding. Failure to comply with this requirement will make the contractor liable for any changes, additions and expenses necessary for the successful completion of the project.

E. CUTTING AND PATCHING

1. Initial cutting and patching shall be the responsibility of the General Contractor with the Plumbing Contractor responsible for laying out and marking any and all holes required for the reception of his work. No structural beams or joists shall be cut or thimble without first receiving the approval of the Architect/Engineer. After initial surfacing has been done, any further cutting, patching and painting shall be done at this contractor's expense.
2. Cutting and patching shall be done in such a manner that the surrounding work will be restored to its original condition.
3. The plumbing piping shall be run at proper slopes and without conflict with other trades. It may be necessary to penetrate beams, grade beams, footings and foundations. Install thimbles as required and of approved by the Architect.

F. CODES AND STANDARDS

1. The entire plumbing work shall comply with the rules and regulations of the City, Parish and State in which this project is being constructed including the State Fire Marshal and State Board of Health. All modifications required by these authorities shall be made without additional charge to the Owners. The Plumbing Contractor shall report these changes to the Architect and secure his approval before work is started.
2. In addition to the codes mentioned, all plumbing work and equipment shall conform to the applicable portions of the following Specifications, codes and regulations:
 - a. National Electric Code
 - b. National Fire Protection Association
 - c. American Society of Mechanical Engineers
 - d. Underwriters's Laboratories
 - e. American Gas Association
 - f. Energy Code for Commercial and High Rise Residential Buildings
 - g. International Energy Conservation Code
 - h. International Building Code (LA)
 - i. International Plumbing Code (LA)
 - j. International Fuel Gas Code (LA)
3. Materials, equipment and accessories installed under this contract shall conform to all rules, codes, etc., as recommended by National Associations governing the manufacturer, rating and testing of such materials, equipment and accessories. Materials shall be new and of the best quality and first class in every respect. Whenever directed by the

Architect, contractor shall submit a sample for approval before proceeding.

4. Where laws or local regulations provide that certain accessories such as gauges, thermometers, relief valves and parts be installed on equipment, it shall be understood that such equipment be furnished complete with the necessary accessories whether or not called for in these Specifications.
5. Unfired pressure vessels shall be built in accordance with the ASME Code and so stamped. Furnish shop certificates for each vessel.
6. Material and equipment furnished or installed as part of these construction documents shall be installed and operated in strict accordance with the respective manufacturer's guidelines for installation and operating instructions. The manufacturer's guidelines shall become part of the construction documents.

G. MINOR DEVIATIONS

1. Plans and detail sketches are submitted to limit, explain and define conditions, specified requirements, pipe sizes and manner of erecting work. Structural or other conditions may require certain modifications from the manner of installation shown and such deviations are permissible and shall be made as required, but, specified sizes and requirements necessary for satisfactory operation shall remain unchanged. It may be necessary to shift pipes or to change the shape of and these changes shall be made as required. All such changes shall be referred to the Architect/Engineer for approval before proceeding. Extra charges shall not be allowed for these changes.
2. No structural beams or joists (concrete or steel) shall be cut or thimble without first receiving the approval of the Architect. After initial surfacing has been done, any further cutting, patching and painting shall be done at the Plumbing Contractor's own expense.
3. Contractor shall realize that the drawings could delve into every step, sequence or operation necessary for the completion of the project without drawing on the contractor's experience or ingenuity. However, only typical details are shown on the plans. In cases where the contractor is not certain about the method of installation of his work, he shall ask for details. Lack of details shall not be an excuse for improper installation. Submit installation shop drawings with manufacturer's details for review prior to installation.
4. In general, the drawings are diagrammatic and the contractor shall install his work in a manner so that interferences between the various trades are avoided. In cases where interferences do occur, the Architect/Engineer is

to state which equipment, piping, etc., is to be relocated regardless of which item was first installed.

H. WORKMANSHIP

1. Workmanship shall be of highest grade, highest quality and all construction shall be done according to the best practice of the trade. Work shall be completed to satisfaction of the Architect/Engineer.

I. COORDINATION

1. Coordinate work of the different trades to avoid interferences between plumbing and all other work. All piping, ductwork, etc., shall be installed in lines as required to accomplish this end whether or not shown on the plans.
2. There will be a certain amount of work which must be coordinated with the Owner. This contractor shall coordinate required work with the Owner through the General Contractor using procedures acceptable to the Architect and Owner. The contractor shall maintain documentation of coordinated work.
3. This contractor shall coordinate and confirm that all equipment requiring electric service will be adequately and properly serviced by Electrical Contractor. Any conflicts shall be brought to the attention of the Architect/Engineer prior to ordering the equipment. **VERIFY ALL VOLTAGES WITH THE ELECTRICAL PLANS AND ELECTRICAL CONTRACTOR.**
4. This contractor shall coordinate the space clearances required for the plumbing system with the structure, ceilings, lights, ductwork, etc. In some cases, due to space limitations, it may be necessary to reroute piping to meet the conditions of the project. Any rerouting shall be part of this project and done without any additional cost to the Owner. **DO NOT MAKE PIPING WITHOUT COORDINATION. Avoid conflicts with other trades.**
5. All piping shall be run as high as possible with sleeves through concrete beams to avoid conflicts. This means the piping shall run in or through the structure unless approved otherwise by the Architect/Engineer.

J. REVIEW OF MATERIALS

1. Whenever manufacturers or trade names are mentioned in these plans or Specifications, the words "or approved equivalent" shall be assumed to follow whether or not so stated. Manufacturers or trade names are used to establish a standard of quality only and should not be construed to infer a

preference. Equivalent products which meet the Architect's approval will be accepted; however, these requests for acceptance of products must be received by the Architect a minimum of ten days prior to bid date. Submission shall include manufacturer's name, model number, rating table and construction features. Upon receipt and checking of this submittal, the Architect will issue an addendum listing items which are approved as equivalent to those specified. The contractor shall base his bid solely on those items specified or included in the "Prior Approval Addendum" as no other item will be acceptable. Prior approval of a particular piece of equipment does not mean automatic final acceptance and will not relieve the contractor of the responsibility of assuring himself that this equipment is in complete accord with plans and Specifications and will fit into the space provided. Submit shop drawings on all items of equipment for approval as hereinafter specified.

2. Should a substitution or variation occur, the better quality or greater quantity of material or work shall be furnished. This also does not preclude other manufacturers if they meet the following criteria:
 - a. Product proposed for substitution shall be equal or superior to that specified in construction, efficiency, utility and function.
 - b. Physical size of substitute brand shall not be greater than space provided for it.
 - c. Profile of substitution shall be same concerning size, shape, indentations, recesses, etc.
 - d. Complete illustrations, specifications and description of substitution shall be submitted for approval.
 - e. Availability and proximity of manufacturer's service representative shall be factors considered in substitution approval.
 - f. Substitution and/or variations shall be reviewed and allowed when there is no change in cost to the project and shall be made at the discretion of the Engineer.

K. SHOP DRAWINGS

1. Submit all shop drawings with adequate time for review. The General Contractor and his sub-contractors shall bear all responsibility for any extra costs or delays to late submittals of shop drawings.
2. Drawings shall be presented in a clear and thorough manner.
3. Details shall be identified by reference to sheet detail, schedule or room numbers shown on contract and drawings.
4. Drawings shall contain the following information:
 - a. Date.

- b. Number of the drawing or revision.
 - c. Name of project or facility.
 - d. Name of contractor and subcontractor.
 - e. Clear identification of contents and location of work.
5. Preparation:
 - a. Clearly mark each copy to identify pertinent products or models.
 - b. Show performance characteristics and capacities.
 - c. Show dimensions and clearances required.
 - d. Show wiring or piping diagrams and controls.
 - e. Show weights and mounting data.
 - f. Provide letter documentation confirming that all coordination with other trades effected have been done. This is especially necessary with the electrical requirements and rough-in requirements.
6. Manufacturer's standard schematic drawings and diagrams:
 - a. Modify drawings and diagrams to delete information which is not applicable to the work.
 - b. Supplement standard information to provide information specifically applicable to the work.
7. Office samples shall be of sufficient size and quantity to clearly illustrate:
 - a. Functional characteristics of the product, with integral related parts and attachment devices.
 - b. Full range of color, texture and pattern.
8. Equipment shop drawing shall be prepared by the contractor/supplier. These shop drawing shall include the manufacturer's performance data and installation manuals. In addition, the shop drawings shall show the installation specific to this project.
9. Assemble certificates, executed by each of the respective manufacturers, suppliers, and subcontractors.
10. All submittals shall be submitted prepaid and in ample time for review before installation.
11. Six (6) copies of each submittal shall be submitted to the Architect.
12. These shop drawings shall be supplied as part of this contractor's contract. Any drawings not approved shall be resubmitted until approved. **Submit all shop drawings at the same time. No separate items will be accepted.**

13. All materials installed in the work shall match the reviewed submittals. After a submission has been reviewed, no substitutions will be permitted without written approval by the Architect.
14. The Architect's/Engineer's review of shop drawings shall not relieve the contractor from the responsibility of incorrectly figured dimensions or any other errors that may be contained in these drawings. The omission from the shop drawings or specifications, even though approved by the Architect, shall not relieve the contractor from furnishing and erecting same.
15. Any delays caused by contractor not submitting shop drawings within a timely manner shall be the problem of the responsible subcontractor and the General Contractor.

L. UTILITIES

1. Connect all utilities at the points indicated on the drawings and extend such utilities to the building and to equipment or facilities requiring same.
2. Contractor shall pay all service and connection charges required by utility companies and/or site conditions (offsets, conflict boxes, etc.).
3. Contractor shall include all costs required by utility companies to extend utilities to the site. It is the responsibility of the contractor to obtain these fees from the utility companies and include those costs in the bid.

M. MATERIALS

1. Work materials shall be new and the best of their respective kinds, and shall bear the label of NFPA, ASME Code, AGA, and UL where such standard has been established for the particular item of equipment used.

N. MATERIAL STORAGE

1. General: Provide space for storage of material and equipment at ground level. Roof surfaces shall not be used for storage of materials or equipment. Any storage within the building shall be approved by the Architect/Engineer prior to use of the space.
2. Exterior: Pipe, fitting, or other materials stored outside of building shall be set on wood or steel racks or platforms inside storage container units. All necessary provisions shall be made to keep water and debris away from such stored material. Ends of pipes and valves shall be kept sealed until used.

3. Warehousing: Equipment subject to rusting shall be kept warehoused until just prior to setting. If necessary the warehouse shall have climate controlled conditions.
4. Offsite warehousing shall be approved by the Architect and Owner only.
5. Any warehousing used shall be approved by the Owner and an insurance certificate naming the Owner as insured shall be provided to the Owner.

O. GROUNDS AND CHASES

1. Contractor shall see that all required chases, sleeves, grounds, holes and accessories necessary for the installation of his work are properly built in as the work progresses; otherwise he shall bear the cost of providing them.

P. SPECIAL TOOLS

1. Special tools required for proper operation or maintenance of any equipment provided under this contract shall be delivered to the Owner at the completion of the project.

Q. FILL AND CHARGES FOR EQUIPMENT

1. Fill and charge with materials or chemicals all devices or equipment as required to comply with the manufacturer's guarantee or as required for proper operation of the equipment.
2. This contractor shall flush systems as required per local and state jurisdictions and equipment/material manufacturer's guideline. (Chlorination, chemical treatment, etc.)

R. EQUIPMENT IDENTIFICATION

1. Stenciling: All items of major plumbing equipment (water heaters, pumps, starters, mixing valves, etc.) shall be neatly and clearly stenciled in letters not less than 1 inch high, with the same designation as appears on drawing. Location and color of such stenciling shall be appropriate for ready identification and/or as directed by the Architect. One set of compatible metal interlocking stencil letters and numbers shall be turned over to the Owner at the completion of the job. At contractor's option engraved plastic adhesive tags may be used. Tags used outdoors shall be listed for such use.
2. Pipe Coding: All piping, etc., both insulated and bare, shall be color coded with a general purpose pipe marker for interior locations and a 6 inch enamel painted ban for exterior locations, and stenciled as to service and characteristics on the 10 foot centers and/or as directed. Directional

arrows not less than 1/2 inch wide and not less than 6 inches long shall be permanently stenciled on each line at each stencil location. Stenciling shall be located such that it is clearly visible from floor or adjacent service platform. Coding shall be as per schedule approved by Owner through submittal to Architect. At contractor's option, pre-manufactured vinyl pipe labels and directional arrows may be used but shall be banded on either end to secure to pipe.

3. Valve tags shall be installed on all valves controlling building zones, areas, or equipment. Valve tags shall be 2 inch diameter brass stenciled with valve number. A framed list of valves with associated numbers, sizes and locations shall be mounted in the building as directed by Architect.

S. TEMPORARY USE OF EQUIPMENT

1. The permanent equipment installation shall not be used for temporary purposes by the contractor for temporary conditioning of the building during construction.
2. Acceptable Use Without Specific Authorization: Temporary use shall not be construed to mean "bumping" of electric motors on equipment to verify rotation direction nor short time operation of systems for test purposes.

T. CLEANING AND ADJUSTING

1. Upon completion of his work, the contractor shall clean and adjust all equipment, controls, valves, etc. Clean all piping, etc., and leave entire installation in good working order.

U. PAINTING

1. This contractor shall obtain the services of a painting sub-contractor as part of his contract with the General Contractor for all painting.
2. General: Except for standard factory finishes, all pipe, pipe covering, equipment, supports, hangers, etc., exposed inside and outside building or in equipment room shall be painted. This contractor shall prepare surface of material to receive first coat of paint. All subsequent coatings shall be prepared by Painting Subcontractor. Requirements covering paints, workmanship and preparation of surfaces as stated in Architectural Specifications shall govern. Color coding shall be approved by Architect (submit color samples). All submittals for review shall be through Architect.
3. Damage: Where standard equipment factory finishes have been damaged or scratched, the damaged area shall be repaired or replaced by the contractor to match the original finish.

4. Preparation: Thoroughly clean surfaces of all rust, scale, cement, and dirt from all equipment, piping or other work installed and leave ready for finish painting.
5. All exposed piping shall be painted. Paint with two (2) coats of paint. The color shall be industry standard color coding. Submit color code chart with sample color chips to Architect for review prior to starting work.

V. FIRESTOPPING

1. Penetrations through rated construction shall be sealed with a material capable of preventing the passage of flames and hot gases when tested in accordance with ASTM-EB14.
2. Notify Architect for inspection of all completed fire and/or smoke barrier walls before any construction is installed that may conceal the firestopping material installation.
3. Access to random selected areas may be required by the architect at the time of final inspection should notification not be given.
4. Provide detailed instructive cutsheets of fire penetration sealing system (firestopping) used to the architect at the time of inspection. Random selective sampling by the contractor will be observed by the architect and State Fire Marshal.

W. NOISE VIBRATION

1. General: Take the utmost precautions in the installation of the equipment, piping systems to prevent noise and vibration transmission.
2. Isolation of equipment: Equipment that would tend to cause noise or vibration shall be isolated to prevent noise transmission to the building or to other equipment.
3. Equipment Connections: Piping, conduit, or other connections to equipment shall be isolated. The contractor shall be responsible for the prevention of noise and vibration transmission through these connections to equipment.

X. PERMITS, INSPECTIONS AND TESTS

1. Contractor shall obtain and pay for permits, fees, etc., for the installation, inspection, service connections, verifying location or construction of the work which are required by any authority and/or agencies having jurisdiction.

