



Florida Gateway College
Building 31 – Temporary Chemistry Lab Renovations
Lake City, Florida
FGC Bid Number: ITB No. 19-1-01

Construction Documents

Project Manual

Architect's Project No. 1838
October 1, 2018

Prepared for
The District Board of Trustees
of Florida Gateway College
Lake City, Florida

Architect

Kail Partners Architecture & Interiors
PO Box 359055
Gainesville, Florida 32635

Mechanical & Electrical Engineer

Coburn & Associates, Inc.
370 S.W. Unity Court
Fort White, Florida 32038



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SECTION 00 1116
INVITATION TO BID

THE DISTRICT BOARD OF TRUSTEES
OF FLORIDA GATEWAY COLLEGE
WILL RECEIVE BIDS FOR THE FOLLOWING:

FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA

FGC BID NUMBER: ITB NO. 19-1-01

ARCHITECT'S PROJECT NO. 1838

Date & Time for
Receiving Bids: Monday, October 15, 2018 at 2:00 p.m.

Date, Time and Place for
Pre-Bid Conference: All interested bidders are required to attend the Mandatory Pre-Bid
Conference to be held at 10:00 a.m. local time on Monday, October 8,
2018 at Florida Gateway College, 149 S.E. College Place, Lake City,
Florida, 32025. Conference will start in Room 103, Building 001.

Place for Receiving Bids: Bids may be mailed as follows:

Florida Gateway College
Procurement Department
149 S.E. College Place
Lake City, Florida 32025-2007

Hand delivered bids are to be presented to:

Florida Gateway College
Procurement Department, Building 001, Room 130
149 S.E. Staff Way
Lake City, Florida 32025-2007

All bids must arrive and be date/time stamped by a Procurement
representative prior to the specified bid opening date/time. The College
will not be responsible for postal or other delivery service delays that
cause a bid to arrive at Florida Gateway College after the designated bid
opening date/time. Bids that are mailed must be clearly marked on the
outside of the envelope "ITB No. 19-1-01, FLORIDA GATEWAY
COLLEGE, BUILDING 31 – TEMPORARY CHEMISTRY LAB
RENOVATIONS, BID OPENING, October 15, 2018".

Bids will be opened in a public bid opening in Room 103, Building 001, which is located at 149 S.E. Staff Way, Lake City, Florida 32025. Each Bidder shall submit one original and one copy of their bid paperwork in the sealed envelope.

Contractor's Prequalification: All prime Contractors wishing to bid this project must be prequalified. Contractors who wish to submit a bid on this project must prequalify with Florida Gateway College. To be considered for prequalification, Contractors must request, complete and submit a prequalification package to the College. Prequalification packages may be obtained from the College's Director of Procurement & Contracts, Misty Taylor at 386-754-4381 or by email at misty.taylor@fgc.edu. Completed prequalification packages must be returned to Procurement Department which is located in Building 001, Room 130 not later than 4:00 PM local time Thursday, October 11, 2018. The College will not be responsible for postal or other delivery service delays that cause a prequalification package to arrive in the Procurement Department after the designated date/time.

Bid Documents Prepared By: Kail Partners Architecture & Interiors
PO Box 359055
Gainesville, Florida 32635-9055
(352) 871-4935, danny@kailpartners.com

Bid Documents Available From: <http://www.kailpartners.com>

Project Description: Renovations to existing Building 31 for a Temporary Chemistry Lab as outlined in the Documents. The work includes, but is not limited to: cutting and patching, selective structure demolition, cast-in-place concrete, concrete finishing, metal fabrications, miscellaneous rough carpentry, architectural wood casework, vapor retarders, joint protection, finish schedule, painting and coating, specialties and termite control. Mechanical, Plumbing and Electrical work, as outlined in the Documents.

Right to Waive Irregularities and Technicalities: Florida Gateway College reserves the right to waive minor irregularities and/or technicalities associated with this solicitation. The Director of Procurement & Contracts of Florida Gateway College shall be the final authority regarding waivers of irregularities and technicalities.

FOR THE DISTRICT BOARD OF TRUSTEES
OF FLORIDA GATEWAY COLLEGE

Lawrence Barrett, President

Sunday, September 30 and Sunday, October 7, 2018

END OF SECTION

SECTION 00 2113
INSTRUCTIONS TO BIDDERS

PART 1 - DEFINITION OF TERMS: Whenever in this Project Manual the following term(s) are used, their intent and meaning shall be interpreted as follows:

1.1 OWNER

DISTRICT BOARD OF TRUSTEES OF
FLORIDA GATEWAY COLLEGE
149 S.E. COLLEGE PLACE
LAKE CITY, FLORIDA 32025-8703

1.2 BUILDING CODE ADMINISTRATOR

A. The Building Code Administrator shall be licensed by the Department of Professional Regulation as a Building Official.

1.3 CONTRACTOR

A. Any individual, firm, partnership or corporation entering into a construction Contract to perform as "General" or "Prime" Contractor the Work specified in the Contract Documents.

1.4 ARCHITECT

A. The firm of Kail Partners Architecture & Interiors, PO Box 359055, Gainesville, Florida, 32635-9055.

1.5 ENGINEERS

A. Mechanical and Electrical: The firm of Coburn & Associates, 370 S.W. Unity Court, Fort White, Florida, 32038

1.6 SUBCONTRACTOR

A. Any individual, firm, partnership or corporation entering into an agreement to furnish materials and labor for the work specified and described in the Contract Documents. Subcontractors must have a current occupational license for the State of Florida, as applicable.

1.7 MANUFACTURER OR SUPPLIER

A. Any individual, firm, partnership or corporation entering into an agreement to furnish materials only for the work specified and described in the Contract Documents.

1.8 BIDDER

A. Any individual, firm, partnership or corporation submitting a proposal for the work contemplated.

1.9 PROJECT

A. All work specified and described in the Contract Documents.

1.10 SURETY

A. A Performance Bond is required for this project.

1.11 ADDENDA

- A. Written and/or graphic revisions issued prior to the award and execution of the Contract which modify and/or interpret the Contract Documents by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Contract is awarded and executed.

1.12 CONTRACT DOCUMENTS

- A. Consist of the Contract, the Project Manual, Drawings, any Addenda issued prior to the award and execution of the Contract, and all Change Orders issued after the award and execution of the Contract, and such other documents as are made a part of same by reference in any of the Contract Documents.

1.13 PROPOSAL

- A. The forms, including all items related thereto, envelopes, and all other information pertaining to the entire bid, complete and properly executed, which the Bidder has submitted as his Proposal for the work contemplated.
 1. Base Bid: The sum stated in the Proposal for which the Bidder offers to perform the work described in the Contract Documents as the base, to which work may be added to or deducted from for sums stated in Alternate Bids.
 2. Alternate Bid: An amount stated in the Proposal to be added to or deducted from the amount of the Base Bid if the corresponding change in Project scope or materials or methods of construction described in the Contract Documents is accepted.
 3. Unit Price: An amount stated in the Proposal as a price per unit of measurement for materials and labor or services as described in the Contract Documents.

1.14 DRAWINGS

- A. The official plans and other Drawings or reproductions thereof, pertaining to the work to be performed, with index of Drawings on Sheet G-1.

1.15 PROJECT MANUAL

- A. Written and graphic data bound together for Architectural and MEP Specifications.

1.16 BUILDING PERMIT

- A. Issued to the Contractor after all requirements of the application process have been satisfied and compliance with the appropriate Codes and Standards has been achieved. Construction Plans and Specifications shall be submitted for review by the Building Code Administrator and construction cannot begin until a Building Permit has been issued by the Building Code Administrator.

1.17 CONTRACT

- A. The Owner-Contractor Agreement consisting of: The agreement text preceding the signature of the parties, the Bonds as required, the Certificates of Insurance and any other documents as may be required by the Contract Documents.

1.18 APPLICATION FOR PAYMENT

- A. Statement of amounts claimed by Contractor as payments due on account of work performed or materials suitably stored.

1.19 ARCHITECT'S ACCEPTANCE

- A. Architect's acknowledgement that a material is acceptable or in accordance with Contract requirements.

1.20 RECORD DRAWINGS

- A. Drawings made during progress of construction illustrating how various elements of the work were actually installed.

1.21 CHANGE ORDER

- A. A work order, issued after the award and execution of the Contract, signed by the Owner, authorizing a change in the scope of the work during construction.

1.22 FIELD REPRESENTATIVE

- A. A person in the field designated to represent a responsible party during construction.

1.23 SCHEDULE OF VALUES

- A. A statement furnished to the Architect by the Contractor reflecting the amounts to be allotted for the principal parts of the work. It is to serve as a guide for reviewing the Contractor's periodic Application for Payment.

1.24 SHOP DRAWINGS AND PRODUCT DATA

- A. Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the work shall be fabricated, erected and/or installed.

1.25 SAMPLES

- A. Physical examples furnished by the Contractor which illustrate materials, equipment or workmanship, and which establish standards by which the work will be judged.

1.26 TIME OF COMPLETION

- A. The number of calendar days, or the actual date, by which the work is required to be completed.

PART 2 - EXAMINATION

2.1 DRAWINGS, PROJECT MANUAL AND PROJECT SITE AND PRE-BID CONFERENCE

- A. Bidders are required to examine carefully the Drawings, Project Manual and any issued Addenda to become thoroughly familiar with all work to be performed under the Contract.
- B. Bidders are encouraged to visit the project site to become familiar with the local conditions that may in any manner affect the work to be performed, and the equipment, materials and labor required.
- C. Pre-Bid Conference: As indicated on the Advertisement for Bids, Bidders are required to attend a Pre-Bid Conference on the date, time and place set forth in the Advertisement for Bids. This Pre-Bid Conference will be held in order to more fully explain the scope of work covered by the Contract Documents and to allow questions to be asked by the Bidders. If deemed necessary, Architect will then issue an Addendum to the Drawings and Project Manual as necessary to change, modify or explain any decisions or other information that comes out at this Pre-Bid Conference.

PART 3 - CLARIFICATION TO BIDDERS

3.1 CLARIFICATION

- A. No oral clarification in regard to the meaning of Drawings and Project Manual and no oral instructions will be given before the award and execution of the Contract. Discrepancies, omissions or doubts as to the meaning of Contract Documents shall be given in writing to the Architect for interpretation not later than five calendar days prior to Bid Date. Bidders shall act promptly and allow two calendar days for a reply to reach them before the submission of their bids.

PART 4 - FAMILIARITY WITH LAWS

4.1 KNOWLEDGE OF LAWS

- A. The Bidder shall be familiar with all Federal, State, and Local laws, ordinances, codes, rules, and regulations that in any manner affect the Bid or the work under this Contract. Lack of knowledge on the part of the Bidder will not provide relief from responsibility of compliance with the above, whether or not specifically called for or shown in the Contract Documents.

PART 5 - PREPARATION AND SUBMISSION OF BIDS

5.1 PREPARATION

- A. Each Bidder shall use the Proposal Form included herein, indicating base bid amount and alternate bid amount(s) in the proper spaces. Any erasures or other corrections in the Proposal must be explained or noted over the signature of the Bidder. Proposals containing any conditions, omissions, unexplained erasures, alterations, items not called for, or irregularities of any kind may be rejected by the Owner.
- B. Each Proposal must give the full business address of the Bidder and state whether it is an individual, corporation or partnership. Proposals by a corporation, must be signed with the legal name and seal of the corporation, followed by the name of the State of its incorporation, and by the manual signature and designation of an officer, agent, or other person authorized to bind the corporation, and if the person signing is not the President, be accompanied by a duly authenticated document evidencing the authority to the officer or agent. Proposals by partnerships shall show the names of all partners and must be signed in the partnership name by one of the partners. The partnership signature shall be followed by the manual signature of the partner signing. In every case, the name of the person signing and his designation shall be typed or printed below his signature. Proposals by a person who affixes to his signature the word "President", "Secretary", "Agent", or other designation without disclosing his principal may be held to the terms of the Proposal by the individual so signing. Satisfactory evidence of the authority of an officer, agent, attorney, or other person signing for a corporation, and agent, attorney, etc., signing for a partnership or an individual shall be furnished.

5.2 SUBMISSION

- A. Proposals with all items related thereto, shall be enclosed in a sealed envelope which shall be marked: "Florida Gateway College, Building 31 – Temporary Chemistry Lab Renovations, Lake City, Florida, FGC Bid Number: ITB No. 19-1-01", and delivered or mailed to the proper address. Failure to comply with these requirements shall be cause for rejection of the Proposal. **EACH BIDDER SHALL SUBMIT ONE ORIGINAL AND ONE COPY OF THEIR PROPOSAL IN THE SEALED ENVELOPE.**

- B. Each bidder shall submit per requirements of Section 00 4300 the following:
1. A list of names of the Subcontractors or other persons or organizations, including those who are to furnish materials for equipment fabricated to a special design, proposed for such portions of the work as may be designated in the Contract Documents, or if no portions are so designated, the names of the Subcontractors proposed for the principal portions of the work. If the Contractor uses his own work force for any of the above, he must insert the names of his firm in the appropriate blank and be properly licensed as applicable for the specific type work listed.
 2. Refer to Section 00 4300.

PART 6 - DISQUALIFICATION OF BIDDERS

6.1 DISQUALIFICATION

- A. More than one Proposal from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. Reasonable grounds for believing that a Bidder is interested in more than one Proposal for the same work will cause rejection of all Proposals in which such Bidders are believed to be interested. Any or all Proposals will be rejected if there is reason to believe that collusion exists among the Bidders, and no participants in such collusion will be considered in future Proposals for the same work. Proposals in which the prices obviously are unbalanced may be rejected.

PART 7 - BID GUARANTEE

7.1 BID GUARANTEE

- A. Not required for this project.

PART 8 - RECEIPT AND OPENING OF BIDS

8.1 RECEIPT AND OPENING

- A. Bids will be opened publicly at the time and place stated in the Advertisement for Bids. The Owner or Owner's Agent whose duty it is to open the Proposals will decide when the specified time has arrived, and no Proposals received thereafter will be considered. No responsibility will be attached to the Owner or any Owner's Agent for the premature opening of a Proposal not properly addressed and identified.

PART 9 - BID MODIFICATIONS

9.1 MODIFICATIONS

- A. Bid modifications will be accepted from Bidders provided the modification(s) is (are) clearly written, and signed and dated by an authorized agent of the Bidder, at the place where Proposals are to be received, and if received prior to the Bid Opening. Bid modifications will be read prior to opening formal Bids.

PART 10 - WITHDRAWAL OF BIDS

10.1 WITHDRAWAL

- A. Bids may be withdrawn on request received from Bidders prior to the time fixed for Bid opening. Negligence on the part of the Bidder in preparing his Proposal confers no right for the withdrawal of his Proposal after it has been opened.

PART 11 - AWARD OF CONTRACT

11.1 AWARD OF CONTRACT

- A. The Construction Contract will be awarded as soon as possible to the lowest responsible Bidder, provided his Proposal is reasonable and it is to the best interest of the Owner to accept it.

11.2 RIGHT TO WAIVER

- A. The Owner reserves the right to waive any informality in bids received when such waiver is in the best interest of the Owner.

11.3 FURTHER REQUESTS

- A. Each Bidder shall, if so requested by the Owner, present evidence of his experience, qualifications and ability to carry out the terms of the Contract, including a financial statement.

PART 12 - REJECTION OF BIDS

12.1 REJECTION

- A. The Owner reserves the right to reject any and all Proposals when rejection is in the best interest of the Owner and to reject the Proposal of a Bidder who, in the opinion of the Owner, is not in a position to perform the Contract.

PART 13 - COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

13.1 TIME OF COMPLETION

- A. Contractor shall execute the Owner/Contractor Contract within seven calendar days from date of receipt and return to the Owner for his execution, along with all required bonds and insurance certificates. Contractor shall begin work within seven calendar days from date of receipt of a letter of intent, Building Permit and Notice to Proceed issued by the appropriate authority.
- B. All work shall be Substantially Complete by Thursday, December 20, 2018 and Finally Complete by Thursday, January 3, 2019.
- C. Contractor shall maintain sufficient labor and supervision on the project site until all items have been completed, including Architect's Substantial Completion Review Punch List. A Final Review with the Owner's Representative, Architect, Engineers and Contractor will be scheduled upon completion of all items on all A/E Punch Lists.

13.2 COMMENCEMENT

- A. At the Preconstruction Conference, the Owner and Architect shall make arrangements with the Contractor for the assignment of staging area to be used at the site for storage of materials, parking, sheds, trailers, etc. During the construction, the Contractor shall maintain the areas in neat condition. The storage of materials for use in construction of this Contract shall in no way interfere with, or make hazardous, existing walkways, driveways, etc. Existing trees and landscaping shall be protected from injury.

PART 14 - SUBSTANTIAL COMPLETION

14.1 DEFINITION

- A. The term Substantial Completion shall mean that all materials required by the Contract Documents are incorporated in the project, that all labor has been performed and that the work is ready for review. It shall not mean the inclusion of such minor alterations and patching as the Substantial Completion Review shall disclose.

PART 15 - FINAL COMPLETION

15.1 FINAL REVIEW

- A. If, upon Final Review of the project site, more than ten items on the original A/E Substantial Completion Review Punch Lists are found to be uncorrected, the Architect reserves the right to terminate the Final Review at the site, until such time as all items on the Punch Lists are completed.

PART 16 - LIQUIDATED DAMAGES

16.1 LIQUIDATED DAMAGES

- A. Bidders are notified that the following paragraphs will be inserted in the Contract: "If project is not Substantially Completed, according to the definition of Substantial Completion, or within such further time, if any, as in accordance with the provisions of the Contract Documents shall be allowed for such Substantial Completion, the Contractor shall pay to the Owner as liquidated damages for such delay and not as a penalty, five hundred dollars for each and every calendar day elapsing between the date fixed for Substantial Completion and the date such Substantial Completion shall have been fully accomplished. It is also hereby agreed that if the project is not Finally Completed, in accordance with the requirements of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, two hundred and fifty dollars per calendar day."
- B. Said Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor to the Owner under the provisions of the General Conditions, and Supplementary Conditions and shall not exclude the recovery of damages by the Owner under other provisions of the Contract Documents, except for Contractor's delays.
- C. The provision for Liquidated Damages for delay shall in no manner affect the Owner's right to terminate the Contract as provided in the General Conditions, or elsewhere in the Contract Documents, and the Owner's exercise of the right to terminate shall not release the Contractor from his obligation to pay said Liquidated Damages in the amounts stipulated herein. Said Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor in the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the Contract, except for Contractor's delays.

PART 17 - PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

17.1 THE PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

- A. The Performance Bond shall be accompanied by a duly authenticated or certified document, in duplicate, evidencing that the person executing the Bond on behalf of the Surety had the authority to do so on the date of the Bond.
- B. In the usual case the conferring of that authority has occurred prior to the date of the Bond and the document showing the date of appointment and enumeration of the powers of the person executing the Bond is accompanied by a certificate that the appointment and power have not been revoked

and remain in effect. The date of the certifications cannot be earlier than the date of the Bond. The Bond shall be dated not earlier than the Contract. See General Conditions.

- C. The Bond shall be executed in the same manner and by the same person who executed the Contract.
- D. A Labor and Material Payment Bond is not required for this project.

PART 18 - REQUIREMENTS FOR CERTIFICATES OF INSURANCE

18.1 RELATED REQUIREMENTS

- A. Refer to Supplementary Conditions for specific requirements.

PART 19 - BASIS FOR BIDDING

19.1 BASIS FOR BIDDING PRODUCTS (I.E. MATERIAL, EQUIPMENT AND SYSTEMS) SHALL BE AS FOLLOWS:

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or descriptions.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Pre-Bid or Post-Bid Substitutions. See individual Sections for specific requirements.
- C. Products Specified by Naming Several Manufacturers: Products of named manufacturers meeting specifications: No options, no substitutions allowed.
- D. Products Specified by Naming Only One Manufacturer: No options, no substitutions allowed.

19.2 SUBSTITUTIONS

- A. Pre-Bid and Post-Bid Substitutions: Refer to Section 01 6000.

PART 20 - EXECUTION OF CONTRACT

20.1 SIGNATURES

- A. If the Contractor be an individual, the Contract shall be signed with his manual signature.
- B. If the Contractor be a firm or company owned by an individual, the Contract shall be executed in the name of the firm or company by the manual signature of the Owner.
- C. If the Contractor be a partnership, the Contract shall be executed in the name of the partnership by the manual signature of a partner or partners.
- D. If the Contractor be a corporation, the Contract shall be executed in the name of the corporation and shall bear the corporate seal. It may be signed for the corporation by the President and attested by the Secretary; if signed for the corporation by any officer other than the President, the signature of each officer signing shall be attested by the Secretary, and the executed Contract shall be accompanied by a duly authenticated document, bearing the seal of the corporation, quoting the section of the By-Laws of the corporation authorizing the Board of Directors to designate such officer, and a copy of the Resolution designating and authorizing him to execute on behalf of the corporation. That document must contain a statement that the authority is in effect on the date of execution of the Contract, and may not be dated earlier than the date of the execution of the Contract. The same officer may not execute the Contract and authenticate the document of authority.

PART 21 - INTENT

21.1 INTENT

- A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the work. The Contract Documents are complementary, and what is required by any one element of the Contract Documents shall be binding as if required by all. The Contractor shall be responsible for the construction and coordination of the parts, and all systems shall be completely compatible and fully functional without additional cost to the Owner.

PART 22 - PRECEDENCE

22.1 PRECEDENCE

- A. Supplementary General Conditions shall govern over the General Conditions; but neither the Supplementary General Conditions nor the General Conditions shall govern over the basic Owner/Contractor Contract. Addenda and Change Orders supersede only affected portions of the Construction Documents.
- B. Should any provision of the Florida Statutes or other State Regulations conflict with any of the General Conditions, the provisions of the State requirements shall govern; where there are no State requirements involved, the General Conditions shall govern.
- C. Should the Construction Documents (Drawings and Specifications) conflict on any point, the work shall be performed according to the Specifications, in-so-far as the quality of materials and workmanship is concerned; but the Drawings shall govern in-so-far as the form or extent of the work is concerned. Should an item be shown on the Drawings, but not specified, or specified but not shown on the Drawings, Contractor shall provide the item as "standard of the industry", or as specified insofar as quality is concerned.
- D. Should details and schedules shown on the Drawings conflict on any point, the schedules shall prevail. Large scale details shall prevail over small-scale details, plans or elevations. Figure dimensions shall prevail over scaled dimensions.

END OF SECTION

**SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____

(print name of the public entity)

by _____

(print individual's name and title)

For _____

(print name of entity submitting sworn statement)

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), **Florida Statutes**, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(a)(b), **Florida Statutes**, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), **Florida Statutes**, means:
1. A predecessor or successor of a person convicted of a public entity crime; or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
5. I understand that a "person" as defined in Paragraph 287.133(1)(e), **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors,

executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **(indicate which statement applies.)**

_____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. **(attach a copy of the final order.)**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

Sworn to and subscribed before me this _____ day of _____, 20 _____.

Personally known _____

OR Produced identification _____

Notary Public - State of _____

(Type of identification)

My commission expires _____

(Printed typed or stamped
commissioned name of notary public)

Form PUR 7068 (Rev. 06/18/92)
PUBLIC.ENT

DRUG FREE WORKPLACE PROGRAM REQUIREMENTS

The Contractor will be required to have a Drug Free Workplace Program implemented in his business. In order to have a Drug Free Workplace Program, a business shall:

- 1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection one above.
- 4) In the statement specified in subsection one, notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace, no later than five days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

DATE

CONTRACTOR'S SIGNATURE

DRUGFREE.REQ

SECTION 00 4113

BID FORM

(To be copied on Contractor's business letterhead)

TO: DISTRICT BOARD OF TRUSTEES OF
FLORIDA GATEWAY COLLEGE
149 S.E. COLLEGE PLACE
LAKE CITY, FLORIDA 32025-8703

PROJECT: FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01

The undersigned Contractor, hereinafter called "Bidder", proposes to furnish all labor and materials for the construction of the above referenced project, in full accordance with the Contract Documents for said project, as prepared by Kail Partners Architecture & Interiors, on file in the office of said Architect for the following bid amounts:

BASE BID: _____ DOLLARS (\$ _____)

The undersigned agrees that if this Proposal is accepted, construction of this project will begin within time specified after award of Contract, and shall be Finally Completed within the specified time as evidenced by my willingness to sign and execute a Contract so stating.

The Bidder does hereby agree, that this Proposal shall remain in full force and effect for a period of thirty calendar days after the time of the opening of this Proposal, and that the Bidder will not revoke nor cancel this Proposal or withdraw from the competition within said thirty calendar day period; that in the event the Contract is awarded to this Bidder, they will, within ten calendar days after it is received, enter into a written Contract with the Owner in accordance with the accepted bid.

Acknowledgment is hereby made of receipt of the following Addenda issued during the bidding period:

ADDENDUM NO. _____ DATED: _____

ADDENDUM NO. _____ DATED: _____

ADDENDUM NO. _____ DATED: _____

In witness whereof, the Bidder has hereunto set his signature and affixed his seal

this _____ day of _____, A.D. 20__.

(FIRM NAME) (SEAL)

BY: _____
(Authorized Signature) (Typed Name and Title)

Certificate Number and Type _____ as issued to

_____ by the
(Name of Holder Representing Firm)

State of Florida Construction Industry Licensing Board.

END OF SECTION

SECTION 00 4300
PROCUREMENT FORM SUPPLEMENTS

Submit with the Bid a list of "SUBCONTRACTORS, MANUFACTURERS OR SUPPLIERS" indicated below:

FIRM NAME: _____

ADDRESS: _____

For the construction of the project, if an Alternate changes Base Bid Subcontractor or Supplier, list the Alternate Subcontractor or Supplier with the Alternate.

The undersigned, hereinafter called "Bidder" lists below the names of the Subcontractors who will perform the portions of the work included in the project. Subcontractors listed cannot be changed without the express written approval of the Owner and only upon submission of a signed and notarized statement from the listed Subcontractor stating the reason they are withdrawing from the project.

Subcontractors not meeting the requirements listed below will be cause for rejection of that Subcontractor. The undersigned declares that they have fully investigated each Subcontractor listed and has in his files evidence that such Subcontractor is currently and appropriately licensed in the State of Florida and engaged successfully in his line of work for a minimum of two consecutive years prior to this Bid Date, that they maintain a fully equipped organization capable, technically and financially, of performing the pertinent work, and that they have made similar installations in a manner satisfactory to the Owner. Subcontractors proposed for this project may, at the Owner's discretion, be required to submit references from previous project owners.

If Contractor lists themselves as a Subcontractor they must meet all the above requirements, including licenses, occupational licenses and/or certifications for each trade for which they are listed and they shall be required to perform the work for which they have listed themselves as the Subcontractor.

Subsequent to execution of Contract, Contractor will be required to submit copies of all Subcontractors' and, if applicable, the Contractor's occupational licenses and evidence of compliance with the above requirements. Please provide the name of the Subcontractor's Company along with home office city and state for the following Subcontractors.

1. Mechanical _____

2. Electrical _____

IN WITNESS WHEREOF, the Bidder has hereunto set his signature and affixed his seal
this ____ day of _____, A.D., 20__.

(FIRM NAME) (SEAL)

(Type Name and Title)

By: _____
(Authorized Signature)

END OF SECTION

**SECTION 00 5214
AGREEMENT FORM**

GENERAL CONDITIONS

**ARTICLE 1.00
CONTRACT DOCUMENTS**

1.1 DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the following:

- (a) The executed Agreement between Owner and Contractor
- (b) Conditions of the Contract (General, Supplementary, and Special Conditions) and Attachments thereto
- (c) Performance Bond
- (d) Labor and Material Payment Bond – Not required for this project.
- (e) Drawings
- (f) Project Manual
- (g) Addenda issued prior to execution of the Contract
- (h) Modifications issued after execution of the Contract

1.1.2 THE CONTRACT

The contract will be executed on Attachment One to these General Conditions, titled Agreement between Owner and Contractor. The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, and including the bidding documents. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.5.