2. Contractor shall arrange and pay for inspections, examinations and tests required to obtain complete and final acceptance of all plumbing systems. Contractor shall deliver certificates of all such inspections to the Architect.
3. Contractor shall notify Architect and local governing authorities before any tests are made and tests are not to be drawn off a line covered or insulated until examined and approved by the authorities. In the event defects are found, these shall be corrected and the work shall be retested.
4. Prior to requesting final inspection by the Architect, the contractor shall have a complete coordination and adjustment meeting of all of his subcontractors directly responsible for the operation of any portion of the system. At the time of this meeting, each and every sequence of operation shall be checked to assure proper operation. Notify the Architect in writing ten days prior to this meeting instructing him of the time, date and whom you are requesting be present. This project shall not be accepted until the above provisions are met to the satisfaction of the Architect.

Y. TRAINING OF MAINTENANCE PERSONNEL

1. Contractor shall provide on the job training for Owner's personnel upon completion of the work including testing and adjustment. Minimum 16 hours of onsite training shall include maintenance checks, lubrication of components, adjustment of control set points, and troubleshooting techniques.
2. Contractor shall use factory start-up personnel to train the owner's maintenance personnel (where factory start-up is specified).

Z. OPERATION AND MAINTENANCE INSTRUCTIONS

1. Provide Owner with four (4) copies of printed instructions indicating various pieces of equipment by name and model number complete with parts lists and maintenance and repair instructions. This information shall be bound in plastic covered notebooks. Submit the manuals to the Architect for approval.
2. Include all warranty certificates or statements in a separate section of the manuals. Provide all materials and test certificates for the final inspection.
3. Provide three (3) sets of DVDs of the operation and maintenance manuals.

AA. GUARANTEE

1. Contractor shall guarantee all materials, equipment and workmanship for a period of one year from the date of final acceptance of the project. This

guarantee shall include furnishing of all labor and material necessary to make any repairs, adjustments or replacement of any equipment, parts, etc., necessary to restore the project to first class condition. This guarantee shall exclude only the changing or cleaning of filters.

2. If the contractor's office is in excess of a 50 mile radius of the project, he shall appoint a local qualified contractor to perform any emergency repairs or adjustments required during the guarantee period. The contractor appointed to provide emergency services shall be submitted to the Architect for his approval.
3. Provide list of contract names and numbers for 24/7 troubleshooting calls and/or on-site services for operational issues during the warranty period (service, repairs and troubleshooting shall cover a 1-year period beginning on the date of final acceptance by the Owner's representative). Longer warranties for specific items may be required, refer to equipment specifications.

BB. WARRANTIES

1. Assemble warranties executed by each of the respective manufacturers, suppliers, and subcontractors into a warranty book and prepare a table of contents.
2. Two (2) original signed copies of each warranty are required.
3. Provide complete information for each item including:
 - a. Product and work item.
 - b. Local supplying firm or manufacturer's dealer, with name of principal, address and telephone number.
 - c. Scope of warranty.
 - d. Date of beginning of warranty.
 - e. Duration of warranty.
 - f. Provide information for Owner:
 - g. Proper procedure to evoke the warranty in case of failure.
 - h. Instances which might affect the validity of the warranty.
 - i. Contractor, name of responsible principal, address and telephone number.
 - j. All contractors and manufacturers equipment warranties shall start at the acceptance of the project by the Owner.
 - k. Provide owner with contact information for warranties which extend beyond one year.

CC. RECORD DRAWINGS

1. Contractor shall maintain two (2) sets of drawings of the original construction documents to utilize as markup sets to record field modifications from original construction documents. Once approval has been gained from the Architect, the contractor shall record these variances on the two (2) sets in a neat and readable manner. Noted shall be sizes, locations, changes in directions, etc. with distances dimensioned from columns, walls, inverts, etc. The maintenance and cost of these documents shall be the responsibility of the contractor.

DD. DEMOLITION

1. This contractor shall do all demolition as shown on the plans. The contractor shall make the areas ready for the new construction work. All demolition debris, piping, equipment, etc., shall be removed from the site by this contractor. All demolition work shall be scheduled through the General Contractor to prevent interruption of any existing services. Do not start any demolition which would interrupt the building operation without scheduling with the Owner (schedule through the General Contractor).
2. The Owner shall retain first salvage rights to anything within the demolition area. If the Owner selected an item to be retained, then this contractor shall remove it with care and deliver the item to the Owner designated location on site. Anything not retained by the Owner shall become the property of the contractor and be removed from the site.

EE. MATERIALS CONTAINING HAZARDOUS SUBSTANCES OR COMPONENTS

1. This contractor shall not provide any material or component of equipment which contains asbestos, lead based paint or PCBs. The contractor shall provide certificates or manufacturer's statements/letters to show that the products and/or building materials do not contain asbestos, lead based paint or PCBs.
2. If any product or building material is found to contain asbestos, lead based paint or PCBs, the contractor shall bear all cost for removal, abatement, and disposal of materials in accordance with all state and federal regulations. The contractor shall install replacement materials to the satisfaction of the Architect at no additional cost to the project.
3. During the construction, if the contractor suspects that any material in the building contains or is a hazard material (asbestos, lead, PCB, mercury, etc.) work shall be stopped to prevent disturbance and the Owner shall be notified immediately.

END OF SECTION 22 05 00

SECTION 22 05 03 - BASIC MATERIALS AND METHODS FOR PLUMBING

I. GENERAL

A. DESCRIPTION

1. Type of piping for various systems shall be as specified herein.
2. All pipe shall be true and straight without sags or traps.

II. MATERIALS

A. DOMESTIC WATER PIPE/EQUIPMENT DRAIN PIPE

1. All domestic cold water lines within building and equipment drain piping shall be government type "L" hard copper water tube of standard weight and thickness, unless indicated otherwise. Use 95-5 "lead free" solder on all piping above slab. Use Silfos 1000 degrees Fahrenheit solder on all piping beneath slabs. "Press-Fit" or "Pro-Press" piping is not acceptable.

B. PIPE FITTINGS

1. All pipe fittings shall be same as piping specified unless indicated otherwise.
2. Fittings for domestic water lines shall be solder type wrought copper, Nibco or equivalent.

C. PIPE SPECIALTIES

1. Dielectric unions shall be used between copper and iron pipe.

D. PIPE HANGERS AND SUPPORTS

1. This contractor shall furnish and install all foundations and supports required for his equipment unless indicated otherwise on the drawings.
2. This contractor shall furnish and install all escutcheons, inserts, thimbles, hangers, etc., required for the proper support and installation of his equipment and piping. Cooperate with other trades in locating and placing these items.
3. Provide sleeves for all pipes passing through walls, floors, beams, etc. Sleeves passing through structural members shall be of cast iron or Schedule 40 steel pipe unless other material is approved by the Structural Engineer. Sleeves passing through nonstructural walls or floors shall be of

Schedule 10 galvanized iron. Joints between sleeves and pipes passing through floors shall be made watertight with plastic materials. Where pipes pass through floors shall be made watertight with plastic materials. Where pipes pass through waterproofing membrane, flashing sleeves shall be installed.

4. Provide malleable iron split ring hangers with rod supports throughout. Strap hangers or wire will not be accepted. Maximum spacing of hangers for cast iron pipes shall be 5 feet; for other than soil, use 10 feet.
5. Provide galvanized iron shields between hangers and pipe covering.
6. Provide chrome plated brass escutcheons wherever pipes pass through floors, walls or ceilings in exposed or finished areas.
7. All piping projecting from chases shall be rigidly supported in the wall or chase. Loosely supported piping or accessories will not be accepted.

III. EXECUTION

A. DOMESTIC WATER PIPE

1. Perforated strap hangers shall not be allowed for any part of the hangers.
2. Mains, branches, and run outs: Piping shall be installed as indicated on the drawings. Pipe shall be cut accurately to measurements established at the building and shall be worked into place without springing or forcing. Care shall be taken not to weaken structural portions of the building. Above ground piping shall be run parallel with the lines of the building unless otherwise shown or noted on the drawings. Branch pipes from service lines may be taken from top, bottom, side or main, using such crossover fittings as may be required by structural or installation conditions. Service pipes, valves, and fittings shall be kept a sufficient distance from other work and other services to permit not less than 1/2 inch between finished covering and other work and not 1/2 inch between finished covering on the different services. No water pipe shall be made with reducing fittings. Use of long screws and bushings will not be permitted. Slope water pipe 1 inch in 40 feet and arrange to drain at low point.
3. Expansion and contraction of piping: Allowance for expansion and contraction shall be made throughout. Sufficient flexibility shall be provided on all branch run outs from mains to risers to provide for expansion and contraction of piping. Flexibility shall be provided by installing one or more turns in the line so that the piping will spring enough to allow for expansion without straining.

4. Joints: Tubing shall be cut square, and butts shall be removed. Both inside of fittings and outside of tubing shall be well cleaned with steel wool before sweating. Care shall be taken to prevent annealing of fittings and hard drawn tubing when making connections. Installation shall be made by competent workmen in accordance with manufacturer's recommendation. Mitering of joints for elbows and notching of straight runs of pipe for tees will not be permitted. Joints for soldered fittings shall be made with a noncorrosive paste flux and solid string of wire solder. Cored solder will not be permitted.
5. Valves: Valves shall be provided on all supplies to fixtures as specified under type of fixture and fixture trimmings. Valves indicated in connection with run outs, risers, branches, and mains shall be in accordance with this specification. No valve shall be installed on any lines with its stem below the horizontal. All valves shall be gate valves unless otherwise specified or indicated. Provide drain valves at main shut-off valves, low points of piping and apparatus.
6. Pipe sleeve, hangers, and fixture supports: These items shall be furnished and set and the contractor shall be responsible for their proper and permanent location.
 - a. Pipe sleeves - Install sleeves for all pipes passing through footings, floors, and walls. Clearance between sleeves and pipe covering and/or pipes shall be approximately 1/4 inch. Construction shall not be cut except where approved by the Architect. Where cutting of construction is permitted, the construction shall be repaired to match its original condition. Sleeves shall not be installed in structural members except where indicated. Sleeves are not required for wall hydrants.
 - 1) Install sleeves for pipes that pass through walls. Sleeves that pass through walls shall be cut flush with surfaces. The space between sleeves and pipe or covering shall be sealed with graphite packing and synthetic rubber caulking compound.
 - 2) Install sleeves where pipes pass through waterproofing membrane. The sleeves shall be provided with an integral flashing flange or a clamping device to which a 4 pound lead flashing shield shall be clamped or soldered. The shield shall extend 12 inches from the pipe and shall be thoroughly mopped into the membrane. The space between the sleeve and pipe shall be made watertight by inserting an oakum gasket, filling the remaining space with lead, and thoroughly caulking.
 - b. Threaded pipe - Support pipes at 7 foot intervals.

- c. Copper tubing - Support tubing at not more than 5 foot intervals. Hangers for copper tubing except where protective shields are installed shall have proper size rings to suit outside diameter of tubing and the hangers or supports shall be copper or copper plated at contact surfaces.
 - d. Underground piping - Lay pipe on a firm bed for its entire length, except where support is otherwise provided.
 - e. Vertical piping - Supports shall be at each floor. Horizontal piping - Hangers and supports shall be installed at locations not more than 3 feet from the end of each run out. A hanger shall be installed not over 1 foot from each change in direction of piping.
- 7. Unions: Make connections to equipment and branch mains with unions. Provide non-conducting type connections wherever jointing dissimilar metals in open systems. Brass adapters and valves are acceptable.
 - 8. Provide drain valves at main shutoff valves, low points of piping and apparatus.
 - 9. Hydrostatically test entire domestic water system to 200 psig or 2-1/2 times normal working pressure.
 - 10. Sealing or flashing the building envelope due to penetrations in building shall be the responsibility of the general contractor.

END OF SECTION 22 05 03

SECTION 22 07 00 – PLUMBING INSULATION

I. GENERAL

A. DESCRIPTION

1. Pipe insulation installation shall not begin until all work has been tested and found to be tight. All insulation shall be UL listed and have a flame spread of less than 25 and a developed smoke rating less than 50. All insulation shall be banded with aluminum bands, three per section. All insulation shall be continuous through walls, floors, ceilings, etc.

II. MATERIALS

A. DOMESTIC WATER PIPING

1. Cover cold water lines with 1 inch thick closed cell rubber type insulation. At contractor's option, 1 inch thick fiberglass insulation with white universal jacket may be used. All flanges, valves and fittings shall be insulated with closed cell rubber type molded fittings insulation, fabricated mitered segments of pipe insulation or closed cell rubber type insulation equivalent in thickness to insulation of adjoining pipe.
2. All water lines exposed in finished spaces and mechanical rooms shall be covered with 0.020 color coded PVC jacket with solvent welded seams and joints.
3. All water lines outside of building exposed to the weather shall have 1 inch thick closed cell rubber type insulation covered with 0.016 smooth aluminum jacket and elbows.

B. INSULATION BANDS

1. All pipe insulation shall be banded with nylon tie-wrap bands, three (3) to a section, and with one (1) band on each side of each fitting, valve, etc.

C. FLANGES, VALVES AND FITTINGS

1. All flanges, valves and fittings shall be insulated with fabricated fiberglass molded fitting insulation, using factory fabricated fittings up to 3 inches and fabricated mitered segments of pipe insulation equal in thickness to the insulation to the adjoining pipe. All fabricated mitered segments shall be covered with matching embossed vapor barrier laminate.

III. INSTALLATION

- A. Provide clearance for installation of insulation and for access to valves, air vents, drains and unions.
 - 1. Insulation Installation:
 - a. Do not install covering before piping has been tested and approved.
 - b. Ensure piping surface is clean and dry prior to installation.
 - c. Ensure insulation is dry before and during application.
 - d. Insulation shall be continuous through walls, floors and ceiling. Pack around pipes with fire proof self-supporting insulation material, fully sealed.
 - e. Insulate fittings and valves. The end of the insulation shall be fitted with a metal escutcheon plate with set screw or taped neatly with pressure sensitive fiberglass reinforcing cloth.
 - f. All joints shall be sealed with 3 inch wide fiberglass reinforcing cloth with pressure sensitive adhesive.
 - g. Pipe insulation at Hangers and Supports: Pipe insulation at hanger and support shall be protected with a half circular shield of the size of the insulation and 12 inches long constructed from 20 gauge galvanized steel. The shield shall be held in place with the fiberglass reinforcing cloth and pressure sensitive adhesive. Where pipes pass through walls, ceiling and floor in finished areas, escutcheon plates shall be installed to encompass pipe and insulation. Escutcheon plates shall be chromed brass or stainless steel and shall be either solid or the clamp on split type.
 - h. Painting of fiberglass pipe jacket is not required. Piping shall be painted colors as standard in this facility.

END OF SECTION 22 07 00

SECTION 22 11 00 - WATER SUPPLY

I. GENERAL

A. DESCRIPTION

1. Install water supply piping as indicated on plans.

II. MATERIALS

A. PIPING

1. All water supply piping shall be of materials hereinbefore specified.
2. All water lines shall be disinfected in accordance with the State Sanitary Code.

III. EXECUTION

A. INSTALLATION

1. Make up complete water supply system. Connect to all fixtures and outlets requiring water.

B. TESTING

1. All lines shall be tested in accordance with requirements listed in construction documents and State Plumbing Code.

END OF SECTION 22 11 00

SECTION 22 16 00 – NATURAL GAS PIPING/DISTRIBUTION

I. GENERAL

A. DESCRIPTION

1. Fuel gas systems, including piping, equipment and all necessary accessories as designated in this section. Fuel gas piping to equipment shall be routed as shown on plans.

B. RELATED WORK

1. FIRESTOPPING: Penetrations in rated enclosures.
2. PAINTING: Preparation and finish painting and identification of piping systems.
3. COMMON WORK RESULTS FOR PLUMBING.
4. GENERAL DUTY VALVES FOR PLUMBING PIPING

C. SUBMITTALS

1. Submit SHOP DRAWINGS, PRODUCT DATA, and SAMPLES.
2. Manufacturer's Literature and Data:
 - a. Pipe & Fittings.
 - b. Valves.
 - c. Strainers.
 - d. All items listed in Part 2 - Products.
3. Detailed shop drawing of clamping device and extensions when required in connection with the waterproofing membrane.