1.1.3 THE PROJECT

The Project is the total construction to be built or renovated on the site as designed by the Architect. Refer to Section 01 3000 for scope of work.

1.1.4 THE WORK

The work is defined as all labor, materials and equipment to be incorporated into the project under the terms of this contract. Said work shall constitute either the whole or a part of the project.

1.1.5 MODIFICATION TO THE CONTRACT

A Modification may be made only after execution of the Contract, and is one of the following:

- (a) A written Amendment to the Contract signed by both parties;
- (b) An executed Change Order;

- (c) A written interpretation issued by the Architect pursuant to Subparagraph 1.2.8 of the General Conditions;
- (d) A written Field Order for a minor change in the work and issued by the Architect pursuant to Paragraph 12.3 of the General Conditions.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

1.2.1 The Contract Agreement shall be signed by the Owner and Contractor for distribution to the Owner, Contractor and Architect.

1.2.2 By executing the Contract, the Contractor agrees that he has carefully examined the Contract Documents together with the site of the proposed work as well as its surrounding territory, that he is fully informed regarding the conditions affecting the work to be done and the labor and materials to be furnished for the completion of the work.

1.2.3 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention is to include all labor, materials, supplies, equipment and tools necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, or division of the Specifications shall be supplied unless it is required elsewhere in the Contract Documents or is reasonably inferable therefrom as being necessary to produce the intended results. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings.

1.2.4 Drawings and Specifications are intended to be complementary and to provide for a complete work.

The Contractor acknowledges that the Contract consideration includes sufficient money allowances to make the work complete and operational and in compliance with good practice and agrees that inadvertent minor discrepancies or the failure to show details or to repeat on any part of the Contract Documents, the figures or notes given on another, shall not be the cause of additional charges or claims.

Where contradictions occur within the Specifications or the Drawings, with regard to the quantity, quality or method of installation of a particular item, the Contractor shall include in his bid the cost for furnishing the more expensive item or installation of the greater quantity.

The following shall be given preference in the order hereinafter set forth to determine what work the Contractor is to perform: 1) Addenda (later dates to take precedence over earlier dates), 2) Modifications, 3) Agreement, 4) Specifications, 5) Schedules, 6) Large Scale Detail Drawings, 7) Small Scale Plan and Section Drawings.

Dimensioned Drawings shall govern over scaled drawings.

Existing conditions, including dimensions, shall be verified by the Contractor before laying out the work.

1.2.5 Much of these specifications are written in an abbreviated form and may include sentence fragments. Omissions of words or phrases as "the Contractor shall", "in conformity with", "shall be", "as noted on the Drawings", "according to the plans", "a", "an", "the", and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.2.6 Where such words as "as shown", "as indicated", "as noted", or words of similar import are used, they shall refer to the Drawings. Where references are made to "sections" and "divisions" it shall mean sections and divisions of the Specifications unless otherwise stated. Where such words as "as selected", "as approved", "acceptable" or "approved" occur, they shall have reference to the selection and approval of the Architect unless otherwise stated.

Where sentences contain verbs such as "provide", "install", and "furnish", they shall mean that the Contractor shall "furnish and install or cause to be furnished and installed" complete, the material or item specified, excepting those materials indicated to be Owner furnished and Contractor installed.

1.2.7 The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the work among the Subcontractors or in establishing the extent of work to be performed by any trade.

1.2.8 Written interpretations necessary for the proper execution of progress of the work, in the form of Drawings or other format, will be issued with reasonable promptness by the Architect for such interpretations. Such interpretations shall be consistent with and reasonably inferable from the Contract Documents and shall be promptly rendered by the Architect.

1.3 COPIES FURNISHED AND OWNERSHIP

1.3.1 The Contractor shall furnish copies of Drawings and Specifications to all his Subcontractors as provided in the Supplementary Conditions.

1.3.2 All Drawings, Specifications and copies thereof are and shall remain the Owner's property. They are not to be used on any other project, and, with the exception of one contract set for each party to the Contract, are to be returned to the Owner on request at the completion of the work.

ARTICLE 2.00

ARCHITECT

2.1 DEFINITIONS

2.1.1 The Architect shall be the firm of Kail Partners Architecture & Interiors, and shall act as defined below either directly or through duly authorized personnel.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The Architect will provide general Administration of the Construction Contract, including performance of the functions hereinafter described.

2.2.2 The Architect will be the Owner's representative during construction and until final payment. The Architect will have authority to act on behalf of the Owner as Owner's representative to the extent provided in the Contract Documents, unless otherwise modified by written instrument which will be shown to the Contractor. The Architect will advise and consult with the Owner, and all of the Owner's instructions to the Contractor shall be issued through the Architect.

2.2.3 The Architect and the Owner shall at all times have access to the work wherever it is in preparation and progress.

2.2.4 The Architect will provide on-site review to check the quality and progress of the work and to determine in general if the work is being installed in accordance with the Contract Documents.

The Architect will periodically visit the job site to review the quality of the work being installed.

On the basis of his on-site observations, the Architect shall keep the Owner informed on the progress of the work and will endeavor to protect him against defects and deficiencies in the work of the Contractor.

The Architect will not be responsible for construction means, methods, techniques, sequences or procedures of construction, or safety precautions and programs in connection with the work, and he will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.

2.2.5 Based on the above on-site observations and the Contractor's Application for Payment, the Architect will determine the amounts owing to the Contractor and will issue Certificates for Payment in amounts consistent with the approved Schedule of Values (Reference 9.2.1).

The Architect shall, to the best of ability, determine that the work installed is in conformance with the construction documents.

The Architect must certify on each application for payment that such payment is due before any payment is made.

Such certification by the Architect does not in any way relieve the Contractor of his final responsibility for conformity with plans and specifications.

2.2.6 The Architect will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by the Contractor. The Architect will, within a reasonable time, render such interpretations as he may deem necessary for the proper execution and progress of the work.

- 2.2.7 Claims, disputes and other matters in question relating to the execution or progress of the work or the interpretation of the Contract Documents shall be referred initially to the Architect and the Owner for a decision which will be rendered by the Architect within a reasonable time.
- 2.2.8 All interpretations and decisions of the Architect shall be consistent with the intent of the Contract Documents.
- 2.2.9 The Architect's decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.
- 2.2.10 Any Claim, dispute or other matter that has been referred to the Architect, except those relating to artistic effect as provided in Subparagraph 2.2.9 and except any which have been waived by the making or acceptance of final payment as provided in Paragraph 9.7, shall be subject to arbitration upon the written demand of any party. However, no demand for arbitration of any such claim, dispute or other matter may be made until the earlier of:
- (a) The date on which a written decision has been rendered, or,
 - (b) the tenth day after the parties have presented their evidence to the Architect or have been given a reasonable opportunity to do so, if no written decision has been rendered by that date.
- 2.2.11 If a decision is made in writing and states that it is final but subject to appeal, no demand for arbitration of a claim, dispute or other matter covered by such decision may be made later than thirty days after the date on which the party making the demand received the decision. The failure to demand arbitration within said thirty days period will result in the Architect's decision becoming final and binding upon the Contractor. If a decision is rendered after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede any arbitration proceedings unless the decision is acceptable to the parties concerned.
- 2.2.12 The Architect will have authority to reject work which does not conform to the Contract Documents or has been damaged prior to approval of final payment. Whenever, in reasonable opinion, Architect considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, Architect will have authority to require special inspection or testing of the work in accordance with Subparagraph 7.8.2 whether or not such work be then fabricated, installed or completed. However, neither authority to act under this Subparagraph 2.2.12, nor any decision made in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the work.
- 2.2.13 The Architect will review shop drawings and samples as provided in Paragraph 4.13.
- 2.2.14 The Architect will prepare change orders in accordance with Article 12.
- 2.2.15 The Architect will conduct reviews to determine the dates of Substantial Completion and Final Completion and will receive and review written guarantees and related documents required by the Contract and assembled by the Contractor and will recommend a Final Certificate of Payment to the Owner.
- 2.2.16 The duties, responsibilities and limitation of authority of the Architect as the Owner's representative during construction as set forth in Articles 1 through 15 inclusive of these General Conditions will not be modified or extended without written consent of the Owner, Contractor and Architect.

- 2.2.17 The Architect will not be responsible for the acts or omissions of the Contractor, any Subcontractors or any of their agents or employees or any other persons at the site or otherwise performing of the work.
- 2.2.18 In case of the termination of the employment of the Architect, the Owner shall appoint an Architect whose status under the Contract Documents shall be that of the former Architect.

ARTICLE 3.00

OWNER

3.1 DEFINITION

- 3.1.1 The Owner is the DISTRICT BOARD OF TRUSTEES, FLORIDA GATEWAY COLLEGE, a Body Politic, identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or his authorized representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 3.2.1 The Owner through the Architect shall furnish all surveys describing the physical characteristics, subsurface conditions, legal limits and utility locations for the site of the project including investigative reports, all of which have been relied upon by the Architect in preparing Drawings and Specifications, where applicable.
- 3.2.2 Should conditions encountered below the surface of the ground vary to an unreasonable extent from the conditions indicated by the Drawings and Specifications, the Architect shall be notified by the Contractor and instructions shall have been received from the Architect prior to the Contractor's proceeding with the work involved. Core boring data, including ground-water elevations or conditions, if shown on the Drawings or attached to these Specifications, are presented only as information that is available indicating certain conditions found and limited to the exact locations shown. Neither the Owner nor the Architect shall be responsible for variations found to exist between the data referred to and actual field conditions that develop through the period of construction. The Contractor shall be responsible for making his own determination of water table variations prior to bidding and shall not assume that any water levels shown by the aforesaid core boring data will necessarily be maintained at the level indicated.
- 3.2.3 The Owner shall secure and pay for easements for permanent structures or permanent changes in existing Facilities.
- 3.2.4 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the work.
- 3.2.5 The Owner shall issue all instructions to the Contractor through the Architect.
- 3.2.6 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Payment and Insurance in Articles 9 and 11 respectively.

3.3 OWNER'S RIGHT TO STOP THE WORK

- 3.3.1 If the Contractor fails to correct defective work, or has significant safety violations, or persistently fails to supply materials or equipment in accordance with the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. The Contractor will not be entitled to a time extension of the contract completion time in the event the Owner exercises his rights under this paragraph.

3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

- 3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including the cost of the Architect's additional services made necessary by such default, neglect or failure. The Architect must approve both such action and the amount charged to the Contractor. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

ARTICLE 4.00

CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative who is licensed to do business by the State of Florida.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect any error, inconsistency or omission he may discover. The Contractor shall not be liable to the Owner or the Architect for any damage resulting from any such errors, inconsistencies or omissions in the Contract Documents provided they are reported as outlined above. The Contractor shall do no work without Contract Documents.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct his work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for the proper execution and completion of the work.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformity with the Contract Documents. All work not so conforming to these standards at the time of acceptance or at the time of inspections, tests or approvals, shall be considered defective. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of material and equipment.

4.6 TAXES

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes required by law.

4.7 PERMITS, FEES AND NOTICES

4.7.1 The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work, which are applicable at the time the bids are received. Contractor shall submit a current copy of your Professional License(s) with your executed contract. Educational facilities are exempt from assessments of fees for building permits, ordinances, and impact fees or service availability fees as set forth in Florida Statute 235.26(1).

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and order of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted by appropriate Modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect he shall assume full responsibility therefore and shall bear all costs attributed thereto.

4.7.3 Contractor shall save harmless the Owner and Architect against any claim or liability arising from or based upon the violation of law, ordinance or regulation, whether by himself, his employees, or any subcontractor.

4.8 CASH ALLOWANCES

4.8.1 No cash allowances are specified in the project.

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the project site during the progress of the work. The Superintendent shall be satisfactory to the Architect and shall not be changed except with the consent of the Owner, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor and all communications given to the Superintendent shall be as binding as if given to the Contractor. Important communications will be confirmed in writing. Other communications will be so confirmed on written request in each case.

4.10 RESPONSIBILITY FOR THOSE PERFORMING THE WORK

4.10.1 The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all Subcontractors, their agents and employees, and all Sub-subcontractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.

4.10.2 The Contractor shall enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the task assigned to him. The Owner may require the removal of disorderly employees.

4.10.3 There shall be no alcohol, firearms or drugs allowed on the job site. No unprofessional interaction with students or staff will be allowed.

4.11 PROGRESS SCHEDULE

4.11.1 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Architect's approval an estimated progress schedule for the work. The progress schedule shall be related to the entire project to the extent required by the Contract Documents. This schedule shall indicate the dates for the starting and completion of the various stages of construction and shall be revised as required by the conditions of the work, subject to the Architect's approval.

4.11.2 Within five working days after the commencement of any condition which is causing or may cause delay in completion, the Contractor must notify the Architect and the Owner in writing of the effect, if any, of such conditions on the time progress schedule, and must state why and in what respects, if any, the condition is causing or may cause such delay.

4.12 DRAWINGS AND SPECIFICATIONS AT THE SITE

4.12.1 One set of Drawings, marked to record all changes made during construction, shall be delivered to the Architect for the Owner upon completion of the Work.

4.13 SHOP DRAWINGS AND SAMPLES

4.13.1 Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.

4.13.2 Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the work will be judged.

4.13.3 Within ten working days of the date of contract award, the Contractor shall furnish to the Architect a schedule of shop drawings and samples to be submitted for review. This schedule shall indicate an estimated total number of drawings and samples and a timed sequence for their submission and approval. When approved by the Architect this shop drawing schedule shall be incorporated into the overall schedule.

4.13.4 The Contractor shall review, stamp with his approval and submit in accordance with the above schedules, all Shop Drawings and Samples required by the Contract Documents. Shop Drawings and Samples shall be identified in a manner acceptable to the Architect. At the time of submission the Contractor shall inform the Architect in writing of any deviation in the Shop Drawings or Samples from the requirement of the Contract Documents.

4.13.5 The Contractor shall submit to the Architect electronic copies (PDF format) of all Shop Drawings required for the work of the various trades.

Shop Drawings will be annotated as appropriate by the Architect and returned to the Contractor with appropriate action indicated thereon.

4.13.6 By approving and submitting Shop Drawings and Samples, the Contractor thereby agrees that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each Shop Drawing and Sample with the requirements of the work and of the Contract Documents.

In checking his Shop Drawings prior to submittal, the Contractor is requested to note his corrections or comments on the Drawings in red.

4.13.7 The Architect will review and approve Shop Drawings and Samples with reasonable promptness so as to cause no delay, but only for conformity with the design concept of the project and with the information given in the Contract Documents. The Architect's approval of a separate item shall not indicate approval of an assembly in which the item functions.

4.13.8 Drawings returned to the Contractor will be stamped either: "NO EXCEPTIONS TAKEN", "EXCEPTIONS AS NOTED", "REVISE AND RESUBMIT", OR "REJECTED". Those drawings stamped "EXCEPTIONS AS NOTED" need not be returned for further approval if the notations are acceptable to the Contractor and Subcontractors. Drawings stamped "REVISE AND RESUBMIT" or "REJECTED" shall require new submission.

4.13.9 The Contractor shall make any corrections required by the Architect and shall resubmit the corrected copies of Shop Drawings or submit new samples until approved. The Contractor shall direct attention in writing to revisions other than the corrections requested by the Architect on previous submissions.

- 4.13.10 Appropriate and specific catalogue cuts may be submitted for approval by the Contractor where applicable.
- 4.13.11 The Architect's approval of Shop Drawings or Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the submission and the Architect has given written approval to the specific deviation, nor shall the Architect's approval relieve the Contractor from responsibility for errors or omissions in the Shop Drawings or Samples.
- 4.13.12 No portion of the work requiring a Shop Drawing or sample submission shall be commenced until the submission has been approved by the Architect unless the Architect specifically in writing cancels this requirement.

4.14 USE OF SITE

- 4.14.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.
- 4.14.2 The Contractor shall be responsible for any encroachments on rights or property of the public or adjoining property owners and shall hold the Owner and Architect harmless because of any encroachments which may be a result of his lack of proper layout. In this regard he shall, without extra cost to the Owner, remove any work or that portion of any Work that encroaches on the property of others, or that is built beyond legal building or setback limits, and he shall rebuild the affected work or portion of work at the proper location and in full compliance with the Contract Documents.
- 4.14.3 Contractor will coordinate at least 48 hours in advance any utility or access interruption that will impact other buildings or portions of that building in use.

4.15 CUTTING AND PATCHING OF WORK

- 4.15.1 The Contractor shall be responsible for any cutting, fitting and patching that may be required to complete his work except as otherwise specifically provided in the Contract Documents. The Contractor shall not endanger any work of any other contractors by cutting, excavating or otherwise altering any work and shall not cut or alter the work of any other contractor except with the written consent of the Architect.

4.16 COMMUNICATIONS

- 4.16.1 The Contractor shall forward all communications to the Owner through the Architect.

4.17 INDEMNIFICATION

- 4.17.1 To the full extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of personal property including the loss of use resulting therefrom, and (2) is caused in whole or in part by a negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by the negligence of a party indemnified hereunder. Such obligations shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph 4.17.

- 4.17.2 In any and all claims against the Owners or the Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.17 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 4.17.3 The obligations of the Contractor under this Paragraph 4.17 shall not extend to the liability of the Architect, his Agent or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his Agents or employees provided such giving or failure to give is the primary cause of the injury or damage.
- 4.18 CLEANING UP**
- 4.18.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the work he shall remove all his waste materials and rubbish from and about the project as well as all his tools, construction equipment, machinery and surplus materials, and shall clean all glass surfaces and leave the work clean, except as otherwise specified.
- 4.18.2 If the Contractor fails to clean up, the Owner may do so and the cost thereof shall be charged to the Contractor as provided in Paragraph 3.4.
- 4.18.3 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by paragraph 4.18.1, the Owner may clean up and charge the cost thereof to the several contractors as the Owner may determine to be just.

ARTICLE 5.00
SUBCONTRACTORS

5.1 DEFINITION

- 5.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative who is licensed to do business by the laws of the State of Florida. It shall be the Contractor's responsibility to provide the College the current license number of each Subcontractor and to confirm their license is still valid.
- 5.1.2 A Sub-subcontractor is a person or organization who has a direct or indirect contract with a Subcontractor to perform any of the work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof who is licensed to do business by the law of the place where the project is located.
- 5.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the Owner or the Architect and any Subcontractor or Sub-subcontractor.
- 5.1.4 The Owner retains the right and privilege to reject any Subcontractor or Sub-subcontractor and further retains the right and privilege to approve any and all Subcontractors or Sub-subcontractors.

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

- 5.2.1 The Supplementary Conditions include a requirement for the identification of specified Subcontractors.
- 5.2.2 The Contractor shall not make any substitution for any Subcontractor or person or organization that has been accepted by the Owner and the Architect, unless the substitution is acceptable to the Owner and the Architect (per Florida Statute 255.0515).

5.3 SUBCONTRACTUAL RELATIONS

- 5.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractor and Sub-subcontractors) which shall contain provisions that
- 5.3.1.1 Preserve and protect the rights of the Owner and the Architect under the Contract with respect to the work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
- 5.3.1.2 Require that such work be performed in accordance with the requirements of the Contract Documents;
- 5.3.1.3 Required submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 9;

- 5.3.1.4 Required that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;
- 5.3.1.5 Waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Paragraph 11.3, except such rights as they may have to the proceeds of such insurance held by the Contractor as trustee under Paragraph 11.2 and
- 5.3.1.6 Obligate each Subcontractor specifically to consent to the provisions of this Paragraph 5.3.
- 5.3.1.7 When the Contractor receives payment from the Owner for labor, services, or materials furnished by subcontractors and suppliers hired by the Contractor for the project, the Contractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the Contract, and suppliers, less the value of any item contested in accordance with the Contract, within ten days after the Contractor's receipt of payment from the Owner. When the payment due the subcontractor is for final payment, including retainage, the subcontractor must include with the invoice for final payment a conditional release of lien and all appropriate warranties and closeout documentation. When the subcontractor receives payment from the Contractor for labor, services, or materials furnished by subcontractors and suppliers hired by the subcontractor, the subcontractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the Contract, within ten days after the subcontractor's receipt of payment. This provision shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the Owner and a Subcontractor or Sub-subcontractor (et al.), between the Owner and Architect or between any persons or entities other than the Owner and Contractor.

5.4 PAYMENT TO SUBCONTRACTORS

- 5.4.1 The Contractor shall pay each Subcontractor, upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's work, less the percentage retained from payment to the Contractor. The Contractor shall also require each Subcontractor to make similar payment to his Sub-subcontractors.
- 5.4.2 If the Architect fails to issue a Certificate for Payment for any cause which is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay the Subcontractor on demand, made at any time after the Certificate for Payment should otherwise have been issued, for his work to the extent completed, less the retained percentage.
- 5.4.3 The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor under Article 2, and he shall require each Subcontractor to make similar payment to his Sub-subcontractors.
- 5.4.4 The Architect may, on request and at his discretion, furnish to any Subcontractor, if practicable, information regarding percentage of completion certified to the Contractor on account of work done by such Subcontractors.
- 5.4.5 Neither the Owner nor the Architect shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.

ARTICLE 6.00

SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO AWARD SEPARATE CONTRACTS

- 6.1.1 Prior to and during the progress of the work, the Owner reserves the right to award other contracts relating to the project or in connection with other work within the boundaries of the project.
- 6.1.2 When separate contracts are awarded for different portions of the project, "the Contractor" in the Contract Documents in each case shall be the contractor who signs each separate contract.

6.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

- 6.2.1 The Architect shall coordinate the work of the Contractor with that of other Contractors on the site. The Contractor shall cooperate fully with the Architect in this activity and shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his work with theirs.
- 6.2.2 If the project will be constructed using phased design and construction methods, the work of the Contractor will depend upon proper execution and results of the work of another Contractor.
- The Contractor shall inspect and promptly report to the Architect any apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor to inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper to receive his work, except as to defects which may develop in the other separate Contractor's work after the execution of the Contractor's work.
- 6.2.3 Should the Contractor cause damage to the work or property of any separate Contractor on the project, the Contractor shall, upon due notice, settle with such other Contractor by agreement or mediation, if he will so settle. If such separate Contractor sues the Owner or initiates an mediation proceeding on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorney's fees and court or mediation costs which the Owner has incurred.

ARTICLE 7.00

MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 The Contract shall be governed by the law of the State of Florida and all local ordinances and codes, and exclusive venue shall be Columbia County, Florida.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGES

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 PERFORMANCE BOND

7.5.1 Performance Bond, in the penal sum of not less than 100 percent of the Contract amount, with a Surety Company rated A - or better by AM Best and licensed to conduct business in the State of Florida, will be required of the Contractor, guaranteeing that the Contract, including the various guarantee periods thereunder, will be faithfully performed; and that the Contractor will promptly make payment to all persons supplying him labor, materials, supplies and services used directly or indirectly by the Contractor in the prosecution of the work provided for in the Contract. The Bond, along with the appropriate power of attorney, shall be delivered to the Owner simultaneously with Contractor's execution of the Agreement. The Bond shall be satisfactory to the Owner and shall extend as a Guarantee Bond for one year after acceptance of the project.

7.5.2 In the event that Surety Company becomes bankrupt, insolvent or unsatisfactory to the Owner, the Contractor shall substitute additional or new Bond in the same or lesser penal sum, satisfactory to the Owner and to be conditioned as above required. Upon the Contractor's failure to furnish such additional or new Bond within five days from the date of written notice to do so, all payments under this Contract shall be withheld until such additional Bond is furnished.

7.5.3 The Bond required in Paragraphs 7.5.1 and 7.5.2 shall be executed on the form shown as Attachment 5 and Attachment 6 to these documents, and, prior to delivery to the Owner, shall be recorded in the public records of the county where the work is to be performed pursuant to FS 255.05 (1)

7.6 RIGHTS AND REMEDIES

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.7 ROYALTIES AND PATENTS

7.7.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Architect.

7.8 TESTS

7.8.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to be inspected, tested or approved, the Contractor shall give the Architect timely notice of its readiness and of the date arranged so the Architect may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests, and approvals unless otherwise provided.

7.8.2 If after the commencement of the work, the Architect determines that any work requires special inspection, testing or approval (which subparagraph 7.8.1 does not include) he will, upon written authorization from the Owner instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as in subparagraph 7.8.1. If such special inspection or testing reveals a failure of the work to comply with the requirements of the Contract Documents or with respect to the performance of the work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the Contractor shall bear all costs thereof, including the Architect's additional services made necessary by such failure; otherwise the Owner shall bear such costs and an appropriate Change Order shall be issued.

7.8.3 Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the Architect.

7.8.4 If the Architect or Owner wishes to observe the inspections, tests or approval required by this Paragraph 7.8 he will do so promptly and, where practicable, at the source of supply.

7.8.5 Neither the observations of the Architect in his administration of the Construction Contract, nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the work in accordance with the Contract Documents.

7.9 ARBITRATION

7.9.1 The parties agree that controversies between the Owner and the Contractor arising out of or relating to this agreement or breach thereof shall not be subject to arbitration, but may be submitted to mediation or a court of competent jurisdiction in Columbia County, Florida.

7.10 EQUALITY AND SUBSTITUTIONS

7.10.1 In general, the preparation of the Drawings and Specifications has been based upon sizes, loads, and requirements of specific items of materials or equipment and, as such, it is the basis of bidding. Therefore, all substitutions must be in accordance with the following provision:

7.10.1.1 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and recommendation for approval, and in accordance with a Change Order, if required.

7.11 PRECONSTRUCTION CONFERENCE

7.11.1 Before starting any construction work on the project, a conference including the Architect will be held at a place as designated by the Architect for the purpose of verifying general procedures, expediting and handling of Shop Drawings and Schedules and to establish a working understanding between the parties concerned with this project. Present at the conference shall be a responsible representative of the Contractor, the Contractor's Job Superintendent and representatives of the Architect and Owner. If Contractor so desires, he may have present with him representatives of major subcontractors. The date and time of the conference shall be agreed upon by the Contractor and Architect.

7.12 REFERENCED SPECIFICATIONS AND DOCUMENTS

7.12.1 Documents, materials, systems or operations specified by reference shall be provided in compliance with the requirements of the specified reference, except as modified by the requirements of the Contract Documents. Unless a particular edition is called for, the reference used shall be the latest published edition on the date of the project Specifications.

7.12.2 In case of conflict between references and the project Specifications, the project Specifications shall govern. In case of conflict between references, the references having the more stringent requirement shall govern.

ARTICLE 8.00

TIME

8.1 DEFINITIONS

- 8.1.1 The Contract Time is the period of time allotted in the Contract Documents, Refer to Section 00 2113 for completion of the work.
- 8.1.2 The date of commencement of work is the date established in the Notice to Proceed.
- 8.1.2.1 If there is no Notice to Proceed, commencement of the work shall be the date of the Agreement or such date as may be established therein.
- 8.1.3 The date of Substantial Completion of the work or designated portion thereof is the date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the work or designated portion thereof for the use for which it is intended.
- 8.1.4 The term day as used in the Contract Documents shall mean calendar day.

8.2 PROGRESS AND COMPLETION

- 8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.
- 8.2.2 The Contractor shall begin the work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the work forward expeditiously with adequate forces and shall complete it within the Contract Time.

8.3 DAMAGES FOR DELAY

- 8.3.1 Where the Architect and the Contractor cannot agree that the delay in the prosecution of the work is justified, liquidated damages will be assessed in accordance with Paragraph 14.2 "TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS".
- 8.3.2 Bidders are notified that the following paragraphs will be inserted in the Contract: "If the project is not Substantially Completed, according to the definition of "Substantial Completion" contained hereof, or within such further time, if any, as in accordance with the provisions of the Contract Documents shall be allowed for such Substantial Completion, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, FIVE HUNDRED DOLLARS FOR EACH AND EVERY CALENDAR DAY ELAPSING BETWEEN THE DATE FIXED FOR SUBSTANTIAL COMPLETION AND THE DATE SUCH SUBSTANTIAL COMPLETION SHALL HAVE BEEN FULLY ACCOMPLISHED.
- It is also hereby agreed that if the project is not Finally Completed, in accordance with the requirements of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, TWO HUNDRED AND FIFTY DOLLARS FOR EACH AND EVERY CALENDAR DAY ELAPSING BETWEEN THE DATE FIXED FOR SUBSTANTIAL COMPLETION AND THE DATE SUCH SUBSTANTIAL COMPLETION SHALL HAVE BEEN FULLY ACCOMPLISHED.
- 8.3.3 Said Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor to the Owner under the provisions of the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the Contract Documents, except for Contractor's delays.