D. APPLICABLE PUBLICATIONS

1. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. Use the edition listed or most recent edition adopted by Local, State or Federal agencies having jurisdiction.
2. Federal Specifications (Fed. Spec.):
A-A-59617 Unions, Brass or Bronze Threaded, Pipe Connections and Solder-Joint Tube Connections

3. American National Standards Institute (ANSI):
American Society of Mechanical Engineers (ASME): (Copyrighted Society)
A13.1-(2007)Scheme for Identification of Piping Systems
B16.3-(2006).....Malleable Iron Threaded Fittings: Classes 150 and 300 ANSI/ASME
B16.9-2007.....Factory-Made Wrought Steel Buttwelding Fittings ANSI/ASME
B16.11-2009.....Forged Steel Fittings, Socket-Welding and Threaded ANSI/ASME
B16.15-2006.....Cast Copper Alloy Threaded Fittings: Classes 125 and 250 ANSI/ASME
B31.8-2010Gas Transmission and Distribution Piping Systems ANSI/ASME

4. American Society for Testing and Materials (ASTM):
A47-99(2009)Standard Specification for Ferritic Malleable Iron Castings
A53-10Standard Specification for Pipe, Steel, Black And Hot-Dipped, Zinc-coated Welded and Seamless
A183-09Standard Specification for Carbon Steel Track Bolts and Nuts
A536-09Standard Specification for Ductile Iron Castings
A733-03(2009)e1Standard Specification for Welded and Seamless Carbon Steel and Austenitic Stainless Steel Pipe Nipples
B687-99(2005)e1Standard Specification for Brass, Copper, and Chromium-Plated Pipe Nipples

5. National Fire Protection Association (NFPA):
54-2009National Fuel Gas Code

6. International Code Council
IPC 2009International Plumbing Code
IFGC 2009International Fuel Gas Code

7. International Association of Plumbing and Mechanical Officials (IAPMO): Uniform Plumbing Code – 2009
IS6-06.....Installation Standard

8. Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS):
SP-72-2010Ball Valves with Flanged or Butt-Welding For General Service
SP-110-2010Ball Valve Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends

E. SYSTEM PRESSURE

1. Natural gas systems, unless otherwise noted are designed and materials and equipment selected to prevent failure under gas pressure at downstream side of pressure regulator.

II. MATERIALS

A. FUEL GAS SERVICE CONNECTIONS TO BUILDING (UNDERGROUND AND/OR EXPOSED TO WEATHER)

1. From inside face of exterior wall (outside of building), use coated piping as herein before and/or herein after specified.
2. Pipe: Black Steel, ASTM A53, Schedule 40. Shop-applied pipe coating shall be one of the following types:
 - a. Coal Tar Enamel Coating: Exterior of pipe and fittings shall be cleaned, primed with Type B primer and coated with hot-applied coal tar enamel with bonded layer of felt wrap in accordance with AWWA C203. **Asbestos felt shall not be used**; felt material shall be fibrous glass mat as specified in Appendix Section A2.1 of AWWA C203.
 - b. Adhesive-thermoplastic Resin Coating: Fed. Spec. L-C-530, Type I
 - c. Thermosetting Epoxy Coating: Fed. Spec. L-C-530, Type II
 - d. Field-applied plastic tape material used on pipe joints and for repairing damaged areas of shop-applied coatings, Fed. Spec. L-T-1512, Type I, 10 mils nominal thickness for pipe joints, and Type II, 20 mils nominal thickness for coating repairs.
3. Holiday Inspections: Procedure for holiday inspection: Holiday Inspection shall be conducted on all coatings to determine the presence and number of discontinuities in those coatings referenced in 2.6/B - 1, 2, 3, and 4 using a Tinker & Razor model AP/W Holiday Detector. Holiday inspection shall be performed in a manner spelled out in the Tinker & Razor operating instructions and at a voltage level recommended by the coating manufacturer or applicable NACE International Standard such as RPO 274-93 or RPO 490-90 in the case thermosetting epoxy coating. Holiday Detectors shall be calibrated and supplied with a certificate of calibration from the factory. A calibration of the Holiday Detector shall be performed once every 6 months to verify output voltages are true and correct.
4. Fittings:

- a. Butt weld fittings, wrought steel, ANSI B16.9.
- b. Socket weld and threaded fittings forged steel, ANSI B16.11.
- c. Grooved End: Ductile iron (ASTM A536, Grade 65-45-12), malleable iron (ASTM A47, Grade 32510), or steel (ASTM A53, Type F or Type E or S, Grade B).

5. Joints: Welded, ANSI B31.8.

B. FUEL GAS PIPING

1. Pipe: Black steel, ASTM A53, Schedule 40.

2. Nipples: Steel, ASTM A733, Schedule 40.

3. Fittings:

- a. Sizes 2 inches under ANSI B 16.3 threaded malleable iron.
- b. Over 2 inches and up to 4 inches ANSI B16.11 socket welded.
- c. Over 4 inches ANSI 16.9 butt welded.

4. Joints: Provide welded or threaded joints.

C. EXPOSED FUEL GAS PIPING

1. Finished Room: Use full iron pipe size chrome plated brass piping for exposed fuel gas piping connecting fixtures, casework, cabinets, equipment and reagent racks when not concealed by apron including those furnished by the Government or specified in other sections.

- a. Pipe: Fed. Spec. WW-P-351, standard weight
- b. Fittings: ANSI B16.15 cast bronze threaded fittings with chrome finish, (125 and 250).
- c. Nipples: ASTM B 687, Chromium-plated.
- d. Unions: 2 inches and smaller Mss SP-72, SP-110, Brass or Bronze threaded with chrome finish. Unions 2-1/2 inches and larger shall be flange type with approved gaskets.
- e. Valves: Mss SP-72, SP-110, Brass or bronze with chrome finish.

2. Unfinished Rooms and Mechanical Rooms: Chrome-plated brass piping is not required. Paint piping systems as specified in Section PAINTING.

D. VALVES

1. Ball Valve: Bronze body, rated for 1025 kPa at 185°C (150 psi at 365°F), 1725 kPa at 121°C (250 psi at 250°F), reinforced TFE seat, stem seal and

thrust washer; end entry, threaded ends, UL-listed for natural or LP gas shut off service when used on those services.

2. Gas Vent Cocks: Type 701: Bronze body, tee handle, rated for 205 kPa at 38°C (30 psi at 100°F), ground plug, rated for tight shut-off on fuel gas service.

E. WATERPROOFING

1. Provide at points where pipes pass through membrane waterproofed floors or walls in contact with earth.
2. Floors: Provide cast iron stack sleeve with flashing device and an underdeck clamp. After stack is passed through sleeve, provide a waterproofed caulked joint at top hub.
3. Walls: See detail shown on drawings.

F. STRAINERS

1. Provide on high pressure side of pressure reducing valves, on inlet side of indicating and control instruments and equipment subject to sediment damage and where shown on drawings. Strainer element shall be removable without disconnection of piping.
2. Gas Lines: "Y" type with removable mesh lined brass strainer sleeve.
3. Body: Smaller than 3 inches, brass or bronze; 3 inches and larger, cast iron or semi-steel.

G. DIELECTRIC FITTINGS

1. Provide dielectric couplings or unions between ferrous and non-ferrous pipe.

H. GAS EQUIPMENT CONNECTORS

1. Flexible connectors with teflon core, interlocked galvanized steel protective casing, AGA certified design.

I. REGULATORS

1. Provide all pressure regulators for the project. Contractor shall be responsible for providing regulators properly selected for pressure, flow, and location. All regulators shall be field adjustable. All regulators shall

be vented type. Regulators installed inside buildings shall have vent piping extended to the exterior of the building.

III. EXECUTION

A. INSTALLATION

1. General: Comply with the International Fuel Gas Code and the following:
 - a. Install branch piping for fuel gas and connect to all fixtures, valves, cocks, outlets, casework, cabinets and equipment, including those furnished by the Government or specified in other sections.
 - b. Pipe shall be round and straight. Cutting shall be done with proper tools. Pipe, shall be reamed to full size after cutting.
 - c. All pipe runs shall be laid out to avoid interference with other work.
 - d. Install valves with stem in horizontal position whenever possible. All valves shall be easily accessible.
 - e. Install union and shut-off valve on pressure piping at connections to equipment.
 - f. Pipe Hangers, Supports and Accessories:
 - 1) All piping shall be supported per the International Fuel Gas Code, Chapter No. 4.
 - 2) Shop Painting and Plating: Hangers, supports, rods, inserts and accessories used for Pipe supports shall be shop coated with zinc Chromate primer paint. Electroplated copper hanger rods, hangers and accessories may be used with copper tubing.
 - 3) Floor, Wall and Ceiling Plates, Supports, Hangers:
 - a) Solid or split unplated cast iron, chrome plated in finished areas.
 - b) All plates shall be provided with set screws.
 - c) Pipe Hangers: Height adjustable clevis type.
 - d) Adjustable Floor Rests and Base Flanges: Steel.
 - e) Concrete Inserts: "Universal" or continuous slotted type.
 - f) Hanger Rods: Mild, low carbon steel, fully threaded or Threaded at each end with two (2) removable nuts at each end for positioning rod and hanger and locking each in place.
 - g) Riser Clamps: Malleable iron or steel.
 - h) Rollers: Cast iron.
 - i) Self-drilling type expansion shields shall be "Phillips" type, with case hardened steel expander plugs.

- j) Miscellaneous Materials: As specified, required, directed or as noted on the drawings for proper installation of hangers, supports and accessories.
- g. Install cast chrome plated escutcheon with set screw at each wall, floor and ceiling penetration in exposed finished locations and within cabinets and millwork.
- h. Penetrations:
 - 1) Fire Stopping: Where pipes pass through fire partitions, fire walls, smoke partitions, or floors, install a fire stop that provides an effective barrier against the spread of fire, smoke and gases. Completely fill and seal clearances between piping and openings with the fire stopping materials.
 - 2) Waterproofing: At floor penetrations, completely seal clearances around the pipe and make watertight with appropriate sealant.

2. Piping shall conform to the following:

- a. Fuel Gas:
 - 1) Entire fuel gas piping installation shall be in accordance with requirements of NFPA 54.
 - 2) Provide fuel gas piping with plugged drip pockets at low points.

B. CLEANING OF SYSTEM AFTER INSTALLATION

- 1. Clean all piping systems to remove all dirt, coatings and debris.

C. TESTING

- 1. General: Test system either in its entirety or in sections after system is installed and cleaned.
- 2. Test shall be made in accordance with Section 406 of the International Fuel Gas Code. The system shall be tested at a minimum of 1.5 times maximum working pressure, but not less than 30 psig (20 kPa) gage).

END OF SECTION 22 16 00

SECTION 23 05 00 - GENERAL PROVISIONS FOR HVAC

I. GENERAL

A. DIVISION OF SPECIFICATIONS

1. For Bidder's convenience only, this Division of the Specifications is divided into the following parts:

23 05 00	GENERAL PROVISIONS FOR HVAC
23 05 03	BASIC MATERIALS AND METHODS FOR HVAC
23 05 93	TESTING, ADJUSTING AND BALANCING
23 07 00	MECHANICAL INSULATION
23 09 00	TEMPERATURE CONTROLS
23 70 00	AIR CONDITIONING

B. GENERAL CONDITIONS

1. The General Conditions of the Architectural Specifications along with supplementary conditions, special conditions, information to bidders, and any other pertinent information and documents shall apply the same as if repeated herein. The contractor shall review Architectural General Conditions. Where the requirements of Architectural General Conditions and these specs conflict for the contractor, the most stringent shall be applied.
2. Mechanical (HVAC) subcontractor shall be the sole source responsible party to furnish and install the mechanical system. Mechanical contractor shall be properly licensed to perform this work.
3. Wherever the word contractor is mentioned in Division 23 of these specifications, it is intended to mean the Mechanical Contractor as appropriate. These are sub contractors to the General Contractor who has the contract with the owner. It is the General Contractor who bears the responsibility to fulfill this part of the project (Division 23 – Mechanical) under the contract with the owner. The General Contractor shall be responsible for all costs associated with any and all bidding errors and omissions of the sub-contractor.

C. SCOPE OF WORK

1. Furnish labor, materials and equipment necessary to provide and install the complete mechanical portion of this contract, including air conditioning, heating, and ventilating systems as called for herein and on accompanying drawings. Parts of the mechanical division may be bid

separately or in combination at the contractor's option; however, it shall be the responsibility of the General Contractor to assure himself that all items covered in the Mechanical Division have been included if he chooses to accept separate bids.

2. Contractor shall refer to the Architectural, Structural and Plumbing drawings and install all equipment, piping, etc., to meet building and space requirements. **No equipment shall be bid on or submitted for approval if it will not fit in space provided or coordinated with other trades involved on the project.**
3. It is the intention of these Specifications that all mechanical systems shall be furnished complete with all necessary valves, controls, insulation, piping, devices, equipment, etc., necessary to provide a satisfactory installation in working order and in accordance with all Federal, State and Local codes and ordinances.
4. Contractor shall visit the site and acquaint himself thoroughly with all existing facilities and conditions which would affect his portion of the work. Failure to do so shall not relieve the contractor from the responsibility of installing his work to meet conditions.
5. Lack of coordination shall not be acceptable and shall not be a reason for poorly installed work or additional cost to this trade or others on the project. All associated extra cost shall be borne by the contractor. The General Contractor shall be responsible for all costs, time and liquidated damages associated with lack of coordination or poor coordination.

D. LOCAL CONDITIONS

1. Location and elevation of all services is based on information obtained from the Owner. However, this shall serve as a general guide only and the contractor shall visit the site and verify the location and elevation of this service to his own satisfaction in order to determine the amount of work required for the execution of the contract.
2. Contractor shall contact the various utility companies, determine the extent of their requirements and cooperate with the utility company in reaching a finished product. Contractor shall pay charges by Utility Company for extensions, connections meter fees, street patching, etc.
3. In case major changes are required, this fact, together with the reasons therefore, shall be submitted to the Architect, in writing, not less than seven days before the date of bidding. Failure to comply with this requirement will make the contractor liable for any changes, additions and expenses necessary for the successful completion of the project.

E. CUTTING AND PATCHING

1. Initial cutting and patching shall be the responsibility of the General Contractor with the Mechanical Contractor responsible for laying out and marking any and all holes required for the reception of his work. No structural beams or joists shall be cut or thimbled without first receiving the approval of the Architect/Engineer. After initial surfacing has been done, any further cutting, patching and painting shall be done at this contractor's expense.
2. Cutting and patching shall be done in such a manner that the surrounding work will be restored to its original condition.
3. The HVAC piping shall be run in such a manner as to avoid conflicts with other trades. It may be necessary to penetrate beams, grade beams, footings, and foundations. Install thimbles as required and as approved by the Architect.

F. CODES AND STANDARDS

1. The entire mechanical work shall comply with the rules and regulations of the City, Parish and State in which this project is being constructed including the State Fire Marshal and State Board of Health. All modifications required by these authorities shall be made without additional charge to the Owners. The Mechanical Contractor shall report these changes to the Architect and secure his approval before work is started.
2. In addition to the codes mentioned, all mechanical work and equipment shall conform to the applicable portions of the following Specifications, codes and regulations:
 - a. American Society of Heating, Refrigeration and Air Conditioning Engineers
 - b. National Electric Code
 - c. National Fire Protection Association
 - d. American Society of Mechanical Engineers
 - e. Underwriters's Laboratories
 - f. American Gas Association
 - g. International Energy Conservation Code (LA)
 - h. International Building Code (LA)
 - i. International Plumbing Code (LA)
 - j. International Mechanical Code (LA)
 - k. International Fuel Gas Code (LA)
 - l. SMACNA Guidelines

3. Materials, equipment and accessories installed under this contract shall conform to all rules, codes, etc., as recommended by National Associations governing the manufacturer, rating and testing of such materials, equipment and accessories. Materials shall be new and of the best quality and first class in every respect. Whenever directed by the Architect, contractor shall submit a sample for approval before proceeding.
4. Where laws or local regulations provide that certain accessories such as gauges, thermometers, relief valves and parts be installed on equipment, it shall be understood that such equipment be furnished complete with the necessary accessories whether or not called for in these Specifications.
5. Material and equipment furnished or installed as part of these construction documents shall be installed and operated in strict accordance with the respective manufacturer's guidelines for installation and operating instructions. The manufacturer's guidelines shall become part of the construction documents.

G. MINOR DEVIATIONS

1. Plans and detail sketches are submitted to limit, explain and define conditions, specified requirements, pipe sizes and manner of erecting work. Structural or other conditions may require certain modifications from the manner of installation shown and such deviations are permissible and shall be made as required, but, specified sizes and requirements necessary for satisfactory operation shall remain unchanged. It may be necessary to shift ducts or pipes or to change the shape of ducts and these changes shall be made as required. All such changes shall be referred to the Architect/Engineer for approval before proceeding. Extra charges shall not be allowed for these changes.
2. No structural beams or joists (concrete or steel) shall be cut or thimble without first receiving the approval of the Architect. After initial surfacing has been done, any further cutting, patching and painting shall be done at the Mechanical Contractor's own expense.
3. Contractor shall realize that the drawings could delve into every step, sequence or operation necessary for the completion of the project without drawing on the contractor's experience or ingenuity. However, only typical details are shown on the plans. In cases where the contractor is not certain about the method of installation of his work, he shall ask for details. Lack of details shall not be an excuse for improper installation. Submit installation shop drawings with manufacturer's details for review prior to installation.

4. In general, the drawings are diagrammatic and the contractor shall install his work in a manner so that interferences between the various trades are avoided. In cases where interferences do occur, the Architect is to state which equipment, piping, etc., is to be relocated regardless of which item was first installed.
5. Materials and equipment furnished or installed as part of these construction documents shall be installed and operated in strict accordance with the respective manufacturer's guidelines for installation and operating instructions. The manufacturer's guidelines shall become part of the construction documents.

H. WORKMANSHIP

1. Workmanship shall be of highest grade, highest quality and all construction shall be done according to the best practice of the trade. Work shall be completed to satisfaction of the Architect/Engineer.

I. COORDINATION

1. Coordinate work of the different trades to avoid interferences between mechanical and all other work. All piping, ductwork, etc., shall be installed in lines as required to accomplish this end whether or not shown on the plans.
2. There will be a certain amount of work which must be coordinated with the Owner. This contractor shall coordinate required work with the Owner through the General Contractor using procedures acceptable to the Architect and Owner. The contractor shall maintain documentation of coordinated work.
3. This contractor shall coordinate and confirm that all equipment requiring electric service will be adequately and properly serviced by Electrical Contractor. Any conflicts shall be brought to the attention of the Architect/Engineer prior to ordering the equipment. **VERIFY ALL VOLTAGES WITH THE ELECTRICAL CONTRACTOR.**
4. This contractor shall coordinate the space clearances required for the HVAC ductwork with the structure, ceilings, lights, sprinklers, etc. In some cases, due to space limitations, it may be necessary to re-size ductwork to meet the conditions of the project. **Any resizing required shall be part of this project and done without any additional cost to the Owner. DO NOT MAKE DUCTWORK WITHOUT COORDINATION. Avoid conflicts with other trades.**

5. This contractor shall coordinate the installation of HVAC piping with all parts of the structural foundation system and structural building systems. Provide sleeves through grade beams or concrete beams at all conflicts. All points of penetration of foundation shall be reviewed by the Architect/Engineer prior to rough-in. All sleeves shall be installed per instructions and details of the Architect.
6. All piping shall be run as high as possible with sleeves through concrete beams to avoid conflicts. This means the piping shall run in or through the structure unless approved otherwise by the Architect/Engineer.

J. REVIEW OF MATERIALS

1. Whenever manufacturers or trade names are mentioned in these plans or Specifications, the words "or approved equivalent" shall be assumed to follow whether or not so stated. Manufacturers or trade names are used to establish a standard of quality only and should not be construed to infer a preference. Equivalent products which meet the Architect's approval will be accepted; however, these requests for acceptance of products must be received by the Architect a minimum of ten days prior to bid date. Submission shall include manufacturer's name, model number, rating table and construction features. Upon receipt and checking of this submittal, the Architect will issue an addendum listing items which are approved as equivalent to those specified. The contractor shall base his bid solely on those items specified or included in the "Prior Approval Addendum" as no other item will be acceptable. Prior approval of a particular piece of equipment does not mean automatic final acceptance and will not relieve the contractor of the responsibility of assuring himself that this equipment is in complete accord with plans and Specifications and will fit into the space provided. Submit shop drawings on all items of equipment for approval as hereinafter specified.
2. Should a substitution or variation occur, the better quality or greater quantity of material or work shall be furnished. This also does not preclude other manufacturers if they meet the following criteria:
 - a. Product proposed for substitution shall be equal or superior to that specified in construction, efficiency, utility and function.
 - b. Physical size of substitute brand shall not be greater than space provided for it.
 - c. Profile of substitution shall be same concerning size, shape, indentations, recesses, etc.
 - d. Complete illustrations, specifications and description of substitution shall be submitted for approval.
 - e. Availability and proximity of manufacturer's service representative shall be factors considered in substitution approval.

- f. Substitution and/or variations shall be reviewed and allowed when there is no change in cost to the project and shall be made at the discretion of the Engineer.

K. SHOP DRAWINGS

1. Shop drawings shall be submitted in a timely manner for review. The General Contractor and his sub-contractors shall bear all responsibility for any extra costs or delays to late submittals of shop drawings.
2. Drawings shall be presented in a clear and thorough manner.
3. Details shall be identified by reference to sheet detail, schedule or room numbers shown on contract and drawings.
4. Drawings shall contain the following information:
 - a. Date.
 - b. Number of the drawing or revision.
 - c. Name of project or facility.
 - d. Name of contractor and subcontractor.
 - e. Clear identification of contents and location of work.
5. Preparation:
 - a. Clearly mark each copy to identify pertinent products or models.
 - b. Show performance characteristics and capacities.
 - c. Show dimensions and clearances required.
 - d. Show wiring or piping diagrams and controls.
 - e. Show weights and mounting data.
 - f. Provide letter documentation confirming that all coordination with other trades effected have been done. This is especially necessary with the electrical requirements and rough-in requirements.
6. Manufacturer's standard schematic drawings and diagrams:
 - a. Modify drawings and diagrams to delete information which is not applicable to the work.
 - b. Supplement standard information to provide information specifically applicable to the work.
7. Office samples shall be of sufficient size and quantity to clearly illustrate:
 - a. Functional characteristics of the product, with integral related parts and attachment devices.
 - b. Full range of color, texture and pattern.

8. Equipment shop drawing shall be prepared by the contractor/supplier. These shop drawing shall include the manufacturer's performance data and installation manuals. In addition, the shop drawings shall show the installation specific to this project.
9. Assemble certificates, executed by each of the respective manufacturers, suppliers, and subcontractors.
10. All submittals shall be submitted prepaid and in ample time for review before installation.
11. Six (6) copies of each submittal shall be submitted to the Architect.
12. These shop drawings shall be supplied as part of this contractor's contract. Any drawings not approved shall be resubmitted until approved. **Submit all shop drawings at the same time. No separate items will be accepted.**
13. All materials installed in the work shall match the reviewed submittals. After a submission has been reviewed, no substitutions will be permitted without written approval by the Architect.
14. The Architect's/Engineer's review of shop drawings shall not relieve the contractor from the responsibility of incorrectly figured dimensions or any other errors that may be contained in these drawings. The omission from the shop drawings or specifications, even though approved by the Architect, shall not relieve the contractor from furnishing and erecting same.
15. Any delays caused by contractor not submitting shop drawings within a timely manner shall be the problem of the responsible subcontractor and the General Contractor.

L. MATERIALS

1. Work materials shall be new and the best of their respective kinds, and shall bear the label of NFPA, ASME Code, AGA, and UL where such standard has been established for the particular item of equipment used.

M. MATERIAL STORAGE

1. General: Provide space for storage of material and equipment at ground level. Roof surfaces shall not be used for storage of materials or equipment. Any storage within the building shall be approved by the Architect/Engineer prior to use of the space.

2. Exterior: Pipe, fitting, or other materials stored outside of building shall be set on wood or steel racks or platforms inside storage container units. All necessary provisions shall be made to keep water and debris away from such stored material. Ends of pipes and valves shall be kept sealed until used.
3. Warehousing: Equipment subject to rusting shall be kept warehoused until just prior to setting. If necessary the warehouse shall have climate controlled conditions.
4. Offsite warehousing shall be approved by the Architect and Owner only.
5. Any warehousing used shall be approved by the Owner and an insurance certificate naming the Owner as insured shall be provided to the Owner.

N. GROUNDS AND CHASES

1. Contractor shall see that all required chases, sleeves, grounds, holes and accessories necessary for the installation of his work are properly built in as the work progresses; otherwise he shall bear the cost of providing them.

O. MACHINERY GUARDS

1. Contractor shall provide v-belt guards for each v-belt drive or other hazardous drive. Guard shall enclose the drive entirely and shall have a hole for taking tachometer reading.

P. SPECIAL TOOLS

1. Special tools required for proper operation or maintenance of any mechanical equipment provided under this contract shall be delivered to the Owner at the completion of the project.

Q. FILL AND CHARGES FOR EQUIPMENT

1. Fill and charge with materials or chemicals all devices or equipment as required to comply with the manufacturer's guarantee or as required for proper operation of the equipment.
2. This contractor shall flush systems as required per local and state jurisdictions and equipment/material manufacturer's guidelines (chlorination, chemical treatment, etc.).

R. EQUIPMENT IDENTIFICATION

1. Stenciling: All items of major mechanical equipment (pumps, boilers, starters, valves, etc.) shall be neatly and clearly stenciled in letters not less than 1 inch high, with the same designation as appears on drawing. Location and color of such stenciling shall be appropriate for ready identification and/or as directed by the Architect. One set of compatible metal interlocking stencil letters and numbers shall be turned over to the Owner at the completion of the job. At contractor's option engraved plastic adhesive tags may be used. Tags used outdoors shall be listed for such use.
2. Pipe Coding: All piping, etc., both insulated and bare, shall be color coded with a general purpose pipe marker for interior locations and a 6 inch enamel painted ban for exterior locations, and stenciled as to service and characteristics on the 10 foot centers and/or as directed. Directional arrows not less than 1/2 inch wide and not less than 6 inches long shall be permanently stenciled on each line at each stencil location. Stenciling shall be located such that it is clearly visible from floor or adjacent service platform. Coding shall be as per schedule approved by Owner through submittal to Architect. At contractor's option, pre-manufactured vinyl pipe labels and directional arrows may be used but shall be banded on either end to secure to pipe.
3. Valve tags shall be installed on all valves controlling building zones, areas, or equipment. Valve tags shall be 2 inch diameter brass stenciled with valve number. A framed list of valves with associated numbers, sizes and locations shall be mounted in the building as directed by Architect.

S. TEMPORARY USE OF EQUIPMENT

1. The permanent equipment installation shall not be used for temporary purposes by the contractor for temporary conditioning of the building during construction. **Contractor shall provide temporary dehumidification and drying equipment as required to maintain clean, dry air during construction.**
2. Acceptable Use Without Specific Authorization: Temporary use shall not be construed to mean "bumping" of electric motors on equipment to verify rotation direction nor short time operation of systems for test purposes, operation of refrigeration and heating system for short periods to adjust controls and temperature regulation, or the operation of fans for air balance.

T. CLEANING AND ADJUSTING

1. Upon completion of his work, the contractor shall clean and adjust all equipment, controls, valves, etc. Clean all piping, ductwork, etc., and leave entire installation in good working order.

U. PAINTING

1. This contractor shall obtain the services of a painting sub-contractor as part of contract with the General Contractor for all painting.
2. General: Except for standard factory finishes, all pipe, pipe covering, ducts, equipment, supports, hangers, etc., exposed inside and outside building or in equipment room shall be painted. This contractor shall prepare surface of material to receive first coat of paint. All subsequent coatings shall be prepared by Painting Subcontractor. Requirements covering paints, workmanship and preparation of surfaces as stated in Architectural Specifications shall govern. Color coding shall be approved by Architect (submit color sample). All submittals for review shall be through Architect.
3. Damage: Where standard equipment factory finishes have been damaged or scratched, the damaged area shall be repaired or replaced by the contractor to match the original finish.
4. Preparation: Thoroughly clean surfaces of all rust, scale, cement, and dirt from all equipment, piping or other work installed and leave ready for finish painting.
5. All exposed piping shall be painted. Paint with two (2) coats of paint. The color shall be industry standard color coding. Submit color code chart with sample color chips to Architect for review prior to starting work

V. FIRESTOPPING

1. Penetrations through rated construction shall be sealed with a material capable of preventing the passage of flames and hot gases when tested in accordance with ASTM-EB14.
2. Notify Architect for inspection of all completed fire and/or smoke barrier walls before any construction is installed that may conceal the firestopping material installation.
3. Access to random selected areas may be required by the architect at the time of final inspection should notification not be given.
4. Provide detailed instructive cutsheets of fire penetration sealing system (firestopping) used to the architect at the time of inspection. Random

selective sampling by the contractor will be observed by the architect and State Fire Marshal.

W. NOISE VIBRATION

1. General: Take the utmost precautions in the installation of the equipment, piping, and duct systems to prevent noise and vibration transmission.
2. Isolation of equipment: Equipment that would tend to cause noise or vibration shall be isolated to prevent noise transmission to the building or to other equipment.
3. Equipment Connections: Piping, conduit, or other connections to equipment shall be isolated. The contractor shall be responsible for the prevention of noise and vibration transmission through these connections to equipment.

X. PERMITS, INSPECTIONS AND TESTS

1. Contractor shall obtain and pay for permits, fees, etc., for the installation, inspection, service connections, verifying location or construction of the work which are required by any authority and/or agencies having jurisdiction.
2. Contractor shall arrange and pay for inspections, examinations and tests required to obtain complete and final acceptance of all mechanical systems. Contractor shall deliver certificates of all such inspections to the Architect.
3. Contractor shall notify Architect and local governing authorities before any tests are made and tests are not to be drawn off a line covered or insulated until examined and approved by the authorities. In the event defects are found, these shall be corrected and the work shall be retested.
4. Prior to requesting final inspection by the Architect, the contractor shall have a complete coordination and adjustment meeting of all of his subcontractors directly responsible for the operation of any portion of the system. At the time of this meeting, each and every sequence of operation shall be checked to assure proper operation. Notify the Architect in writing ten days prior to this meeting instructing him of the time, date and whom you are requesting be present. This project shall not be accepted until the above provisions are met to the satisfaction of the Architect.

Y. TRAINING OF MAINTENANCE PERSONNEL

1. Contractor shall provide on the job training for Owner's personnel upon completion of the work including testing and adjustment. Minimum 40 hours of onsite training shall include maintenance checks, lubrication of components, adjustment of control set points, and troubleshooting techniques of the air conditioning unit.
2. Contractor shall use factory start-up personnel to train the owner's maintenance personnel (where factory start-up is specified).

Z. OPERATION AND MAINTENANCE INSTRUCTIONS

1. Provide Owner with four (4) copies of printed instructions indicating various pieces of equipment by name and model number complete with parts lists and maintenance and repair instructions. This information shall be bound in plastic covered notebooks. Submit the manuals to the Architect for approval.
2. Include all warranty certificates or statements in a separate section of the manuals. Provide all materials and test certificates for the final inspection.
3. Provide three (3) sets of DVDs of the operation and maintenance manuals.