8.3.4

The provision for Liquidated Damages for delay shall in no manner affect the Owner's right to terminate the Contract as provided in the General Conditions, or elsewhere in the Contract Documents, and the Owner's exercise of the right to terminate shall not release the Contractor from his obligation to pay said Liquidated Damages in the amounts stipulated herein. Said Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor as set fourth in the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the Contract, except for Contractor's delays.

ARTICLE 9.00

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Within two weeks after the Contract is executed, the Contractor shall submit to the Architect a schedule of values of the various portions of the work, including quantities aggregating the total Contract Sum, divided so as to facilitate payments to Subcontractors in accordance with Schedule of Values and work in place, as the Architect and the Contractor may agree upon, and supported by such data to substantiate its correctness as the Architect may require. Each item in the schedule of values shall include its proper share of overhead and profit. This schedule, when approved by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 PROGRESS PAYMENTS

9.3.1 Not less than thirty days after the previous application, the Contractor shall submit to the Architect an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment in the General Conditions, and four originals shall be forwarded to the Architect for distribution as follows: Owner, three originals and Architect, one original.

9.3.2 At the discretion of the Owner payment will be made on account of materials and equipment not incorporated in the work but delivered and suitably stored at the site or at some other location agreed upon in writing. Such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest including applicable insurance and transportation to the site.

9.3.3 The Contractor warrants and guarantees that title to all work, materials and equipment covered by an Application for Payment, will pass to the Owner upon receipt of such payment by the Contractor, free and clear of all liens, claims, security interest or encumbrances, hereinafter referred to in this Article 9 as "Liens"; and that no work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the work at the site or furnishing materials and equipment for the project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 If the Contractor has made Application for Payment as above, the Architect will, with reasonable promptness but not more than seven calendar days after the receipt of the Application, issue a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as he determines to be properly due, or state in writing his reasons for withholding a Certificate as provided in Subparagraph 9.5.1.

- 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.4 and the data comprising the Application for Payment, that the work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the work is in accordance with the Contract Documents (subject to an evaluation of the work for conformity with the Contract Documents Substantial Completion, to the results of any subsequent tests required by the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified. In addition, the final Certificate for Payment will constitute a further representation the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled. However, by issuing a Certificate for Payment, the Architect shall not thereby be deemed to represent that he has made any examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.
- 9.4.3 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Agreement.
- 9.4.4 No certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the project by the Owner, shall constitute an acceptance of any work not in accordance with the Contract Documents.

9.5 PAYMENTS WITHHELD

- 9.5.1 The Architect may decline to approve an Application for Payment and may hold his Certificate in whole or in part, to the extent necessary reasonably to protect the Owner, if in his opinion he is unable to make representations to the Owner as provide in Subparagraph 9.4.2. The Architect may also decline to approve any Applications for Payment, or, because of subsequently discovered evidence or subsequent inspections, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:
- 9.5.1.1 Defective work not remedied or completed work that has been damaged requiring correction or replacement,
- 9.5.1.2 Third party claims have been filed or there is reasonable cause to believe such will be filed,
- 9.5.1.3 Reasonable evidence of the failure of the Contractor to make payments properly to Subcontractors for labor, materials or equipment,
- 9.5.1.4 Reasonable doubt that the work can be completed for the unpaid balance of the Contract Sum,
- 9.5.1.5 Damage to another contractor,
- 9.5.1.6 Reasonable indication that the work will not be completed within the Contract Time, (withholding sufficient funds to cover the anticipated assessment of liquidated damages), or
- 9.5.1.7 Unsatisfactory prosecution of the work including failure to furnish acceptable submittals and adhere to the provision of the Special Conditions appended hereto.
- 9.5.2 When the above grounds in Subparagraph 9.5.1 are removed, payment shall be made for amounts withheld because of them.

9.6 SUBSTANTIAL COMPLETION

- 9.6.1 When the Contractor determines that the work or a designated portion thereof acceptable to the Owner is substantially complete, the Contractor shall give written notice of such to the Architect. When the Architect determines by an inspection that the work is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion; shall state the responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and insurance, and shall fix the time within which the Contractor shall complete any remaining work shown therein. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such certificate.
- 9.6.2 The Contractor shall cooperate with the Owner if it is the Owner's desire to occupy a substantially completed structure or portion of a structure. When such occupancy takes place the applicable warranty periods for the occupied portion shall be as provided in the Certificate of Substantial Completion.
- 9.6.3 The assessment of liquidated damages, shall terminate on the date of Substantial Completion, or Final Completion, as applicable.

9.7 FINAL PAYMENT

- 9.7.1 Upon receipt of written notice from the Contractor that the work is complete and ready for final inspection and acceptance, the Architect will make a final inspection and will notify the Contractor in writing of all particulars in which this inspection reveals the work to be incomplete or defective. The Contractor shall immediately take such measures as are necessary to remedy such deficiencies.
- 9.7.2 After the Contractor has corrected all deficiencies and delivered all Maintenance and Operating Instructions, Record Drawings, Guarantees, Bonds, Certificates of Inspection and other documents - all as required by the Contract Documents, he may make Application for Final Payment following the procedure for progress payments. The Application for Final Payment must be accompanied, in addition to the supporting data and schedules submitted with progress payments, by submittals as follows: (a) Certificate of Completion of the Punch List, signed by the Architect and the Owner's Representative; (b) An Affidavit, sufficient to establish compliance with the provisions of the Mechanics Lien Law (Chapter 713 - Florida Statutes), stating that all lienors have been paid in full; (c) Consent of surety to final payment; and (d) If required by the Owner, other data establishing payment or satisfaction of all obligations, such as receipts, releases, and waivers of liens arising out of the Contract to the extent and in such form as designated by the Owner.

If any Subcontractor, fabricator or supplier fails or refuses to furnish a release or waiver in full, the Contractor will furnish a Bond or other collateral satisfactory to the Owner to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- 9.7.3 If, on the basis of his observation and review of the Work during construction, his final inspection, and his review of the final Application for Payment - all as required by the Contract Documents, the Architect is satisfied that the Work has been completed and the Contractor has fulfilled all his obligations under the Contract Documents, he will within ten (10) days after receipt of the final Application for Payment, indicate in writing his approval thereof and issue a final Certificate of Payment to the Owner. Thereupon the Architect will give written notice to the Owner and the Contractor that the work is acceptable subject to the provisions of Paragraph "Waiver of Claims". Otherwise he will return the application to the Contractor, indicating in writing his reasons for refusing to approve final payment, in which case the Contractor will make the necessary corrections and resubmit the application. The Owner will within thirty (30) days after receipt by him of both an approved final Certificate of Payment from the Architect and, if necessary, an approved Certificate of Final Inspection by the Florida Department of Education or third party qualified inspector pay the Contractor the full amount of the Contract Sum, less the aggregate of all previous payments and any assessment of liquidated damages.
- 9.7.4 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:
- 9.7.4.1 Unsettled claims,
- 9.7.4.2 Faulty or defective work,
- 9.7.4.3 Failure of the work to comply with the requirements of the Contract Documents, or
- 9.7.4.4 Terms of any special guarantees required by the Contract Documents.
- 9.7.5 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.
- 9.8 MISCELLANEOUS PROVISIONS**
- 9.8.1 Unless otherwise provided or agreed upon, the amount certified for payment on each certificate, except the final payment certificate, shall be ninety percent (90%) of the amount approved under Article 9.4.2 less previous amounts certified for payment.
- 9.8.2 Certificate for Payment shall be on the prescribed form as provided in Attachment Two.
- 9.8.3 Pursuant to paragraph 9.7.3, and for the purpose of obtaining final payment, the Contractor shall execute and submit the Contractor's Affidavit to Owner on Attachment Three to these General Conditions.

ARTICLE 10.00

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. Owner shall have the right to stop work on the project until Contractor corrects all noted safety issues. Contractor shall absorb all cost associated with this work stoppage.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

10.2.1.1 All employees on the work and all other persons who may be affected thereby;

10.2.1.2 All the work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors and;

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

10.2.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owners and users of adjacent utilities.

10.2.3 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.4 All damage or loss to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the Contractor, except damage or loss attributable to faulty Drawings or Specification or to the acts or omissions of the Owner or Architect or anyone employed by either of them or for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor.

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

10.2.6 The Contractor shall not load or permit any part of the work to be loaded so as to endanger its safety.

10.2.7 Contractors and Subcontractors will comply with Owner's Security program(s) and ensure enforcement of same or similar program.

10.2.8 Trench Safety Act.

10.3 EMERGENCIES

10.3.1 In any emergency affecting the safety of persons or property, the Contractor or Owner shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for changes in the work.

ARTICLE 11.00

INSURANCE

11.1 CONTRACTOR'S LIABILITY INSURANCE (See Supplementary Conditions.)

11.2 PROPERTY INSURANCE (See Supplementary Conditions.)

ARTICLE 12.00

CHANGES IN THE WORK

12.1 CHANGE ORDERS

- 12.1.1 The Owner, without invalidating the Contract and without notice to the sureties, may order changes in the work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the work shall be authorized by Change Order, and shall be executed under the applicable conditions of the Contract Documents.
- 12.1.2 A Change Order is a written order to the Contractor signed by the Owner and the Architect, issued after the execution of the Contract, authorizing a change in the work or an adjustment in the Contract Sum or the Contract Time. A Change Order will also be signed by the Contractor if he agrees to the adjustment on the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.
- 12.1.3 The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:
- 12.1.3.1 By mutual acceptance of a lump sum properly itemized;
- 12.1.3.2 By unit prices stated in the Contract Documents or subsequently agreed upon; or
- 12.1.3.3 By cost and a mutually acceptable fixed or percentage fee.
- 12.1.4 If none of the methods set forth in 12.1.3 is agreed upon and the Owner and Architect deem it necessary that the added work in question be performed without delay, the Contractor shall promptly proceed with the added work in question. The cost of such work shall then be determined by the Architect on the basis of the Contractor's reasonable expenditures and savings, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Clause 12.1.3.3 above the Contractor shall keep and present in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Pending final determination of cost to the Owner, payments on account shall be made on Certificate for Payment approved by the Architect. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in cost will be the amount of the actual net decrease as confirmed by the Architect. When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net amount, if any. Change Orders extending Contract Time for completion will not automatically entitle the Contractor to increased costs for overhead during the extended period unless specifically allowed in the Change Order.
- 12.1.5 If the Architect, the Owner and the Contractor agree that the unit costs set forth in the Contract Documents are not applicable to the quantities of added work in question, they shall not be utilized.
- 12.1.6 If the Contractor claims that additional cost is involved because of any written interpretation issued pursuant to Subparagraph 1.2.8, any order by the Owner to stop the work pursuant to Paragraph 3.3 where the Contractor was not at fault, or any written order for a minor change in the work issued pursuant to Paragraph 12.3, the Contractor shall make such claim as provided in Paragraph 12.2.

- 12.1.7 When the amount of cost or credit is to be based on mutual acceptance of a lump sum (Clause 12.1.3.1), whether such an amount is an extra, a credit, or no-change-in-contract price, the Contractor shall submit a change order estimate on forms furnished by the Owner which shall be substantiated by a complete itemized breakdown (including breakdowns from each Subcontractor on the same form) showing all direct costs for the change or changes in the work. The breakdown shall list quantities and unit prices for materials, labor, equipment and other items of cost when the amount of cost is to be based on actual direct cost plus overhead and profit (Clause 12.1.3.3). The Contractor shall submit receipts or other evidence as the Architect may direct, showing actual direct costs and his right to the payment claimed.
- 12.1.8 The following factors shall be applicable to all methods of arriving at extra or credit for Change Orders except where unit prices (Clause 12.1.3.2) are stated in the Contract Documents:
- 12.1.8.1 For all work done by his own organization, the Contractor may add ten percent of his net increase in direct costs for combined overhead and profit;
- 12.1.8.2 for all work done by Subcontract, the respective Subcontractors may add ten percent of their net increase in direct costs for combined overhead and profit and the Contractor may then add five percent of the above Subcontractor's total for his overhead and profit;
- 12.1.8.3 Where changes involve the Contractor and one or more Subcontractors, the breakdown shall itemize the above percentages separately, by use of individual change order estimate forms;
- 12.1.8.4 Overhead and profit percentages will be deducted on items which have a net decrease;
- 12.1.8.5 When both additions and deductions are involved in any one item, the overhead and profit shall apply to the net amount, if any;
- 12.1.8.6 direct costs shall include labor, materials, worker's compensation, taxes on labor and sales, and other direct taxes, health and retirement benefits, social security, and the expense of work performed after regular working hours to the extent authorized by the Owner;
- 12.1.8.7 proportionate necessary transportation, traveling and subsistence expenses of Contractor's employees incurred for the project; materials, supplies and temporary facilities, including project office expenses; equipment rental by agreement approved by Owner with advice of Architect, including transportation and unloading; telephone service at the site and other normal overhead expenses as approved by Owner shall be included in the Contractor's compensation for overhead and profit.
- 12.1.9 The above added percentages are defined to include all overhead and additional costs resulting from the change in scope of work including any time extensions.
- 12.1.10 Notwithstanding any other provisions of this Contract it is mutually understood that the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various element of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages pursuant to the new completion schedule.

12.2 CLAIMS FOR ADDITIONAL COSTS

- 12.2.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Architect written notice thereof within twenty days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property, in which case the Contractor shall proceed in accordance Subparagraph 10.3.1. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum it shall be determined by Arbitration, Paragraph 7.9. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3 FIELD ORDERS

- 12.3.1 The Architect may issue written Field Orders which interpret the Contract Documents in accordance with Paragraph 12.3 without change in Contract Sum or Contract Time, a copy of which shall be forwarded to the Owner. The Contractor shall carry out such Field Orders promptly.

ARTICLE 13.00

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any work should be covered contrary to the request of the Architect, it must, if required by the Architect, be uncovered for observation and replaced, at the Contractor's expense.

13.1.2 If any other work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such work and it shall be uncovered by the Contractor. If such work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by a separate contractor employed as provided in Article 6, and in that event the Owner shall be responsible for the payments of such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Architect's additional services thereby made necessary.

13.2.2 If, within one year after the date of the submittal of the Certificate of Final Inspection to the Florida Department of Education or by the terms of any applicable special guarantee required by the Contract Documents, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 All such defective or non-conforming work under Subparagraph 13.2.1 and shall be removed from the site if necessary, and the work shall be corrected to comply with the Contract Documents without cost to the Owner.

13.2.5 The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

13.2.6 If the Contractor does not remove such defective or non-conforming work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may upon ten additional days' written notice sell such work and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor including compensation for additional architectural services. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.7 If the Contractor fails to correct such defective or non-conforming work, the Owner may correct it in accordance with Paragraph 3.4.

13.3

ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1

If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 14.00

TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the work is stopped for a period of thirty days under any order of any court or other public authority having jurisdiction, or as a result of an act of government, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the work under a contract with the Contractor, or if the work should be stopped for a period of thirty days by the Contractor for the Architect's failure to issue a Certificate for Payment as provided in Paragraph 9.5 or for the Owner's failure to make payment thereon as provided in Paragraph 9.5, then the Contractor may, upon seven days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for all work executed and for any proven loss sustained upon any materials, equipment, construction equipment, tools, and machinery, including reasonable profit and damages accruing to the date work has been stopped for thirty days.

14.2 TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS

14.2.1 If the Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to prosecute the work, or any separable part thereof, with such diligence as will insure its completion within the time specified in this Contract, or any extension thereof, or fails to complete said work within such time, the Owner may, upon seven days written notice to the Contractor, and his surety, if any, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event the Owner may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances and plant as may be on the site of the work and necessary therefore. Whether or not the Contractor's right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the Owner resulting from his refusal or failure to complete the work within the specified time.

14.2.2 If fixed and agreed liquidated damages are provided in the Contract and if the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Owner in completing the work.

14.2.3 If fixed and agreed liquidated damages are provided in the Contract and if the Owner does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

14.2.4 The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

14.2.4.1 The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of a public enemy, acts of the Owner in its contractual capacity, acts of other Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather conditions not reasonably anticipated based on Weather Bureau five year averages for the contract period, or delays of subcontractors or suppliers (at any tier) arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and if:

The Contractor, within ten days from the beginning of such delay (unless the Owner grants a further delay of time in writing before the date of final payment under the Contract), notifies the Architect in writing of the causes of delay. The Architect shall ascertain the facts and extent of the delay and, with agreement of the Owner, extend the time for completing the work when, in his judgment, the findings of facts justify such an extension. A Change Order will be executed pursuant to Article 12 to reflect the change in Contract Time.

14.2.5 If, after notice of termination of the Contractor's right to proceed under the provisions of this Paragraph, it is determined for any reason that the Contractor was not in default, or that the delay was excusable, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly.

14.2.6 The rights and remedies of the Owner provided in this Paragraph are in addition to any other rights and remedies provided by law or under this Contract.

14.3 TERMINATION FOR OTHER REASONS

14.3.1 If the Contractor is adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails to supply enough properly skilled workmen or proper materials, or if he fails to make prompt payment to Subcontractors for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven days' written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the work by whatever method he may deem expedient.

14.4 FURTHER PAYMENTS

14.4.1 In the event of termination under Paragraphs 14.2 and 14.3 the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, including compensation for the Architect's additional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

14.5 ABANDONMENT OF THE PROJECT

14.5.1 Upon seven days' written notice to the Contractor and the Architect, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the Agreement. In such case, the Contractor shall be paid for all work executed and any expense sustained, plus a reasonable profit.

ARTICLE 15.00

EQUAL OPPORTUNITY

15.1 EQUAL OPPORTUNITY

- 15.1.1 All jobs let based on bids received or contracts negotiated will be guaranteed by the individual Contractor or Subcontractor or Sub-subcontractor as to compliance with any and all applicable laws, rules and regulations relating to equal employment opportunity, and any Federal, State and Local Laws, rules and regulations pertaining hereto. The Contractor shall execute the certificate as provided in Attachment Number 4 as evidence of such compliance and file it with the Owner simultaneously with the Contractor's execution of the agreement.

ARTICLE 16.00

PROTEST

16.1 ITB/RFP PROTEST

- 16.1.1 A Respondent who wishes to file a protest pertaining to an Invitation to Bid (ITB) bid or a Request For Proposal (RFP) must file such notice in accordance with procedures prescribed by Section 120.57(3) Florida Statutes (F.S.). All protests must be filed with the College's Director of Procurement & Contracts. A protest is officially filed when it is received in the Director's office.
- 16.1.2 Any person who is adversely affected by the district decision or intended decision shall file with the Director of Procurement & Contracts a notice of protest in writing within 72 hours after the posting of the intent to award or after receipt of the notice of the College's decision or intended decision and shall file a formal written protest within ten days after filing the notice of protest. With respect to a protest of the specifications contained in an invitation to bid or in a request for proposals, the notice of protest shall be filed in writing within 72 hours after the receipt of notice of the project plans and specifications or intended project plans and specifications in an invitation to bid or request for proposals, and the formal written protest shall be filed within ten days after the date the notice of protest is filed. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under chapter 120, Florida Statutes. The formal written protest shall state with particularity the facts and law upon which the protest is based. Saturdays, Sundays and state holidays shall be excluded in the computation of the 72 hour time periods provided by this paragraph.
- 16.1.3 As prescribed by FS 255.0516, any protestor who files an action protesting a decision or intended decision pertaining to a bid pursuant to FS 120.57(3)(b) shall post at the time of filing the formal written protest, a bond payable to Florida Gateway College in an amount equal to twenty-five thousand dollars or two percent of the lowest accepted bid, whichever is greater, for projects valued over five hundred thousand dollars or five percent of the lowest accepted bid for all other projects. The bond shall be conditioned upon payment of all costs and fees which may be adjudged against the protestor in the administrative hearing in which the action is brought and in any subsequent appellate court proceedings. In lieu of a bond, a cashier's check, certified bank check, bank certified company check, money order or U.S. currency would be acceptable form of security. If, after completion of the administrative hearing process and any appellate court proceedings, the district prevails, it shall recover all costs and charges, which shall be included in the final order or judgment, including charges made by the Division of Administrative Hearings, but excluding attorney's fees. Upon payment of such costs and charges by the protestor, the protest security shall be returned. If the protestor prevails, he shall recover from the College all costs and charges which shall be included in the final order of judgment, excluding attorney's fees.
- 16.1.4 Disposition of the protest shall follow 120.57 F.S. In the event that the protest cannot be resolved as specified in 120.57(3)(d)1, the standard of proof for any further proceedings shall be whether the proposed College action was clearly erroneous, contrary to competition, arbitrary or capricious. In any bid protest proceeding contesting an intended College action to reject all bids, the standard of review by any administrative law judge shall be whether the College's intended action is illegal, arbitrary, dishonest or fraudulent.

ATTACHMENT TO THESE GENERAL CONDITIONS

The following forms and informational sheets are attached hereto as acceptable guides for various submittals called for herein:

Agreement between Owner and Contractor	Attachment No. 1
Application and Certificate for Payment	Attachment No. 2
Equal Opportunity Certificate of Compliance	Attachment No. 3
Supplementary Conditions	Attachment No. 4
Performance Bond Format	Attachment No. 5
Notes Concerning Surety and Execution	Attachment No. 6

ATTACHMENT NO. 1

FLORIDA GATEWAY COLLEGE

LAKE CITY, FLORIDA

AGREEMENT BETWEEN OWNER AND CONTRACTOR

THIS AGREEMENT, made this ____ day of _____ in the year Two Thousand and _____ between the Owner: **THE DISTRICT BOARD OF TRUSTEES OF FLORIDA GATEWAY COLLEGE**, a body politic, whose mailing address is 149 S.E. College Place, Lake City, Florida 32025; and the Contractor: _____, mailing address is _____

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract for Construction (General, Supplementary and other Conditions), Florida Gateway College, Building 31 – Temporary Chemistry Lab Renovations, Lake City, Florida, FGC Bid Number: ITB No. 19-1-01, Architect's Project No. 1838, Drawings, Project Manual, all Addenda issued prior to execution of this Agreement and all Modifications issued subsequent thereto. These form the Contract and all are as fully a part of the Contract as if attached to this Agreement or repeated herein.

ARTICLE 2

THE WORK

The Contractor shall perform all the work required by the Contract Documents in accordance with the Drawings, Project Manual and Addenda for Florida Gateway College, Building 31 – Temporary Chemistry Lab Renovations, Lake City, Florida, FGC Bid Number: ITB No. 19-1-01, Architect's Project No. 1838, and shall fully execute the work described in the documents, working whatever schedule is required to complete the work in the time allotted, including overtime work and weekend work as required.

ARTICLE 3

TIME OF COMMENCEMENT AND COMPLETION

Contractor shall execute the Owner/Contractor Contract within seven calendar days from date of receipt and return to the Owner for his execution, along with all required bonds and insurance certificates. Contractor shall begin work within seven calendar days from date of receipt of a Letter of Intent, Building Permit and/or Notice to Proceed issued by the appropriate authority.

All work shall be Substantially Complete by Thursday, December 20, 2018 and Finally Complete by Thursday, January 3, 2019.

Where delays are not justified under the General Conditions of the Contract for Construction or otherwise, the Contractor and his Sureties shall be liable for and shall pay to the Owner liquidated damages as follows:

If the Project is not Substantially Completed, according to the definition of "Substantial Completion" contained hereof, or within such further time, if any, as in accordance with the provisions of the Contract Documents shall be allowed for such Substantial Completion, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, Five Hundred Dollars for each and every calendar day elapsing between the date fixed for Substantial Completion and the date such Substantial Completion shall have been fully accomplished. It is also hereby agreed that if the project is not Finally Completed, in accordance with the requirements of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, Two Hundred and Fifty Dollars per calendar day past Final Completion date.

ARTICLE 4

CONTRACT SUM

The Owner shall pay the Contractor for the performance of the work, subject to additions and deductions by Change Orders as provided in the conditions of the Contract, in current funds, the Contract Sum of

_____ DOLLARS (\$_____)

ARTICLE 5

PROGRESS, FINAL PAYMENTS AND CONTRACTOR PAYMENT TO SUBCONTRACTORS

Upon Application for Payment submitted by the Contractor to the Architect/Engineer and Certificates of Payments based thereon issued by the Architect, the Owner shall make progress payments on account of the Contract Sum and a final payment to the Contractor as provided in the conditions of the Contract and as follows:

- 5.1 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.
 - a. Contractor shall present to the Architect an Application for Payment as specified in 5.1.f. Owner shall remit payment, less any contested amount, not later than the 25th business day after the date on which the payment request or invoice is stamped as received as provided in s. 218.74(1) F.S.
 - b. The Owner may reject the payment request or invoice within 20 business days after the date on which the payment request or invoice is stamped as received as provided in s. 218.74(1) F.S. The rejection must be written and specify the deficiency in the payment request and the action necessary to make the payment request proper.
 - c. If a payment request or an invoice is rejected under 5.1.b. and the Contractor submits a corrected payment request or invoice which corrects the deficiency specified in writing by the Owner, the corrected payment request or invoice must be paid or rejected not later than the 10th business day after the date the corrected payment request or invoice is stamped as received as provided in 218.74(1) F.S.
 - d. If a dispute between the Owner and the Contractor cannot be resolved by the procedure in 5.1.b., the dispute must be resolved in accordance with the dispute resolution procedure prescribed in the construction contract.
 - e. If the Owner disputes a portion of a payment request or an invoice, the undisputed portion shall be paid timely, in accordance with 5.1.a.

- f. Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Application for Payment.
 - g. Applications for Payment shall indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment.
- 5.2 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
- a. Until such time as the contract work reaches 50% completion, according to the Architect's best judgment, and after receipt of a Certificate of Payment approved by the Architect, the Owner shall, within the time period set forth above, make a progress payment to the Contractor in the amount provided in such certificate; provided such payment in addition to all previous payments does not exceed ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the work plus ninety percent (90%) of the Contract Sum properly allocable to materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at a bonded location suitable to Owner when agreed upon by the parties in writing, up to five days prior to the date on which the Application for Payment is submitted. Storage on the campus does not constitute title passing to the Owner.
 - b. After such time as the Contract work reaches or exceeds 50% completion according to the Architect's best judgment and after receipt of a Certificate of Payment approved by the Architect, the Owner shall, within the time period set forth above, make a progress payment to the Contractor in the amount provided in such certificate; provided such payment in addition to all previous payments does not exceed ninety-five percent (95%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work plus ninety-five percent (95%) of the Contract Sum properly allocable to materials and equipment not incorporated in the work but delivered and suitably stored at the site or at a bonded location suitable to Owner when agreed upon by the parties in writing, up to five days prior to the date on which the Application for Payment is submitted. Storage on the campus does not constitute title passing to the Owner.
 - c. Any progress payments defined in 5.2 a. and 5.2 b. of this Agreement shall be reduced by any amounts that are the subject of a good faith dispute, the subject of a claim brought pursuant to s. 255.05 Florida Statute or otherwise the subject of a claim or demand by the Owner or contractor.
 - d. The Contractor has fourteen days from the date the Owner accepts the work as Substantially Complete to complete all punch list items for the project. If all punch list items are not completed and Finally Accepted by the Architect and the Owner, liquidated damages for each calendar day of such delay will be assessed in accordance with Supplementary Conditions of the Project Manual. The Contractor and his Sureties will be liable for and shall pay the Owner such amount. Any waiver of any part of this provision must be in a separate writing signed by the Owner. When all final punch list items have been completed to the satisfaction of Owner and Architect, and all Final Closeout Documents have been reviewed and approved, Final Payment of the remaining 5% will be made upon Final Acceptance by the Board of Trustees.
- 5.3 The Application for Payment for the final payment under the contract shall include the following forms:
- a. Contractor's Affidavit to Owner stating that all liens have been paid in full. If any Subcontractor, fabricator or supplier fails or refuses to furnish a release or waiver in full, the prime Contractor will furnish an Indemnity Bond for release of lien to the Owner, or other collateral satisfactory to the Owner, to indemnify the Owner against any lien.