AA. GUARANTEE

1. Contractor shall guarantee all materials, equipment and workmanship for a period of one year from the date of final acceptance of the project. This guarantee shall include furnishing of all labor and material necessary to make any repairs, adjustments or replacement of any equipment, parts, etc., necessary to restore the project to first class condition. This guarantee shall exclude only the changing or cleaning of filters.
2. If the contractor's office is in excess of a 50 mile radius of the project, he shall appoint a local qualified contractor to perform any emergency repairs or adjustments required during the guarantee period. The contractor appointed to provide emergency services shall be submitted to the Architect for his approval.
3. Provide list of contract names and numbers for 24/7 troubleshooting calls and/or on-site services for operational issues during the warranty period (service, repairs and troubleshooting shall cover a 1-year period beginning on the date of final acceptance by the Owner's representative). Longer warranties for specific items may be required, refer to equipment specifications.

BB. WARRANTIES

1. Assemble warranties executed by each of the respective manufacturers, suppliers, and subcontractors into a warranty book and prepare a table of contents.
2. Two (2) original signed copies of each warranty are required.
3. Provide complete information for each item including:
 - a. Product and work item.
 - b. Local supplying firm or manufacturer's dealer, with name of principal, address and telephone number.
 - c. Scope of warranty.
 - d. Date of beginning of warranty.
 - e. Duration of warranty.
 - f. Provide information for Owner:
 - 1) Proper procedure to evoke the warranty in case of failure.
 - 2) Instances which might affect the validity of the warranty.
 - g. Contractor, name of responsible principal, address and telephone number.
 - h. All contractors and manufacturers equipment warranties shall start at the acceptance of the project by the Owner.
 - i. Provide owner with contact information for warranties which extend beyond one year.

CC. RECORD DRAWINGS

1. Contractor shall maintain two (2) sets of drawings of the original construction documents to utilize as markup sets to record field modifications from original construction documents. Once approval has been gained from the Architect, the contractor shall record these variances on the two (2) sets in a neat and readable manner. Noted shall be sizes, locations, changes in directions, etc. with distances dimensioned from columns, walls, inverts, etc. The maintenance and cost of these documents shall be the responsibility of the contractor.

DD. DEMOLITION

1. This contractor shall do all demolition as shown on the plans. The contractor shall make the areas ready for the new construction work. All demolition debris, piping, equipment, etc., shall be removed from the site by this contractor. All demolition work shall be scheduled through the General Contractor to prevent interruption of any existing services. Do not start any demolition which would interrupt the building operation without scheduling with the Owner (schedule through the General Contractor).

2. The Owner shall retain first salvage rights to anything within the demolition area. If the Owner selected an item to be retained, then this contractor shall remove it with care and deliver the item to the Owner designated location on site. Anything not retained by the Owner shall become the property of the contractor and be removed from the site.

EE. MATERIALS CONTAINING HAZARDOUS SUBSTANCES OR COMPONENTS

1. This contractor shall not provide any material or component of equipment which contains asbestos, lead based paint or PCBs. The contractor shall provide certificates or manufacturer's statements/letters to show that the products and/or building materials do not contain asbestos, lead based paint or PCBs.
2. If any product or building material is found to contain asbestos, lead based paint or PCBs, the contractor shall bear all cost for removal, abatement, and disposal of materials in accordance with all state and federal regulations. The contractor shall install replacement materials to the satisfaction of the Architect at no additional cost to the project.
3. During the construction, if the contractor suspects that any material in the building contains or is a hazard material (asbestos, lead, PCB, mercury, etc.) work shall be stopped to prevent disturbance and the Owner shall be notified immediately.

END OF SECTION 23 05 00

SECTION 23 05 03 - BASIC MATERIALS AND METHODS FOR HVAC

I. GENERAL

A. DESCRIPTION

1. Type of piping for various systems shall be as specified herein.
2. All pipe shall be true and straight without sags or traps.

II. MATERIALS

A. REFRIGERANT PIPING/EQUIPMENT DRAIN PIPING

1. All refrigerant and equipment drain piping shall be government type "L" hard copper tube standard weight and thickness as made by Mueller, Chase, Anaconda or equivalent, unless indicated otherwise. Use Silfos 1000 degrees Fahrenheit solder on all joints.
2. Tubing shall be brought to the site with ends sealed.

B. HEATING HOT WATER PIPING

1. Interior piping shall be standard black steel, Schedule 40 pipe. Piping 2 inches and smaller may utilize screw joints and fittings and piping 2-1/2 inches and larger shall utilize welded joints and fitting.

C. PIPE FITTINGS

1. All pipe fittings shall be same as piping specified unless indicated otherwise.
2. Fittings for refrigerant piping and other copper lines shall be solder type wrought copper, Nibco or equivalent.

D. PIPE SPECIALTIES

1. Dielectric unions shall be used between copper and iron pipe.

E. PIPE HANGERS AND SUPPORTS

1. This contractor shall furnish and install all foundations and supports required for his equipment unless indicated otherwise on the drawings.
2. This contractor shall furnish and install all escutcheons, inserts, thimbles, hangers, etc., required for the proper support and installation of his

equipment and piping. Cooperate with other trades in locating and placing these items.

3. Provide sleeves for all pipes passing through walls, floors, beams, etc. Sleeves passing through structural members shall be of cast iron or Schedule 40 steel pipe unless other material is approved by the Architect. Sleeves passing through nonstructural walls or floors shall be of Schedule 10 galvanized iron. Joints between sleeves and pipes passing through floors shall be made watertight with plastic materials. Where pipes pass through floors shall be made watertight with plastic materials. Where pipes pass through waterproofing membrane, flashing sleeves shall be installed.
4. Provide malleable iron split ring hangers with rod supports throughout. Strap hangers or wire will not be accepted. Maximum spacing of hangers for cast iron pipes shall be 5 feet; for other than soil, use 10 feet.
5. Provide galvanized iron shields between hangers and pipe covering.
6. Provide chrome plated brass escutcheons wherever pipes pass through floors, walls or ceilings in exposed or finished areas.
7. All piping projecting from chases shall be rigidly supported in the wall or chase. Loosely supported piping or accessories will not be accepted.

F. MOTORS STARTERS AND ELECTRICAL WORK

1. The Mechanical Contractor shall furnish to Electrical Contractor for installation, all motor starters, variable frequency drives, start-stop push buttons and pilot lights for each piece of motor driven equipment unless shown otherwise.
2. The Electrical Contractor shall install all motor starters, variable frequency drives, start-stop push buttons and pilot lights as furnished by the Mechanical Contractor. The Electrical Contractor shall do all power wiring required for the installation of all mechanical equipment including equipment interlocking power wiring, etc. Temperature control wiring shall be furnished and installed by the Mechanical Contractor. All work shall be done in accordance with the National Electrical Code requirements and with wiring workmanship, etc., as called for in the Electrical Specifications. The Mechanical Contractor shall provide approved wiring diagrams of all equipment, controls, etc., to the Electrical Contractor for his installation. Coordinate all work to provide a complete system in working order. All wiring shall be plenum rated.

3. All motors for the mechanical equipment shall be of the 40 degrees Celsius rise type and shall be furnished and installed by the Mechanical Contractor. All motors shall be wound for +/- 10 percent of the specified voltage. Motors shall be voltages indicated on drawings. All motors shall have copper windings, class F insulation and shall be rated for continuous duty service. All three-phase motors shall be inverter-duty type motors.
4. All electrical equipment shall have UL label or ETL label and shall meet the standards of the National Electrical Code and NEMA.
5. Starters for single phase motors 1/2 HP and below shall be furnished with pilot light and "hand-off-auto" selector switch where required.
6. Starters for three-phase, single speed motors shall be stepless solid state soft starter with "hand-off-auto" selector switch, three (3) overload relays and auxiliary contacts as required. The starter shall operate at manufacturers ratings with 10 percent and -15 percent applied voltage tolerance and be capable of operating continuously under ambient temperatures of 0 to 50 degrees Celsius. The starter control circuitry shall be designed for current ramp operation and utilize current feedback for closed loop operation to minimize variation of acceleration time with varying load conditions. The starter shall use metal oxide varistors to clip transient voltage spikes on incoming power lines with protection to limit the rate of rise of voltage spikes to protect the SCR's from damage. The starter shall provide electronic motor overload protection. The starter shall shut down (or shall not start) to protect itself from either phase loss or phase rotation. The starter shall have adjustments for initial torque, pulse, ramp up time, ramp down time, and current limit. The starter shall have a main trip breaker to act as a disconnect and necessary contactors. The starter shall have contacts for remote starting from a building energy management system.
7. Mechanical contractor shall provide and install all smoke dampers and smoke or duct detectors. The electrical contractor shall provide and install all wiring/interlocks with fire alarm.

G. VARIABLE FREQUENCY DRIVES

1. Furnish complete variable frequency drives as specified herein for HVAC equipment designated on the drawing schedules to be variable speed. All standard and optional features shall be included within the VFD enclosure, unless otherwise specified. VFD shall be housed in a metal NEMA 1 enclosure.
2. The VFD shall convert incoming fixed frequency three-phase AC power into a variable frequency and voltage for controlling the speed of three-

phase AC motors. The motor current shall closely approximate a sine wave. Motor voltage shall be varied with frequency to maintain desired motor magnetization current suitable for equipment being controlled.

3. An advanced sine wave approximation and voltage vector control shall be used to allow operation at rated motor shaft output at nominal speed with no derating. This voltage vector control shall minimize harmonics to the motor to increase motor efficiency and life.
4. The VFD shall include a full-wave diode bridge rectifier and maintain a fundamental power factor near unity regardless of speed or load.
5. The VFD and options shall be tested to ANSI/UL Standard 508. The complete VFD, including all specified options, shall be Listed by a nationally recognized testing agency such as UL, C-UL, ETL or CSA.
6. The VFD shall have a DC link reactor to minimize power line harmonics. VFDs without a DC link reactor shall provide a 3 percent impedance line reactor.
7. The VFD's full load amp rating shall meet or exceed NEC Table 430-150. The VFD shall be able to provide full rated output current continuously, 110 percent of rated current for 60 seconds and 220 percent of rated current for up to one second while starting.
8. An automatic energy optimization selection feature shall be provided standard in the drive. This feature shall reduce voltages when lightly loaded and provide a 3 percent to 10 percent additional energy savings.
9. Input and output power circuit switching can be done without interlocks or damage to the VFD.
10. Protective features shall be as follows:
 - a. Class 20 I2t electronic motor overload protection for single motor applications and thermal-mechanical overloads for multiple motor applications.
 - b. Protection against input transients, loss of AC line phase, short circuit, ground fault, over voltage, under voltage, drive over temperature and motor over temperature. The VFD shall display all faults in plain English. Codes are not acceptable.
 - c. Protect VFD from sustained power or phase loss. The VFD shall incorporate a five second control power loss ride through to eliminate nuisance tripping.
 - d. The VFD shall incorporate a motor preheat circuit to keep the motor warm and prevent condensation build up in the stator.

- e. Drive shall have semi-conductor rated input fuses to protect power components.
 - f. The drive shall be fitted with output line reactors to limit the rate of output voltage rise over time (dV/dt), reduce motor operating temperature and RFI and EMI. To prevent breakdown of the motor winding insulation, the dV/dt must be below 1500 V/msec per IEC recommendations. The supplier shall include with the quotation the dV/dt values of the drive.
 - g. Drive shall catch a rotating motor operating forward or reverse up to full speed.
 - h. VFD shall be rated for 100,000 amp interrupting capacity (AIC).
11. Interface features shall be as follows:
- a. Local/Hand, Stop/Reset and Remote/Auto selector switches shall be provided to start and stop the drive and determine the speed reference.
 - b. Provide a 24 V DC, 40 mA max, output signal to indicate that the drive is in Remote/Auto mode.
 - c. Digital manual speed control. Potentiometers are not acceptable.
 - d. Lockable, alphanumeric backlit display keypad can be remotely mounted up to 10 feet away.
 - e. VFDs up to 300 HP shall use the same control panel.
 - f. Displays shall be available in English language.
 - g. A red FAULT light and a green POWER-ON light shall be provided.
 - h. A quick setup menu with preset parameters shall be provided on the drive.
 - i. The drive shall be fitted with an RS 485 serial communications port and be supplied with software to display all monitoring, fault, alarm and status signals. The software shall allow parameter changes to be made to the drive settings as well as storage of each controller's operating and setup parameters.
 - j. Set point control interface (PID control) shall be standard in the unit.
 - k. Floating point control interface shall be provided to increase/decrease speed in response to switch closures.
 - l. An elapsed time meter and kWh meter shall be provided.
 - m. The following displays shall be accessible from the control panel in actual units: Reference Signal Percent, Output Frequency, Output Amps, Motor HP, Motor kW, kWhr, Output Voltage, No Load Warning, DC Bus Voltage, Drive Temperature (% until trip) and Motor Speed in engineering units per application (in percent speed, GPM, CFM,...).
 - n. Drive will sense the loss of load and signal a no load/broken belt warning or fault.

- o. The VFD shall store in memory the last ten faults and record all operational data with date and time stamp.
 - p. Eight programmable digital inputs shall be provided for interfacing with the systems control and safety interlock circuitry.
 - q. Two (2) programmable relay outputs shall be provided for remote indication of drive status.
 - r. Two (2) programmable analog inputs shall be provided and shall accept a direct-or-reverse acting signal. Analog reference inputs accepted shall include 0-10 V dc, 0-20 mA and 4-20 mA. In addition, the drive shall incorporate a pneumatic transducer to interface with a pneumatic control system.
 - s. Two (2) programmable analog outputs shall be provided for indication of drive status. These outputs shall be programmable for output speed, voltage, frequency, amps and input kW.
 - t. Under fire mode conditions the VFD shall automatically default to a preset speed.
12. Adjustments available to the drive:
- a. VFD shall have an adjustable carrier frequency of 2 to 16 kHz through 60 HP and 2 to 8 kHz above 60 HP.
 - b. Three (3) variable-torque V/Hz patterns shall be provided with the ability to select a constant torque start pattern for each of them.
 - c. Twenty (20) preset speeds shall be provided.
 - d. Eight acceleration and eight deceleration ramps shall be provided. The shape of these curves shall be adjustable.
 - e. Four (4) current limit settings shall be provided.
 - f. If VFD trips on one of the following conditions, the VFD shall be programmable for automatic or manual reset: under voltage, over voltage, current limit, inverter overload and motor overload.
 - g. The number of restart attempts shall be selectable from 0 through 5 and the time between attempts shall be adjustable from 0 through ten seconds.
13. Bypass functions shall be as follows:
- a. Provide a manual bypass consisting of a door interlocked main fused disconnect padlockable in the off position, a built-in motor starter and a four-position DRIVE/OFF/BYPASS/TEST switch controlling three (3) contactors. In the DRIVE position, the motor is operated at an adjustable speed from the drive. In the OFF position, the motor and drive are disconnected. In the BYPASS position, the motor is operated at full speed from the AC power line and power is disconnected from the drive, so that service can be performed. In the TEST position, the motor is operated at full speed from the AC line power. This allows the drive to be given an operational test

while continuing to run the motor at full speed in bypass. Customer supplied normally closed dry contact shall be interlocked with the drives safety trip circuitry to stop the motor whether in DRIVE or BYPASS mode in case of an external safety fault.

14. The drive shall be capable of operating in the following conditions:
 - a. Ambient temperature, -10 to 40 degrees Celsius (14 to 104 degrees Fahrenheit).
 - b. 0 to 95 percent relative humidity, non-condensing.
 - c. Elevation to 3,300 feet without derating.
 - d. AC line voltage variation, -10 to +10 percent of nominal with full output.
 - e. No side clearance shall be required for cooling of wall mount units and all power and control wiring shall be done from the bottom.
 - f. Drive shall be capable of operating a motor up to 200 feet away without derating or field modification.

15. Manufacturers quality control, testing and assurance shall be as follows:
 - a. To ensure quality and minimize infantile failures at the job site, the complete VFD shall be tested by the manufacturer. The VFD shall operate a dynamometer at full load and the load and speed shall be cycled during the test.
 - b. All optional features shall be functionally tested at the factory for proper operation.

16. Submittals shall include the following information:
 - a. Submit manufacturer's performance data including dimensional drawings, power circuit diagrams, installation and maintenance manuals, warranty description, VFD's FLA rating, certification agency file numbers and catalog information.
 - b. The specification lists the minimum VFD performance requirements for this project. No supplier shall take any exceptions to this specification.

17. The Basis of Design is Nidec Control Techniques H300 series drive with the following manufacturers considered equal:
 - a. Graham VLT 3500 Series
 - b. Eaton
 - c. Toshiba
 - d. Magna-Tek
 - e. Allen Bradley

III. EXECUTION

A. PIPING

1. Perforated strap hangers shall not be allowed for any part of the hangers.
2. Piping shall be installed as indicated on the drawings. Pipe shall be cut accurately to measurements established at the building and shall be worked into place without springing or forcing. Care shall be taken not to weaken structural portions of the building. Service pipes, valves, and fittings shall be kept a sufficient distance from other work and other services to permit not less than 1/2 inch between finished covering and other work and not 1/2 inch between finished covering on the different services.
3. Expansion and contraction of piping: Allowance for expansion and contraction shall be made throughout.
4. Tubing shall be cut square, and butts shall be removed. Both inside of fittings and outside of tubing shall be well cleaned with steel wool before sweating. Care shall be taken to prevent annealing of fittings and hard drawn tubing when making connections. Installation shall be made by competent workmen in accordance with manufacturer's recommendation. Mitering of joints for elbows and notching of straight runs of pipe for tees will not be permitted. Joints for soldered fittings shall be made with a noncorrosive paste flux and solid string of wire solder. Cored solder will not be permitted.
5. Pipe sleeve and hangers: These items shall be furnished and set and the contractor shall be responsible for their proper and permanent location.
 - a. Pipe sleeves - Install sleeves for all pipes passing through footings, floors, and walls. Clearance between sleeves and pipe covering and/or pipes shall be approximately 1/4 inch. Construction shall not be cut except where approved by the Architect. Where cutting of construction is permitted, the construction shall be repaired to match its original condition. Sleeves shall not be installed in structural members except where indicated.
 - 1) Install sleeves for pipes that pass through walls. Sleeves that pass through walls shall be cut flush with surfaces. The space between sleeves and pipe or covering shall be sealed with graphite packing and synthetic rubber caulking compound.
 - 2) Install sleeves where pipes pass through waterproofing membrane. The sleeves shall be provided with an integral flashing flange or a clamping device to which a 4 pound lead flashing shield shall be clamped or soldered. The

shield shall extend 12 inches from the pipe and shall be thoroughly mopped into the membrane. The space between the sleeve and pipe shall be made watertight by inserting an oakum gasket, filling the remaining space with lead, and thoroughly caulking.

- b. Threaded pipe - Support pipes at 7 foot intervals.
- c. Copper tubing - Support tubing at not more than 5 foot intervals. Hangers for copper tubing except where protective shields are installed shall have proper size rings to suit outside diameter of tubing and the hangers or supports shall be copper or copper plated at contact surfaces.
- d. Underground piping - Lay pipe on a firm bed for its entire length, except where support is otherwise provided.
- e. Vertical piping - Supports shall be at each floor. Horizontal piping - Hangers and supports shall be installed at locations not more than 3 feet from the end of each run out. A hanger shall be installed not over 1 foot from each change in direction of piping.

B. VARIABLE FREQUENCY DRIVE INSTALLATION

- 1. The manufacturer shall provide start-up commissioning of the variable frequency drive and its optional circuits by a factory certified service technician who is experienced in start-up and repair services. The commissioning personnel shall be the same personnel that will provide the factory service and warranty repairs at the customer's site. Sales personnel and other agents who are not factory certified technicians for VFD field repair shall not be acceptable as commissioning agents. Start-up services shall include checking for verification of proper operation and installation for the VFD, its options and its interface wiring to the building automation system. Start-up shall include customer operator training at the time of the equipment commissioning.
- 2. The VFD shall be warranted by the manufacturer for a period of 36 months from date of shipment. The warranty shall include parts, labor, travel costs and living expenses incurred by the manufacturer to provide factory authorized on-site service.
- 3. Contractor to verify that job site conditions for installation meet factory recommended and code-required conditions for VFD installation prior to start-up, including clearance spacing, temperature, contamination, dust, and moisture of the environment. Separate conduit installation of the motor wiring, power wiring, and control wiring, and installation per the manufacturer's recommendations shall be verified.
- 4. The VFD is to be covered and protected from installation dust and contamination until the environment is cleaned and ready for operation.

The VFD shall not be operated while the unit is covered.

END OF SECTION 23 05 03

SECTION 23 05 93 - TESTING, ADJUSTING AND BALANCING

I. GENERAL

A. RELATED DOCUMENTS

1. All Division 23 Specification Sections, drawings, and general provisions of the contract apply to work of this section, as do other documents referred to in this section.

B. SCOPE OF WORK

1. The Mechanical Contractor shall obtain the services of an independent test and balance company which specializes in the testing and balancing of heating, ventilating and air conditioning (HVAC) systems to test, adjust and balance all HVAC systems in the building(s). These services shall not be provided by the installing mechanical contractor on the project but shall be a direct subcontractor of the mechanical contractor.
 - a. Agency shall provide proof of having successfully completed at least five projects of similar size and scope. Work by this Agency shall be done under direct supervision of a qualified Heating and Ventilating Technician employed by Agency.
 - b. Instruments used by Agency shall be accurately calibrated and maintained in good working order.
 - c. If requested, conduct tests in presence of Engineer.
 - d. Agency shall be approved in writing by Engineer. Mechanical Contractor shall not be permitted to do this work. Submit qualifications for review.
2. The work included in this section consists of furnishing labor, instruments, and tools required in testing, adjusting and balancing the HVAC systems, as described in these Specifications or shown on accompanying drawings. Services shall include checking equipment performance, taking the specified measurements, and recording and reporting the results.
3. Test and Balance company shall take preliminary readings at all pumps prior to demolition. This shall service as a base line for re-balancing post-installation of new equipment.
4. **Test and Balance agency shall be present for factory start-up of equipment when factory startup is required.**
5. Representatives of the test and balance company shall visit the job site during installation to review contractor's progress and identify any issues

which may affect balancing. After each site visit, the test and balance company shall report to the Architect any items that are not installed properly, are missing from the Contract Documents or items that are required to enable him to perform the testing and balancing of the HVAC systems as per normal standard practice. After review, the Architect shall instruct the contractor to implement the recommendations at no additional cost to the Owner if these items were specified in the original scope of the project.

6. Upon completion of the HVAC system installation, the test and balance company shall perform all testing and balancing with the full cooperation of the contractor and his subcontractors. The contractor shall make changes and/or adjustments to the HVAC system components that are required by the test and balance company to accomplish proper balancing. The TAB agency shall not supply or install any materials or balancing devices such as pulleys, drives, belts, etc. All of this work by the contractor shall be performed at no additional cost to the Owner.
 7. **Balancing agency shall be represented at final inspection meeting by qualified testing personnel with balancing equipment and two (2) copies of air balancing test report.**
 8. The test and balance report shall be submitted to the Architect for review by his Mechanical Engineer. If the Mechanical Engineer agrees with the report, he shall sign it and return it to the Architect. If he does not concur with the report, he shall meet with the Test and Balance Company to determine what needs to be done to obtain a properly balanced system.
 9. After the Mechanical Engineer signs the testing and balancing report, the Test and Balance Company shall supply four (4) copies of the final and complete report to the Architect for inclusion in the Operation and Maintenance Manuals.
- C. The items requiring testing, adjusting, and balancing include (but are not restricted to) the following:
1. HYDRONIC SYSTEMS:
Pumps
System Mains and Branches
Boilers
- D. SCHEDULING
1. Contractor shall award test and balance contract to approved agency upon receipt of his contract to proceed to allow Agency to schedule this work in

cooperation with other Sections involved and comply with completion date.

E. DEFINITIONS, REFERENCES, STANDARDS

1. All work shall be in accordance with the latest edition of the Associated Air Balance Council (AABC) National Standards or the latest standards of the National Environmental Balancing Bureau (NEBB). If these contract documents set forth more stringent requirements than the AABC National Standards or the NEBB Standards, these contract documents shall prevail.

F. QUALIFICATIONS

1. Agency Qualifications: The TAB agency shall be a current member of the AABC, NEBB or TABB.
2. Prior to working on this project, the technicians shall attend training provided by the manufacturer of the various equipment on this project on the specific aspects of balancing the equipment. Include letters or certificates from the manufacturer on attendance and satisfactory completion of the factory training. These certifications may be used for continuing education. At a minimum, the technicians shall receive training from the pump manufacturer, boiler manufacturer and temperature controls manufacturer. This should be done prior to any equipment start-ups.
3. Although acceptable to be bidding the project the TAB agency shall provide qualifications and certifications to provide the required services.

G. SUBMITTALS

1. Qualifications: The TAB agency shall submit a company resume listing personnel and project experience in air and hydronic system balancing and a copy of the agency's test and balance engineer or technician certificate.
2. Procedures and Agenda: The TAB agency shall submit the TAB procedures and agenda proposed to be used.
3. Sample Forms: The TAB agency shall submit sample forms, which shall include the minimum data required by the AABC National Standards or the NEBB Standards.
4. Submit continuing education training on each lead technician working on the project.

H. TAB PREPARATION AND COORDINATION

1. Shop drawings, submittal data, up-to-date revisions, change orders, and other data required for planning, preparation, and execution of the TAB work shall be provided when available and no later than 30 days prior to the start of TAB work.
2. System installation and equipment startup shall be witnessed by the TAB agency. The TAB Agency's final Test and Balance shall begin when all factory start-ups are complete.
3. The building control system (BCS) contractor shall provide and install the control system, including all sensors. These shall be calibrated for accurate control. If applicable, the BCS contractor shall install all necessary computers and computer programs, and make these operational. Assistance shall be provided as required for reprogramming, coordination, and problem resolution. The BCS contractor shall provide all necessary software to the TAB Agency at no additional cost.
4. All test points, balancing devices, identification tags, etc., shall be accessible and clear of insulation and other obstructions that would impede TAB procedures.
5. Qualified installation or startup personnel shall be readily available for the operation and adjustment of the systems. Assistance shall be provided as required for coordination and problem resolution.
6. If, upon commencing the work, the TAB contractor finds that the systems are not ready, or if a dispute occurs as to the readiness of the systems, the TAB contractor may request an inspection to be made by the Designer's Mechanical Engineer. This inspection shall establish to the satisfaction of the represented parties whether or not the systems meet the basic requirements for testing and balancing. Items that are determined to be not ready for testing and balancing shall be completed by the Mechanical Contractor and placed in operational readiness before TAB services are again requested.

I. TAB REPORTS

1. Final TAB Report: The TAB agency shall submit the final TAB report for review by the Engineer. On plans provided, all outlets, devices, HVAC equipment, etc., shall be identified, along with a numbering system corresponding to report unit identification. The TAB agency shall submit an AABC or NEBB "National Project Performance Guaranty" assuring that the project systems were tested, adjusted and balanced in accordance with the project Specifications and AABC or NEBB National Standards.

2. Submit four (4) copies of the final TAB report to the Architect for inclusion in the Operation and Maintenance Manuals.

II. INSTRUMENTATION

- A. All instruments used for measurements shall be accurate and calibrated. Calibration and maintenance of all instruments shall be in accordance with the requirements of AABC or NEBB National Standards.

III. EXECUTION

A. GENERAL

1. Mechanical Contractor shall put heating, ventilating, and cooling systems and equipment into full operation and continue their operation during each working day of testing and balancing.
2. Air Balance and Testing Agency shall perform tests specified, compile test data, and submit four (4) copies of complete test data to contractor for forwarding to Engineer for evaluation and approval.
 - a. Approved copies of report shall be bound in Operations and Maintenance manuals.
3. System shall be completely balanced and all reports submitted to Engineer prior to prefinal inspection.
4. The specified systems shall be reviewed and inspected for conformance to design documents. Testing, adjusting and balancing on each identified system shall be performed. The accuracy of measurements shall be in accordance with AABC or NEBB National Standards. Adjustment tolerances shall be + or -10 percent unless otherwise stated.
5. Equipment settings, including manual damper quadrant positions, valve indicators, fan speed control levers, and similar controls and devices shall be marked to show final settings.
6. All information necessary to complete a proper TAB project and report shall be per AABC or NEBB standards unless otherwise noted. The descriptions of work required, as listed in this section, are a guide to the minimum information needed.
7. TAB contractor shall cut insulation, ductwork and piping for installation of test probes to the minimum extent necessary to allow adequate performance of procedures. Upon completion, patch insulation, ductwork

and housings using materials identical to those removed. Seal insulation to reestablish integrity of the vapor barrier.

8. TAB work shall include additional inspection and adjustment of components during the season following the initial balance to include re-balance of any items influenced by seasonal changes or as directed by the Owner.

B. HYDRONIC SYSTEMS

1. The TAB agency shall, as applicable, verify that all hydronic equipment, piping and coils have been filled and purged; that strainers have been cleaned; and that all balancing valves (except bypass valves) are set full open. As applicable, it shall check air vents and expansion or compression tank for proper operation. The TAB agency shall perform the following testing and balancing functions in accordance with the AABC or NEBB National Standards:
 - a. Pumps:
 - 1) Test and adjust chilled water, hot water, and condenser water pumps to meet design gpm requirements. Check pumps for proper operation. Pumps shall be free of vibration and cavitation. Record appropriate gauge readings for final TDH and Block-Off/Dead head calculations.
 - 2) Current and Voltage--Test and record motor voltage and amperage, and compare data with the nameplate limits to ensure pump motor is not in or above the service factor.
 - b. System Mains and Branches:
 - 1) Adjust water flow in pipes to within design gpm requirements. As applicable, at least one branch balancing valve shall be completely open.
 - c. Boilers:
 - 1) Verify that boilers have been filled and started by others, and are in operation.
 - 2) Current and Voltage--As applicable, test and record motor voltage and amperage, and compare data with the nameplate limits to ensure motor is not in or above the service factor.
 - 3) Test and adjust water flow through water boilers.
 - 4) Test and record temperature and pressure profiles of water or steam boilers.

C. HYDRONIC SYSTEM EXECUTION

1. PREPARATION OF SYSTEM - PHASE I

- a. Open valves to full position including coil stop valves, close bypass valves, and return line balancing cocks.
- b. Remove and clean strainers.
- c. Examine water in system to determine if it has been treated and is clean.
- d. Check expansion tanks to make sure they are not air bound and system is full of water.
- e. Check air vents at high points of water systems to make sure they are installed properly and are operating freely. Make certain air is removed from circulating system.

2. PERFORMANCE OF TESTING AND BALANCING - PHASE II

- a. Adjust pumps to desired gpm delivery. Be sure to take readings at pumps before starting adjustment of existing system, where applicable.
- b. Upon completion of flow readings and coil adjustments, mark settings and record data.
- c. The following minimum information shall be included in the finished report:
 - 1) Water Pumps:
Service, manufacturer, model number, serial number, specified and test GPM, specified and operating head (feet), suction and discharge pressures (psi), minimum and test N.P.S.H., required and test differential (feet) with discharge valve closed (to verify impeller trim), motor manufacturer, specified and/or rated and test data for following: HP, RPM, voltage, amps. Pumps to be tested and adjusted with control valves opened and adjusted for full required flow through system.
 - 2) Boiler:
Entering/leaving water temperatures. Verify temperature controls.