- b. Consent of Surety to Final Payment on appropriate A.I.A. Document or other form acceptable to the Owner.
 - c. Contractor's Affidavit of Release of Liens on A.I.A. Documents G706 and G706A, or other forms acceptable to the Owner, certifying that the prime Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of work, labor or services on the project release or waive any lien against the Owner arising in the construction project.
- 5.4 Subcontractors, forty-five days after satisfactory completion of their work on the Contractor's project, can invoice the Contractor for the remainder of unpaid work, including the full value of the retainage related to their work, less the value of any item contested in accordance with the terms and conditions of the construction Contract.
- a. The Contractor shall require the Subcontractor to include a conditional release of lien and all appropriate warranties and closeout documentation with this final payment invoice to the Contractor.
 - b. The Contractor must include this subcontractor payment request in the next Application for Payment in the pay application cycle to the Architect following the receipt of the subcontractor payment request, if deemed to be complete and in compliance with this section.
 - c. When a Contractor receives payment from the Owner for labor, services or materials furnished by subcontractors and suppliers hired by the Contractor, the Contractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the terms and conditions of the construction Contract, within ten days after the Contractor's receipt of payment.
- 5.5 Paragraph 5.4 shall not be construed to create a contractual relationship of any kind (1) between the Architect and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor (et al.), (3) between the Owner and Architect or (4) between any persons or entities other than the Owner and Contractor.
- 5.6 The College may occupy the facilities prior to the completion of all punch list items; however, retainages specified will remain in force.

ARTICLE 6

MISCELLANEOUS PROVISIONS

- 6.1 Terms used in the Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.
- 6.2 The Contract Documents as listed in Article 1 shall constitute the entire Agreement between the Owner and the Contractor, except for Modifications issued after execution of this Agreement, and shall include any Alternates set forth herein. In the event of a conflict between the Project Manual, then specific provisions of the Project Manual shall control.
- 6.3 The Owner's representative is:

Christopher Jones, Director of Facilities
Florida Gateway College
149 S.E. College Place
Lake City, Florida 32025

6.4 The Contractor's representative is:

Name and Title:
Name of Company:
Address:
Telephone:

6.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

7.1 The Specifications are those contained in the Project Manual and are dated October 1, 2018. (See Exhibit A attached after Bid Opening) and incorporated herein by reference (Table of Contents).

7.2 The Drawings are as follows and are dated October 1, 2018. (See Exhibit B attached after Bid Opening) and incorporated herein by reference (Sheet Index).

7.3 The Addenda, if any, are as follows:

<u>Number</u>	<u>Date</u>	<u>Pages</u>
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Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated herein.

THIS AGREEMENT executed as of the day and year first above written, and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Architect for use in the administration of the Contract, and the remainder to the Owner.

Signed, sealed and delivered
in the presence of:

**FLORIDA GATEWAY COLLEGE BOARD OF
TRUSTEES**

ATTEST:

By:

Lawrence Barrett, President

Print or type name

**STATE OF FLORIDA
COUNTY OF COLUMBIA**

The foregoing instrument was acknowledged before me this ___ day of _____
20___, by _____, as Chairperson, **DISTRICT BOARD OF TRUSTEES OF FLORIDA
GATEWAY COLLEGE**, a body politic, on behalf of the Board, who is personally known to me.

**(NOTARIAL
SEAL)**

Notary Public, State of Florida

(Print or Type Name)

My Commission Expires:

Signed, sealed and delivered
in the presence of:

GENERAL CONTRACTOR

Witness

By: _____
Name and Title

Print or type name

Witness

Print or type name

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 20_____,
by _____, as _____
of _____, a Florida corporation, on behalf of
the corporation, who is personally known to me or who has produced _____
as identification.

Notary Public, State of Florida

**(NOTARIAL
SEAL)**

(Print or Type Name)
My Commission Expires:

ATTACHMENT NO. 2

APPLICATION AND CERTIFICATE FOR PAYMENT

Date _____ For Period Ending _____ Payment No. _____

CONTRACTOR: _____

CONTRACT FOR: FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01

Original Contract Sum	\$ _____	Contract Time	_____	Calendar Days	_____
Adds to Date	\$ _____	Authorized Ext	_____	Calendar Days	_____
Total	\$ _____	Pending Requests	_____	Calendar Days	_____
Deducts to Date	\$ _____	Time Lapsed To Date	_____	Calendar Days	_____
Adj. Contr. Sum	\$ _____		_____	Calendar Days	_____

WORK PERFORMED TO DATE	\$ _____
MATERIAL SUITABLY STORED (Itemized list of materials attached)	\$ _____
TOTAL TO DATE	\$ _____
Less Retainage	\$ _____
Less Previous Payments	\$ _____
TOTAL	\$ _____
DUE THIS PAYMENT	\$ _____

CERTIFICATION OF THE CONTRACTOR: I certify that all items and amounts shown on the face of this Certificate are correct and that all work has been performed and material supplied in full accordance with the terms and conditions of the Contract. I further certify that all just and lawful bills against the undersigned and his subcontractors have been paid in full accordance with their terms and conditions and that all Subcontractors listed on the previous month's Application and Certificate for Payment have been paid the full amount listed on that Application as evidenced by Partial Releases of Liens attached.

Date: _____ Contractor: _____ (Printed Name)
(Notarized Signature Required)

Date: _____ Notary: _____



CERTIFICATE OF THE ARCHITECT: I certify that I have checked and verified this Certificate and the accompanying Partial Releases of Liens; that to the best of my knowledge and belief it is a true statement of the value of the work performed and material suitably stored on the site or other approved location by the Contractor; that all work and material included in this Certificate have been reviewed; and that all work has been performed and material supplied in full accordance with the terms of the Contract.

Date: _____

Architect: _____

APPROVED FOR PAYMENT:

Date: _____

Owner: _____

(Authorized Signature)

ATTACHMENT NO. 3

EQUAL OPPORTUNITY

CERTIFICATE OF COMPLIANCE

PROJECT TITLE:

FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01
ARCHITECT'S PROJECT NO. 1838

This is to certify that the undersigned Contractor on subject project does now and will during the entire length of this project comply with all applicable laws, rules and regulations relating to equal employment opportunity, and any Federal, State, or Local laws, rules or regulations pertaining thereto; and further certifies compliance specifically with Executive Order 11246 originally issued by the President of the United States on September 24, 1965, as amended from time to time thereafter, including:

1. The Contractor does not discriminate in any manner in its employment policies as to race, color, religion, sex or national origin; and,
2. The Contractor does maintain an affirmative action plan to recruit, employ and promote qualified members of groups that may have been formerly excluded because of race, color, religion, sex or national origin.

CONTRACTOR

By: _____
Name / Title

Date: _____

ATTACHMENT NO. 4

SUPPLEMENTARY CONDITIONS

1. **Conditions of the Contract** - General Conditions, these Supplementary Conditions and Division I are applicable to all divisions and sections of the specifications and it is the Contractor's responsibility to so inform all parties who should be influenced thereby.

2. **Applicable Drawings** - The Drawings applicable to this work are titled:

Florida Gateway College
Building 31 – Temporary Chemistry Lab Renovations

Dated: October 1, 2018

Prepared by: Kail Partners Architecture & Interiors
PO Box 359055
Gainesville, Florida 32635-9055

The Drawings accompany these Specifications and become a part hereof. In case of dispute, the Architect will identify the various sheets comprising the Drawings. The applicable Drawings consist of the sheets listed on Sheet G-1, Sheet Index.

The Contractor shall purchase sets of Drawings and Project Manual as required of his use and the use of all the Subcontractors on the project.

3. **Contract Time** - The Work shall be commenced within three calendar days after receipt of the Notice to Proceed and shall be Substantially Complete by Thursday, December 20, 2018 and Finally Complete by Thursday, January 3, 2019.

4. **Liquidated Damages** - Since actual damages for delay are impossible of agreed determination, the fixed, agreed and liquidated damages described in Article 8, Paragraph 8.3.1 of General Conditions shall be for each calendar day beyond the specified Contract Time as described in the Project Manual shall be Five Hundred Dollars per calendar day past the date of Substantial Completion and Two Hundred and Fifty Dollars per calendar day past Final Completion.

5. **Notice to Owner** - If a Subcontractor or supplier files a Notice to Owner in any acceptable form under the Florida Mechanics Lien Law, the Owner will notify the Contractor of its receipt. Any payment request delivered subsequent to receipt of that Notice to Owner that contains payment in full or in part for that Subcontractor or supplier shall require a Final or Partial Release of Lien from each Subcontractor or supplier so affected.

6. **Contractor's Liability Insurance**

a) The Contractor shall purchase and maintain in a company or companies licensed to do business in the State of Florida and acceptable to the Owner and his Insurance Counselor such insurance as will protect him from claims, some of which are set forth below, which may rise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone else for whose acts any of them may be liable. The specific delineation of coverage in this paragraph is a minimum guide only, it being the specific intent of the Owner that it shall be fully and completely protected and indemnified from any and all claims which may arise out of Contractor's operation under the Contract; including among others those checked below:

a)i claims under workers' compensation, disability benefit and other similar employee benefit acts;

- a)ii claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
- a)iii claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- a)iv claims for damages by usual personal injury coverage including but not limited to libel, slander, and false arrest which are sustained (1) by any person including, but not limited to, a Contractor, Subcontractor or Sub-subcontractor or their employees as a result of an occurrence directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;
- a)v claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- a)vi claims resulting from explosion, collapse, or underground accident, (X-C-U coverage required) and other on-premises operations.
- a)vii claims resulting from owned, hired and non-owned motor vehicles and equipment;
- a)viii claims for damage resulting from the actions or inactions of independent Contractors;
- a)ix claims arising under products and completed operations insurance.
- b) The insurance required by Subparagraph 6.a) shall be written for not less than the limits of liability specified below, or that required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 4.17 in the General Conditions.

b)i Workers' Compensation:

State per Chapter 440 F.S	Statutory
Applicable Federal	Statutory
Employer's Liability	\$200,000

b)ii Comprehensive General Liability:
Including Premises-Operations; Products Completed Operations; Contractor's Liability
Broad Form Property Damage; Contractual Liability.

General Liability	\$1,000,000 per Claimant
Property Damage	\$500,000 per Occurrence
Personal Injury	\$500,000 per Claimant
Liability	\$1,000,000 per Occurrence \$2,000,000 per Annual Aggregate

Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

The Owner shall be named as additional insured on the Contractor's Comprehensive General Liability Policy.

Personal Injury Liability shall be separate coverage from Bodily Injury.

b)iii Owner's Protective Liability:

The Owner shall be named as the insured; ORIGINAL policy shall be submitted to the Owner.

Bodily/Personal Injury	\$500,000 per Claimant \$1,000,000 per Occurrence
Property Damage	\$500,000 Single Limit per Occurrence

b)iv Contractor's Protective Liability:

The Owner shall be named as additional insured on the Contractor's Protective Liability Policy.

Bodily/Personal Injury	\$500,000 per Claimant \$1,000,000 per Occurrence
Property Damage	\$500,000 Single Limit per Occurrence

b)v Comprehensive Automobile Liability:

The Owner shall be named as additional insured on the Contractor's Comprehensive Automobile Liability Policy. Policy shall cover owned, hired and all classes of non-owned vehicles.

Bodily Personal Injury:	\$500,000 per Claimant \$1,000,000 per Occurrence
Property Damage:	\$500,000 Single Limit per Occurrence

b)vi Coverage to be certified by the Contractor (and Subcontractors) shall include, but not be limited to the following:

- x Workers' Compensation
- x Automobile owned, hired and non-owned
- x Premises
- x Operations
- x Contractual
- x Personal injury - Hazards, A, B and C with employee exclusion removed
- x Broad Form Property Damage
- x Removal of X, C and U exclusions
- x Products and Completed Operations
- x Independent Contractors

- c) A Certificate of Insurance, executed on a standard ACORD form, shall be filed with the Owner simultaneously with the Contractor's execution of the Agreement. The certificate shall contain a provision that coverages afforded under the policies will not be cancelled until at least thirty days prior written notice has been given to the Owner. The Certificate of Insurance will include the following statement: "Interest of the Certificate Holder is included as an Additional Insured."

7. **Property Insurance**

- a) Until the work is completed and accepted by the Owner, the Contractor shall purchase and maintain property insurance upon the entire work at the site to the full insurable value thereof. This insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work and shall insure against the perils of fire, extended coverage, vandalism and malicious mischief. Coverage shall include damages, losses, and expenses arising out of or resulting from any insured property including fees and charges of Architects, Engineers and Attorneys.
- b) The Contractor shall purchase and maintain such steam boiler and machinery insurance as may be required by the Contract Documents or by law. The insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work.
- c) The Contractor shall file a copy of all policies with the Owner and the Architect prior to being issued the Notice to Proceed.
- d) The Owner and Contractor waive all rights against each other or damages caused by fire or other perils to the extent covered by insurance provided under this Paragraph, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The Contractor shall require similar waivers by Subcontractors and Sub-subcontractors in accordance with Clause 5.3.1.5. In waiving rights of recovery under terms of this Paragraph the term "Owner" shall be deemed to include his employees and the Architect, and its employees as the Owner's representative.
- e) All such insurance shall be no less than that required by the Project Manual.

8. **Third Party Qualified Inspector** Per Florida Statute 468, it is required to assign a Third Party Qualified Inspector to each construction project to ensure that all plans for new construction as well as completed facilities meet the standard of the Florida Building Code. The Owner shall designate the Third Party Qualified Inspector for each project. This Inspector is not to assume either the Contractor's responsibility for completion, or the Project Architect's responsibility for Contract Administration of the Contract Documents.

9. In accordance with #489.50 3 (2) Florida Statute any General Contractor contract / subcontract greater than \$25,000 shall use State of Florida licensed contractors / subcontractors.