END OF SECTION 23 05 93

SECTION 23 07 00 - MECHANICAL INSULATION

I. GENERAL

A. DESCRIPTION

1. Pipe insulation installation shall not begin until all work has been tested and found to be tight. All insulation shall be UL listed and have a flame spread of less than 25 and a developed smoke rating less than 50. All insulation shall be banded with aluminum bands, three per section. All insulation shall be continuous through walls, floors, ceilings, etc.

II. MATERIALS

1. CONDENSATE DRAIN PIPING

- a. Insulate condensate drain piping with 1/2 inch thick closed cell rubber type insulation.

2. HOT WATER PIPING

- a. All heating hot water piping, valves, fittings and connections throughout building subject to sweating shall be insulated with 2 inch thick foamed glass. Pipe covering shall be applied with all joints buttered with vapor barrier mastic; jacket laps shall be sealed with vapor barrier adhesive. Apply aluminum bands at circumferential laps and at mid section of pipe covering. Fittings shall be finished with two (2) coats of vapor barrier mastic reinforced with 20-20 mesh glass fabric.
- b. At contractor's option, chilled water piping within building and above slab only may be phenolic foam pipe insulation with vapor barrier jacket and thermal properties equal to or exceeding that for 2 inch thick foamed glass.
- c. At contractor's option, heating hot water piping within building and above slab only may be insulated with Fiberglass pipe insulation with white vapor barrier jacket. Jacket shall have pressure sealing lapped adhesive. Thickness of insulation shall be as follows:
 - 1) 1 inch thick for lines 3/4 inch to 1-1/2 inches.
 - 2) 1-1/2 inches thick for lines 2 inches to 4 inches.
 - 3) 2 inch thick for lines 5 inches and above.
- d. Mastic shall be white vapor barrier type. All insulation shall be installed in strict accordance with manufacturer's recommendations.

- e. All valves, strainers, etc., shall be covered and the covering shall extend all the way up to the equipment.
- f. Mastic shall be white vapor barrier type. All insulation shall be installed in strict accordance with manufacturer's recommendations.

2. INSULATION BANDS

- a. All pipe insulation shall be banded with nylon tie-wrap bands, three (3) to a section, and with one band on each side of each fitting, valve, etc.

3. FLANGES, VALVES AND FITTINGS

- a. All flanges, valves and fittings shall be insulated with fabricated fiberglass molded fitting insulation, using factory fabricated fittings up to 3 inches and fabricated mitered segments of pipe insulation equal in thickness to the insulation to the adjoining pipe. All fabricated mitered segments shall be covered with matching embossed vapor barrier laminate.

4. EXPANSION TANK AND AIR SEPARATOR

- a. Insulate expansion tanks and air separator(s) with 1 inch thick closed cell sheet insulation with two (2) coats of white mastic.

III. INSTALLATION

- A. Provide clearance for installation of insulation and for access to valves, air vents, drains and unions.

1. Insulation Installation:

- a. Do not install covering before piping has been tested and approved.
- b. Ensure piping surface is clean and dry prior to installation.
- c. Ensure insulation is dry before and during application.
- d. Insulation shall be continuous through walls, floors and ceiling. Pack around pipes with fire proof self-supporting insulation material, fully sealed.
- e. Insulate fittings and valves. The end of the insulation shall be fitted with a metal escutcheon plate with set screw or taped neatly with pressure sensitive fiberglass reinforcing cloth.
- f. All joints shall be sealed with 3 inch wide fiberglass reinforcing cloth with pressure sensitive adhesive.
- g. Pipe insulation at Hangers and Supports: Pipe insulation at hanger and support shall be protected with a half circular shield of the size of the insulation and 12 inches long constructed from 20 gauge galvanized steel. The shield shall be held in place with the

fiberglass reinforcing cloth and pressure sensitive adhesive.
Where pipes pass through walls, ceiling and floor in finished areas, escutcheon plates shall be installed to encompass pipe and insulation. Escutcheon plates shall be chromed brass or stainless steel and shall be either solid or the clamp on split type.

- h. Painting of fiberglass pipe jacket is not required. Piping shall be painted colors as standard in this facility.

END OF SECTION 23 07 00

SECTION 23 09 00 - TEMPERATURE CONTROLS

I. GENERAL

A. GENERAL REQUIREMENTS

1. Refer to Section 23 05 00, Section 23 05 03, and Section 23 70 00, provisions of which apply to work under this Section.
2. All control systems shall be furnished complete and functioning.
3. Coordinate all control work with the mechanical and electrical contractors. Contact the Test and Balance Contractor and notify them as to when controls work shall be installed. Test and Balance controller shall verify controls systems installation and proper operations.

B. DESCRIPTION OF WORK

1. Controls work is an extension of the existing temperature controls system as required to accommodate the new boiler installation. Contractor shall confirm all existing controls sequences and equipment prior to demolition and shall ensure that all existing sequences are fully operational at completion of project.
2. Provide a complete system of "hard-wired" automatic controls (wireless unacceptable) as indicated herein. Control system shall consist of all thermostats, sensors, actuators, operators, wiring, switches, relays and control panels necessary to accomplish the control sequence specified herein.

C. RELATED WORK IN OTHER SECTIONS

1. Power wiring and connection to mechanical equipment shall be done by an Electrical Subcontractor in accordance with NEC.
2. For control devices furnished with equipment, refer to equipment specifications and schedules. Any controls equipment not specifically called for elsewhere shall be provided by controls contractor. All control wiring shall be done by controls contractor.
3. All power for control devices such as actuators, operators, etc. shall be furnished, installed and wired by the Controls Contractor. Controls Contractor may use 24 VAC or 120 VAC for the control system. The controls contractor shall be responsible for obtaining the necessary power and pay all costs associated with obtaining power to controls and controls equipment.

4. All interior control wiring shall be installed in galvanized EMT conduit. The last 6 inches at connection to equipment shall be flexible metal conduit. All control wiring on exterior of building shall be in Seal-Tite conduit and/ or Liquid Tight flexible conduit.
5. All control wiring shall be furnished and installed by this contractor.

D. SERVICE

1. Installing Contractor (subcontractor under the Mechanical Contractor) shall maintain adequate automatic control personnel on his payroll to provide back-up project control service on the automatic control system provided under this contract.

E. WARRANTY

1. Contractor shall warranty all work performed under this contract to be free of any defects in workmanship or material for a period of 1 year after final acceptance by the Owner's representative. The warranty shall include quarterly calibration and set-up checks of all controls. THIS WARRANTY DOES NOT START ON DATE THAT THE MECHANICAL EQUIPMENT IS STARTED.

F. SUBMITTAL

1. Submit shop drawings and product data sheets indicating configuration, general assembly, and materials used in fabrication.
2. Submit manufacturer's installation instructions. Instructions shall include complete wiring diagrams drawn specifically for this project.

G. OPERATION AND MAINTENANCE

1. Include manufacturer's descriptive literature, operating instructions, and maintenance data.

H. QUALITY ASSURANCE

1. Manufacturer shall be a company specializing in products of the type specified in this section. All components shall be Class A quality commercial or industrial grade for installation in locations or environments shown on plans.

I. SYSTEM RESPONSIBILITY

1. The entire control system, shall be furnished by a single source manufacturer who shall be responsible for the entire system. The

installation shall be by technicians employed by the controls system manufacturer.

II. PRODUCTS

A. WIRING

1. Factory mount and wire HVAC equipment controls. Mount electrical components in unit control box with removable cover. Provide clearance for access to controls (36 inch clearance).
2. Provide terminal strip(s) for field wiring of thermostat, communications and power source. DO NOT USE WIRE NUTS IN JUNCTION BOX.
3. All wiring shall comply with local and national electric codes and the manufacturer's published installation manual.
4. Provide terminal strip(s) for field wiring of air conditioning unit input connections, duct temperature sensor, velocity sensor, static pressure sensor, communications, start/stop devices, VFD controls, time clock, bypass damper motor and power wiring, etc. Do not use wire nuts on loose wire. All wire shall be in conduit, flexible conduit or wiring harness.

III. EXECUTION

A. INSTALLATION

1. Electrical subcontractor shall be responsible for point to point wiring of all starters and starting switches not factory installed in the HVAC equipment.
2. Install all components of control systems under this Section using experienced control mechanics, all in the regular employ of the Installing Contractor, or the apparatus manufacturer.

B. WIRING

1. Install all control, pilot circuit and interlock wiring, including wiring through interposed safety or other auxiliary control devices within the confines of the mechanical equipment only. Wiring of thermostats shall be by the Mechanical Contractor.
2. All wiring shall conform to the Local and National Electrical Codes.
3. All control and interlock wiring shall be fused at conductor capacity as shown in the National Electrical Code.

4. No splices will be allowed except at junction boxes and control centers.
5. All wires to each control device must be different colors. All wires to each device must be laced or tied at point of entry into control panel and tagged as to its point of origin.
6. All wires shall be run directly from controller or controlled device to control center. There shall be no looping of wires from one device to another external to the control centers.
7. Control voltage shall be a maximum of 120-volt, unless otherwise indicated herein.
8. Control or interlock wiring shall not be run in conduit with any power wiring other than that serving the equipment controlled.
9. Wiring connection to terminal posts shall be made by means of compression type lugs. Wire splices shall be made with sketch locks.
10. Safety devices in motor control circuits shall be wired to interrupt the holding coil circuit regardless of the position of any selector switches in the circuit.
11. Control circuit conductors shall be sized for a maximum voltage drop of 10 percent of the circuit voltage.
12. All electrical power wiring shall conform in all respects with the provisions of the National Electrical Code.
13. Provide all necessary contactors, switches, transformers to accomplish operating sequences.

C. SYSTEM CHECK-OUT

1. Check-out each system for control function through entire sequence, check calibration of instruments, reset instruments control points.
2. Owner maintenance personnel shall be made thoroughly familiar, by the contractor, with the operation and service of the project automatic temperature control circuits.

IV. SEQUENCE OF OPERATION

A. HOT WATER PUMP CONTROLS

1. The boiler controls shall be furnished and installed by the boiler manufacturer. This contractor shall furnish a differential pressure switch

across the pumps. The pumps shall be interlocked with the boiler so that the boiler does not operate unless flow through the pump is given.

B. CONTROL SYSTEM INTERFACE

1. The temperature control system shall have the capability of interfacing to “BAC-NET” and “LON-WORKS” protocols for interfacing to other control systems. The control system shall be web-based.

C. SOFTWARE FOR CONTROLS SYSTEMS

1. All software required for the operation of the temperature control system shall be furnished with the control system. The temperature controls manufacturer/contractor shall furnish the software plus two years of software updates.
2. The software shall be provided in original sealed packaging with all written/printed documentation to the Test and Balance Contractor for use in balancing the project. The temperature controls contractor shall turn the software over to the owner upon completion of the project.

END OF SECTION 23 09 00

SECTION 23 70 00 - AIR CONDITIONING

I. GENERAL

A. DESCRIPTION

1. The General Contractor (Prime Contractor) who has the contracts with the Owner shall be responsible for installing the mechanical systems using qualified subcontractors and/or employees. Any incorrect or improper work shall be corrected by the General Contractor.

B. STANDARDS

1. All air conditioning equipment shall comply with the requirements of applicable ARI standards and shall be tested, rated, labeled, and listed accordingly.

C. SPACE REQUIREMENTS

1. General Contractor and Mechanical Contractor shall refer to architectural, structural and electrical drawings and install all equipment, piping, etc. to meet building and space requirements. No equipment shall be bid on or submitted for approval if it will not fit into the space provided or coordinate with other trades involved on the project.

II. MATERIALS

A. PIPING

1. All piping shall be of materials as hereinbefore specified.

B. WATER PUMP

1. Furnish and install, as indicated on plans and Specifications, an Armstrong Series 4030 B&G 1510, Taco, Aurora, Paco or equal pump equipped with water-tight, long-life, self-lubricating mechanical seal. The pump shall be of the end-suction, radially-split casing type of center-line discharge design with back pull-out feature permitting removal of the complete rotating assembly without distributing pipe connections. Pump construction shall be all bronze suitable for a maximum working pressure of 175 psig. The pump shaft shall be supported by two (2) heavy duty ball bearings. Casing gasket shall be confined within pump casing.
2. The driving motor shall be of the squirrel-cage induction type with open drip proof enclosure and suitable for operation on scheduled voltage.

Pump and motor to be mounted on a rigidly constructed fabricated steel baseplate and directly connected through a flexible coupling.

3. Provide one set of spare pump seals for each type of pump.
4. Pump capacity shall match that of the existing, field verify all existing conditions.

C. FLEXIBLE CONNECTIONS

1. Provide flexible, connections in piping to all pumps, exchangers, etc., as shown on plans. Flexible connections shall be as manufactured by Flexonics, Mason or approved equal and shall be complete with limit control.
2. Refer to noise and vibration isolation section for specifications on the flexible connector.

D. THERMOMETER

1. Furnish and install industrial type thermometers equal to Weksler AAWS, Marsh, or Powers. Each shall be provided with lens front red reading mercury tubes, wide angle satin finish 9 inch aluminum scales, bold black scale graduations, open face black numerals, thick glass windows, die-cast aluminum case with baked bronze finish, adjustable angle cases and stems, and brass separable sockets with minimum 1 inch lagging extensions.
2. Provide scales and divisions as follows:
Hot water: 30-240 degrees Fahrenheit, 2 degree Div.

E. PRESSURE GAUGES

1. Furnish and install pressure gauges equal to Weksler EA-14, Marsh, or Taylor. Each shall be provided with a 4-1/2 inch diameter stainless steel dial, balanced adjustable black pointer, phosphor bronze tube, 1/4 inch NPT bottom connection, and easy-to-read white litho background with bold black numerals and graduations.
2. Ranges shall be selected so that normal reading will be at mid-point.
3. Provide a-10 brass tee handle gauge cock at each gauge.

F. PRESSURE RELIEF VALVES

1. Furnish and install pressure relief valves for various systems described, shown on the plans, or required. Relief valves serving pressure reducing

station shall have capacity to relieve entire line capacity in case of failure, of pressure reducing valve. Relief valves shall be Kunkle Fi. 250 or equal. All relief valves or steam service shall be equipped with Kunkle Fig. 299 drip pan elbows with discharges run separately from equipment terminating to above roof. Pipe drain from drip panel to nearest floor drain. Equal manufacturers are Watts and Thrush.

G. HEATING HOT WATER BOILER

1. Manufacturer's Certification – The boiler manufacturer shall certify the following: The boiler, burner and other associated mechanical and electrical equipment have been properly coordinated and integrated to provide a complete and operable boiler package. ASME Certification in the form of ASME Stamp ("H" stamp for section IV, "S" stamp for section I) on the product and completed and signed data sheet. ASME CSD-1 Certification, in the form of completed data sheet (when required). cULus Certification in the form of an affixed label to the equipment.
2. Warranty:
 - a. Manufacturer's Warranty: Manufacturer agrees to repair or provide replacement components for boilers that fail in materials or workmanship for a period of 12 months from startup or 18 months from shipment, whichever comes first.
 - b. The boiler pressure vessel shall be warranted against damage resulting from thermal stress for a period of 25 years from date of shipment, provided the boiler is operated and maintained in accordance with the conditions specified in the owner's Operating and Maintenance Manual.
 - c. The boiler's integral burner shall be warranted against failure resulting from normal wear and tear for a period of 10 years from date of shipment, provided the boiler is operated and maintained in accordance with the conditions specified in the owner's Operating and Maintenance Manual.
 - d. Manufacturer's Extended Warranty: Manufacturer agrees to repair or provide replacement components per product specific manufacturer issued warranty certificate.
3. Performance:
 - a. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - b. ASME Compliance: Fabricate and label boilers to comply with the current version of the ASME Boiler and Pressure Vessel Code in

- accordance with the operating pressure and temperature of the system.
- c. UL Compliance: Test boilers for compliance with UL 795 (Commercial-Industrial Gas Heating Equipment), UL 726 (Oil-Fired Boiler Assemblies) and UL 2106 (Field Erected Boilers). Boilers shall be listed and labeled by a testing agency acceptable to authorities having jurisdiction.
 - d. Boiler and controls shall be compliant with ASME CSD-1 or NFPA 85 Code requirements.
 - e. Manufacturer Seismic Qualification Certification: Submit certification that boiler, accessories, and components will withstand seismic forces defined in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment." Include the following:
 - 1) Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - i. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."
 - ii. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."
 - f. A. Fuel-to-steam efficiency indicated shall be based on the following:
 - 1) ASME Power Test Code, PTC 4.1 Heat Loss Method
 - i. Test Operating Conditions:
 - Ambient Temperature: 80°F.
 - Ambient Relative Humidity: 30%.
 - Percent Excess Air in Exhaust Flue Gas: 15% across the entire firing range, firing Natural Gas.
 - Natural Gas with higher heating value of 1,000 Btu/cubic Ft.
 - No. 2 Fuel Oil with a higher heating value of 140,000 Btu/gallon.
 - For Hot Water Boilers: 180°F nominal outlet temperature, 160°F inlet
 - ii. Boiler fuel-to-steam efficiency on gas shall be minimum 81%, fuel-to-water efficiency minimum 84%. Manufacturer is required to provide certified test data or field verification of efficiency. Boiler efficiency is calculated without economizers (stack

- or blowoff) using ASME PTC 4.1 Heat Loss Method.
 - iii. Boiler fuel-to-steam efficiency on #2 oil shall be minimum 83%, fuel-to-water efficiency 87%. Manufacturer is required to provide certified test data or field verification of efficiency. Boiler efficiency is calculated without economizers (stack or blowoff) using ASME PTC 4.1 Heat Loss Method.
 - g. Expected natural gas emissions are not to exceed 0.0007 lb/MMBtu SO_x, 0.08 lb/MMBtu CO, 0.0043 lb/MMBtu volatile organic compounds (VOC). NO_x emissions to be specified to meet local or customer specific emissions requirements.
 - h. Expected oil emissions are not exceed 0.1536 lb/MMBtu NO_x.
 - i. Multiple Boiler Operation: Equip individual boilers in multiple boiler applications with integral controls and a single stand-alone Host Control Panel to control each client boiler. To provide multiple boiler operation for optimum system performance and energy efficiency, the following options shall be available:
 - 1) Equalize runtime of boilers in service.
 - 2) Operate multiple boilers hot to minimize disruption of service in the event of single boiler failure.
 - 3) Configure controls so any boiler can be taken out of service with power disconnected and not impact multiple boiler operation.
 - j. Operation Following Loss of Normal Power: Loss of power shall require a manual reset of the control.
- 4. Furnish and install, as shown on the plans, a gas-fired forced draft inclined watertube hot water boiler, as manufactured by Cleaver Brooks. Alternate firetube boiler: LES.
- 5. Heat-Exchanger Design:
 - a. Bent, steel tubes swaged into steel headers.
 - b. The boiler shall be a two-drum, flexible watertube 5-pass design with a tangent-tube full waterwall furnace mounted on a heavy steel frame.
 - c. The boiler pressure vessel must be constructed in accordance with ASME Boiler Code, and must receive authorized boiler inspection prior to shipment. A copy of the inspection report shall be furnished to the purchaser.
 - d. The boiler drums shall be furnished with hand holes to facilitate boiler inspection and cleaning.
 - e. Boiler tubes with ferrule connections shall be minimum of 1.5" (1.5 thru 14.5 million Btu/hr input) or 2" (16.5 thru 25 million

- Btu/hr input) diameter, with minimum 0.095" wall thickness, and shall be easy to remove and replace without expanding or welding the tube attachment to the drums.
- f. The boiler shall have a sufficiently sized factory insulated downcomer(s) to provide natural internal circulation, circulating pumps will not be allowed.
6. Base:
- a. Factory-mounted pressure vessel as a complete self-supported unit requiring only a flat level surface for support.
- b. Base included with attachments if required to secure boiler to structure.
- c. 3. Manufacturer's standard provisions for lifting shall be sufficient to carry total weight of fully assembled boiler with a safety factor of 1.2.
7. The burner shall be mounted on a hinged backing plate for easy access to the furnace.
8. Observation ports for the inspection of flame conditions shall be provided at the rear of the boiler, and in the burner assembly at the front.
9. The tangent wall tubes shall be covered with 1-1/2 inches of insulation under a gas-tight, minimum 16-gauge inner casing. There shall be 2 inches of insulation between the inner and outer casing. The outer casing shall be minimum of 20 gauge.
10. The boiler base frame and other components shall be factory-painted before shipment, using a hard enamel finish.
11. Flue: Flanged connection located along top centerline and near the back of the boiler. The field-installed flue stack to be supported separately in the field, not solely by the boiler stack connection.
12. The burner shall be completely assembled, listed by Underwriters Laboratories (UL), wired and factory tested.
- a. A supplier shall not be allowed to furnish a standard UL approved burner and "field mount" additional assemblies to meet specified NOx emissions requirements without pre-approval or field approval by UL.
- b. Furnish Cleaver Brooks integral burner. The burner shall be mounted at the front of the boiler and shall be a combination of the low-pressure air atomizing type for oil and multi-port type for gas. The burner shall be approved for operation with either CS12-48 Commercial No. 2 oil or natural gas.
- c. Systems which use a separate FGR fan assembly to force FGR into the burner and/or combustion chamber during normal burner "run"

- shall not be acceptable excluding applications that require CS12-48 Commercial No. 2 oil firing only below 12 million Btu/hr input.
- d. 2. Mesh (pre-mix) burners and jet burners to be allowed only below 12 million Btu/hr input.
 - e. Jet type burners may be applied for applications that require CS12-48 Commercial No. 2 oil firing only below 12 million Btu/hr input.
 - f. Gas Pilot - The gas pilot shall be a premix type with automatic electric ignition. An electronic detector shall monitor the pilot so that the primary fuel valve cannot open until pilot flame has been established. The pilot train shall include one manual shut-off valve, solenoid valve, pressure regulator and one plugged leakage test connection.
- 1. Gas Burner
 - 1) Gas Burner Piping - Gas burner piping on all units shall include a primary gas shutoff valve, motor operated with proof of closure switch and plugged leakage test connection. The main gas valve shall be wired to close automatically in the event of power failure, flame failure, low water or any safety shutdown condition. A lubricating plug cock shall be provided as a means for a tightness check of the primary shutoff valve. An additional plug cock shall be furnished at entrance to gas train. High and low gas pressure switches shall be provided. A second motorized safety shutoff valve with plugged leakage test connection shall be provided. A vent valve shall be located between the safety shutoff valves, if necessary.
 - 2) 1.5 thru 12.5 million Btu/hr input. High and low gas pressure switches shall be provided. A second motorized safety shutoff valve, plus an additional plugged leakage test connection shall be provided.
 - 3) 14.5 thru 25 million Btu/hr input. High and low gas pressure switches shall be provided. A second motorized safety shutoff valve, plus an additional plugged leakage test connection shall be provided. A valve proving switch shall be located between the safety shutoff valves.
 - 4) Burner Turndown - Turndown range shall be:
 - 5) 6:1 when firing natural gas for boiler capacities 1.5 thru 12 million Btu/hr input
 - 6) 15:1 available with standard Cleaver-Brooks pre-mix burner and Cleaver-Brooks Hawk-1000 PLC controls firing natural gas for capacities 12 million Btu/hr input and below, 10:1 available for 9ppm NO_x configured pre-mix burner.
 - 7) 10:1 when firing natural gas for boiler capacities 12.5 thru 25 million Btu/hr input.

13. Blower:
- a. For boiler capacities 12.5 million Btu/hr input and above, air for combustion shall be supplied by a forced draft blower incorporated into an integral burner design wind box to eliminate vibration and reduce noise level. For boiler capacities below 12.5 million Btu/hr input, air for combustion shall be supplied by a standard burner mounted blower assembly or an ECM driven blower incorporated into the burner design to reduce power consumption and enable modulation without a damper assembly via venturi gas delivery system.
 - b. The impeller shall be machined from cast aluminum with radial blade, carefully balanced, and directly connected to the blower motor shaft.
 - c. Blower and drive assembly shall be controlled through boiler's integral controls in response boiler manufacturer's prescribed sequence of operation that is coordinated with burner and fuel train to achieve performance indicated.
14. Hot Water Boiler Trim:
- a. Low Water Cut-Off: A probe-type, low water cut-off control shall be mounted in the upper drum. It is to be wired to the burner control circuit to prevent burner operation if the boiler water falls below a safe level.
 - b. Miscellaneous: A combination temperature and pressure gauge shall be mounted on the boiler. Temperature controls, for regulation of burner operation, shall be mounted on the boiler and the temperature sensing element shall be located adjacent to the boiler outlet. Water relief valves (shipped loose) shall be of a type and size to comply with ASME Code requirements.
15. Controls:
- a. Pilot gas train for each burner: A separate pilot gas cock, gas pressure regulator, and pilot safety shutoff gas valve, shall be provided for the ignition gas supply.
 - b. Gas valve train for each burner
 - 1) Provide a pressure gauge to indicate the gas burner manifold pressure.
 - 2) Furnish and install one manually operated, ball valve upstream of all valves.
 - 3) Provide one main gas pressure regulator (of tight shutoff roll out diaphragm type) with vent to outside atmosphere, in accordance with local codes.

- 4) Provide one automatically operated motorized safety gas valve. This valve shall be closest to the burner and shall be proven closed during pre-ignition by proof of valve closure interlock switch on valve.
 - 5) Provide a second automatically operated gas safety shutoff valve to operate simultaneously with the above gas valve. (Size dependent)
 - 6) A manually operated gas valve shall be located downstream of both automatic gas valves to permit leakage testing of the valves.
 - 7) Gas pressure monitoring shall be provided by approved pressure switches interlocked to accomplish a non-recycling safety shutdown in the event of either high or low gas pressure.
- c. Controller shall be provided for both flame safeguard and boiler control and shall perform the following functions:
- 1) Burner sequencing with safe start check, pre-purge, pilot ignition and post purge. UV or IR scanner to prove combustion.
 - 2) Flame Supervision. The control shall provide pre-purge and post-purge and shall maintain a running history of operating hours, number of cycles, and the most recent six faults. The control shall be connected to a keyboard display module that will retrieve this information.
 - 3) Safety Shutdown with display of error.
 - 4) Modulating control of the variable speed fan for fuel/air input relative to load requirements.
 - 5) Gas pressure supervision, high and low.
 - 6) Combustion Air Proving Supervision.
 - 7) The supply pressure shall be displayed at all times on the touch screen display.
 - 8) Controller shall be equipped with a touch screen display for set up, trouble shooting, and operational display, and shall include ModBus communication capability of this information.
- d. All parameter input control set-points shall be factory downloaded with jobsite conditions programmed at the time of initial jobsite operation.
- e. All controls to be panel mounted and so located on the boiler as to provide ease of servicing the boiler without disturbing the controls and also located to prevent possible damage by water according to CSA requirements.

16. Electrical:

- a. Single-Point Field Power Connection: Factory-installed and -wired electrical devices necessary shall provide a single-point field power connection to boiler. Separate power and control connections will not be allowed.
 - 1) House in NEMA 1 or 12 enclosure.
 - 2) Wiring shall be numbered and color-coded to match wiring diagram.
 - 3) Install factory wiring outside of an enclosure in metal conduit.
 - 4) Field power interface shall be to non-fused disconnect furnished by electrical contractor
 - 5) Provide each motor with overcurrent protection.

17. Quality Control

- a. Burner and Hydrostatic Test: Factory pressure test gas train, test fire burner and gas train assembly, and perform a functional controls test for all safety devices; perform hydrostatic test.
- b. Test and inspect factory-assembled boilers, before shipping, according to most current ASME Boiler and Pressure Vessel Code.

18. Installation shall be provided by the contractor in accordance with the requirements of the codes specified hereinbefore. All of the contractor's work shall be performed by experienced personnel previously engaged in boiler plant construction and shall be under the supervision of a qualified installation supervisor.

19. All connections shall be made in accordance with manufacturer's installation instructions.

20. Field Quality Control:

- a. General: The boiler supplier's factory authorized service organization shall be responsible for performance of inspections, start up and testing of the package boiler, and accessory equipment and materials furnished under this Section. A detailed written record of the startup performance, including burner setting data over the entire load range shall be furnished to the engineer before final acceptance. All labor, equipment, and test apparatus shall be furnished by the authorized service organization. All equipment defects discovered by the tests shall be rectified either by the service organization or boiler manufacturer.
- b. Equipment inspection: Boiler representative shall inspect boilers and other equipment upon arrival, verifying completeness of equipment supplied and potential shipping damages. All shipped

- loose components, to be mounted and installed on boiler by contractor.
- c. Equipment shall be flushed or boiled out prior to start-up per the water treatment company guidelines and product installation manual requirements.
 - d. Pre start-up walk through: Boiler representative shall review the installation with the mechanical contractor prior to start-up and note any required changes prior to start-up.
 - e. Start-up shall be conducted by experienced and factory authorized technician in the regular employment of the authorized service organization, and shall include:
 - 1) Demonstrate that boiler, burner, controls, and accessories comply with requirements of this Section as proposed by the boiler and accessories supplier. Pre-test all items prior to scheduling the final testing that will be witnessed by the test engineer.
 - 2) Readings at different firing rates (20, 50, 75 and 100%) of load for the modulating burner shall be taken with a written report of the tests submitted to the engineer. The reports shall include readings for each firing rate tested and include stack temperatures, O₂, CO, NO_x, and overall boiler efficiency.
 - 3) Auxiliary Equipment and Accessories: Observe and check all valves, draft fans, electric motors and other accessories and appurtenant equipment during the operational and capacity tests for leakage, malfunctioning, defects, and non-compliance with referenced standards or overloading as applicable.
 - f. Commissioning Requirements:
 - 1) Fireside inspection
 - 2) Set up fuel train and combustion air system
 - 3) Set up operating set points
 - 4) Check all safeties, including Flame safeguard, LWCO, Airflow, Fuel pressures, High limits.
 - 5) Set up and verify efficiencies at 20%, 50%, 75%, and 100%
 - 6) Set up and verify burner turndown.
21. The entire boiler shall be factory assembled, requiring only connection to services. The boiler manufacturer shall guarantee all components and workmanship for one year from date of start-up, provided that the units are started within six months from date of shipment. Complete operating, adjustment and start-up instructions shall be provided in booklet form.
22. Factory startup of boiler is required. Coordinate factory startup with Test and Balance contractor.

III. EXECUTION

A. INSTALLATION

1. Install air conditioning systems in accordance with Section 23 05 00.
2. Mount equipment complete with piping system and provide for power connection.
3. Complete structural, mechanical, and electrical connections in accordance with manufacturer's installation instructions.
4. Furnish and install complete piping systems as shown on plans. Valve equipment on both inlet and outlet. Provide automatic float vents to eliminate air from high points of air trap points in each system and at each piece of equipment. Pipe vent valves and relief valves to drains. In addition, provide manual air vent valves at high points.
5. Furnish and install a drain valve in each of the supply and return mains at the low points in the system.
6. Furnish and install all gate valves, check valves, balancing valves, ball valves, hangers, floor and ceiling plates, etc., to make the system complete.
7. All joints shall be welded utilizing weld fittings. Pump connections shall be flanged and piping shall be adequately supported so there is no strain on pump castings. Furnish and install strainer of fine mesh in each system.
8. Furnish and install automatic fill valves in each water system. Provide by-pass quick-fill line around automatic fill valves.

B. TESTING

1. Heating hot water piping shall be tested under 200 psi hydrostatic pressure for a minimum of five hours.

END OF SECTION 23 70 00