ATTACHMENT NO. 5

PERFORMANCE BOND

[Substantially in the form attached]

PERFORMANCE BOND _____ **BOND NO.** _____

THIS BOND IS IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT.

KNOW ALL MEN BY THESE PRESENTS: that _____, as Principal, hereinafter called Company, and _____

_____, (Surety name, address and phone number), as Surety, hereinafter called Surety, are held and firmly bound unto the **DISTRICT BOARD OF TRUSTEES OF FLORIDA GATEWAY COLLEGE**, as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the amount of:

\$ _____ / _____,
(Written Amount)

for the payment whereof Company and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Company has by written agreement dated _____, entered into a contract with Owner for _____

_____, in accordance with drawings and specifications prepared by _____, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Company shall promptly and faithfully perform said Contract and all obligations thereunder, then this obligation shall by null and void; otherwise it shall remain in full force and effect. The Surety hereby waives notice of any alteration or extension of time made by the Owner, and any changes in or under the contract documents and compliance or non-compliance with any formalities connected with the contract which shall not affect Surety's obligation under this bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is that if Company:

1. Performs the Contract between Company and Owner, and at the times and in the manner prescribed in the Contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Company with labor, materials, or supplies used directly or indirectly by Company in the prosecution of the work provided for in the Contract; and
3. Pays Owner all losses, damages, expenses, costs and attorneys' fees, including appellate proceedings, that Owner sustains because of a default by Company under the Contract; and
4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void. Otherwise, it remains in full force.

The sole and exclusive venue and jurisdiction for any proceedings, legal or equitable, under this Bond, shall be in a court of competent jurisdiction in the county in which the project which is the subject of this Bond is being constructed.



Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the Contract documents and compliance or non-compliance with formalities connected with the Contract or the changes does not affect Surety's obligation under this bond.

SIGNED AND SEALED this ____ day of _____, 20____.

(Signature of Witness)

(Signature of Company) (Seal)

Type Name

(Signature of Witness)

(Signature of Attorney-in-Fact)(Seal)

Type Name

(Signature of Witness)

(Signature of Florida Resident Agent)

Type Name

(Signature of Witness)

(Signature of Surety)(Seal)

Type Name

(Signature of Witness)

(Signature of Attorney-in-Fact)(Seal)

Type Name

(Signature of Witness)

(Signature of Florida Resident Agent)

Type Name

ATTACHMENT NO. 6

NOTES CONCERNING SURETY AND EXECUTION

A. SURETY COMPANY REQUIREMENTS

To be acceptable to the Owner, a Surety Company shall comply with all of the requirements of the Contract.

B. EXECUTION OF BOND

1. Enter the Surety Company's name and address on each copy of the Bond in the space provided.
2. Enter the Effective Date of the Contract in the space provided on each copy of the Bond.
3. Enter the date of execution on each copy of the Bond in the space provided. This date must be the same as the date shown on the Contract.
4. Have each copy of the Bond signed by the same person that signed the Contract on behalf of the Company. Type in that person's name and title in the place provided on each copy of the Bond, and have one other individual witness that person's signature on each copy of the Bond. Also, have the Company's Corporate Seal affixed to each copy of the Bond beside that person's signature.
5. Have each copy of the Bond signed by the person authorized to sign on behalf of the Surety Company. Type that person's name in the place provided on each copy of the Bond and have one other individual witness that person's signature on each copy of the Bond. Also, have the Surety Company's Corporate Seal affixed to each copy of the Bond beside that person's signature.
6. Have each copy of the Bond signed by a Florida Resident Agent (Reference Chapters 624.425 and 624.426 of the Florida Statutes). Type in that person's name and Social Security number in the place provided on each copy of the Bond and have one other individual witness that person's signature on each copy of the Bond. This may be the same person indicated in B.5 above, if this person is a Florida Resident Agent and is also authorized to sign on behalf of the Surety Company as Attorney-In-Fact.
7. Each copy of the Bond must have a Power of Attorney attached indicating that the person in B.5 above is authorized to sign on behalf of the Surety Company.
8. Each copy of the Power of Attorney must have the Surety Company's Corporate Seal and a Notary Seal either manually affixed or they may utilize facsimile reproductions of the same.
9. If the date of execution of the Power of Attorney is not the same as the date shown on the Contract, then the Power of Attorney must be certified to still be in effect on the Effective Date of the Contract.
10. If the Bond is being backed by the Small Business Administration, then a certified true and correct copy of the Surety Bond Guarantee Agreement, SBA Form 990, must be attached to each copy of the Bond.

SECTION 01 0145
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Requirements and limitations for cutting and patching of work.
- B. "Cutting and Patching" is hereby defined to include, but is not limited to, the cutting and patching of nominally completed or previously existing work in order to accommodate the coordination of work, or the installation of other work, or to uncover other work for access or inspection, or to obtain samples for testing or for similar purposes; and is defined to exclude integral cutting and patching during the manufacturing, fabricating, erecting and installing process for individual units of work.

1.2 RELATED REQUIREMENTS

- A. Refer to Division 00 and 01 Sections of these specifications.

1.3 SUBMITTALS: Submittals shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

- A. Submit request in advance of cutting or alteration which affects: Structural integrity of any element, integrity of weather-exposed or moisture-resistant element, efficiency, maintenance or safety of any operational element, visual qualities of sight-exposed elements and/or work of Owner or other separate Contractors performing work at the same time.
- B. Include in Request: Identification of project, location and description of affected work, necessity for cutting or alteration, description of proposed work and products to be used, alternatives to cutting and patching, effect on work of Owner or other Contractors on site, permission of affected Contractor and date and time work propose to be executed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide materials for cutting and patching which will result in equal-or-better work than the work being cut and patched in terms of performance characteristics, including visual effect where applicable. Use materials identical with the original materials where feasible and where recognized that satisfactory results can be produced.

PART 3 - EXECUTION

3.1 GENERAL

- A. Execute cutting, fitting and patching to complete work, and to: Fit the parts together and to integrate with other work, uncover work to install ill-timed work, remove and replace defective and non-conforming work, remove samples of installed work for testing and provide openings in elements of work for penetrations of mechanical and electrical work.

3.2 INSPECTION

- A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- B. After uncovering, inspect conditions affecting performance of work.

C. Beginning of cutting or patching means acceptance of existing conditions.

3.3 PREPARATION

- A. Provide supports to assure structural integrity of surroundings and devices and methods to protect other portions of project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work and maintain excavations free of water.

3.4 PERFORMANCE

- A. Execute work by methods to avoid damage to other work and which will provide proper surfaces to receive patching and finishing.
- B. Employ original installer to perform cutting and patching for weather-exposed, moisture-resistant elements and sight-exposed surfaces.
- C. Cut rigid materials using masonry saw or core drill within a 1/4 inch tolerance of size of opening needed. Pneumatic tools not allowed without prior approval.
- D. Fit work to pipes, sleeves, ducts, conduit and other penetrations through surfaces. All voids around penetrations shall be grouted.
- E. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit; for patches in walls, refinish wall-to-wall and floor-to-ceiling; for patches in masonry walls, cut out face shell of block and replace or cut out individual units as required and replace.
- F. All penetrations through fire rated construction shall be fire stopped using a through penetration fire stop system listed in the "Underwriters Laboratory Fire Resistance Directory".

3.5 CLEANUP AND DEBRIS DISPOSAL

- A. Contractor shall clean up and remove debris resulting from these operations from the site on a regular basis and not exceeding one week intervals. More frequent cleanup in specific areas of extensive demolition may be required by the Owner.
- B. It is envisioned that a construction dumpster will be placed on the site and emptied at an approved off-site as required.
- C. The primary concern is that safety of the staff and workers not be compromised in any way as a result of the demolition work required under this contract. Debris will not be allowed to collect and remain in the areas of demolition.

END OF SECTION

SECTION 01 0390
COORDINATION AND MEETINGS

PART 1 - PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Preconstruction Conference.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 Section of these specifications.

1.3 PRECONSTRUCTION CONFERENCE / PROGRESS MEETINGS

A. Contractor will administer the preconstruction conference for review of the contract requirements, clarification of responsibilities and use of project site and for review of administrative procedures. Date, time and place for Preconstruction Conference will be announced after award of the contract.

B. At the Preconstruction Conference, the Owner shall make arrangements with the Contractor for the assignment of staging areas to be used for storage of materials, parking, sheds, trailers, etc.

C. Contractor shall prepare agenda with copies for participants, attend progress meetings, record minutes and distribute copies to participants and those affected by decisions made.

D. Attendance: Owner, Contractor, Engineer, Architect and major Subcontractors, to include Mechanical and Electrical Subcontractors.

E. The dates and times of the progress meetings will be discussed at the Preconstruction Conference.

1.4 SUBCONTRACTOR PRECONSTRUCTION CONFERENCES

A. Review conditions of installation, preparation and installation procedures and coordination with related work.

END OF SECTION

SECTION 01 0811
RELEASE OF LIEN FORMS

THIS FORM TO BE USED FOR ATTACHMENT TO EACH APPLICATION AND CERTIFICATE FOR PAYMENT.

PARTIAL WAIVER AND RELEASE OF LIEN UPON PROGRESS PAYMENT

The undersigned lienor, in consideration of the sum of \$ _____, hereby waives and releases its lien and right to claim a lien for labor, services or materials furnished through _____ to _____ on the site of the following property: _____
(insert name of your General Contractor) (insert date)

FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01

This waiver and release does not cover any retention, labor, services or materials furnished after the date specified above.

DATED on _____, 20__.

BY: _____
(Lienor)

DATE: _____

NOTARY: _____

THIS FORM TO BE USED FOR ATTACHMENT TO REQUEST FOR FINAL APPLICATION AND CERTIFICATE FOR PAYMENT.

FINAL WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT

The undersigned lienor, in consideration of the final payment in the amount of \$ _____, hereby waives and releases its lien and right to claim a lien for labor, services or materials furnished to _____ on the site of the following property:

(insert name of General Contractor)

**FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01**

DATED on _____, 20__.

BY: _____
(Lienor)

DATE: _____

NOTARY: _____

END OF SECTION

SECTION 01 2000

PRICE AND PAYMENT PROCEDURES

Date _____ For Period Ending _____ Payment No. _____

CONTRACTOR: _____

CONTRACT FOR: FLORIDA GATEWAY COLLEGE
BUILDING 31 – TEMPORARY CHEMISTRY LAB RENOVATIONS
LAKE CITY, FLORIDA
FGC BID NUMBER: ITB NO. 19-1-01

Original Contract Sum	\$ _____	Contract Time	_____	Calendar Days	_____
Adds to Date	\$ _____	Authorized Ext	_____	Calendar Days	_____
Total	\$ _____	Pending Requests	_____	Calendar Days	_____
Deducts to Date	\$ _____	Time Lapsed To Date	_____	Calendar Days	_____
Adj. Contr. Sum	\$ _____		_____	Calendar Days	_____

WORK PERFORMED TO DATE	\$ _____
MATERIAL SUITABLY STORED (Itemized list of materials attached)	\$ _____
TOTAL TO DATE	\$ _____
Less Retainage	\$ _____
Less Previous Payments	\$ _____
 TOTAL	 \$ _____
 DUE THIS PAYMENT	 \$ _____

CERTIFICATION OF THE CONTRACTOR: I certify that all items and amounts shown on the face of this Certificate are correct and that all work has been performed and material supplied in full accordance with the terms and conditions of the Contract. I further certify that all just and lawful bills against the undersigned and his subcontractors have been paid in full accordance with their terms and conditions and that all Subcontractors listed on the previous month's Application and Certificate for Payment have been paid the full amount listed on that Application as evidenced by Partial Releases of Liens attached.

Date: _____ Contractor: _____ (Printed Name)
(Notarized Signature Required)

Date: _____ Notary: _____



CERTIFICATE OF THE ARCHITECT: I certify that I have checked and verified this Certificate and the accompanying Partial Releases of Liens; that to the best of my knowledge and belief it is a true statement of the value of the work performed and material suitably stored on the site or other approved location by the Contractor; that all work and material included in this Certificate have been reviewed; and that all work has been performed and material supplied in full accordance with the terms of the Contract.

Date: _____

Architect: _____

APPROVED FOR PAYMENT:

Date: _____

Owner: _____

(Authorized Signature)

END OF SECTION

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Scope of work covered by Contract Documents.
- B. Coordination of all trades.
- C. Codes and reference standards.
- D. Ordinances and regulations.

1.2 RELATED REQUIREMENTS

- A. See the Florida Gateway College front end legal section of these specifications.

1.3 SCOPE OF WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Description: Renovations to Building 31 for a Temporary Chemistry Lab. The scope of work includes, but is not limited to: cutting and patching, selective structure demolition, cast-in-place concrete, concrete finishing, metal fabrications, miscellaneous rough carpentry, architectural wood casework, vapor retarders, joint protection, finish schedule, painting and coating, specialties and termite control. Mechanical, plumbing and electrical scope of work as outlined in the documents.

1.4 COORDINATION

- A. Coordinate work of the various specifications sections to assure efficient and orderly sequence of installation of construction elements with provisions for accommodating items installed later.
- B. Verify that characteristics of elements of interrelated operating equipment are compatible. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service such equipment.
- C. Coordinate space requirements and installation of mechanical and electrical work. Follow routing shown for pipes, ducts and conduits, as closely as practicable and make runs parallel with the lines of the building. Utilize spaces efficiently to maximize accessibility for other installations, maintenance and repairs.
- D. In finished areas, conceal all pipes, ducts, conduit and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Execute cutting and patching to integrate elements of work, uncover ill-timed, defective and non-conforming work, provide proper openings for penetrations of existing surfaces and provide samples for testing. Seal all penetrations through floors, walls and ceilings with appropriate materials.

1.5 REGULATIONS, CODES AND STANDARDS

- A. Design and construction shall conform to the Florida Building Code 6th Edition 2017 and the Florida Fire Prevention Code 6th Edition.
- B. For products specified in the individual specifications sections by association or trade standards, comply with requirements of the applicable standard, except when more rigid requirements are specified or are required by applicable codes.

- C. All work shall conform to all applicable Florida Building Code, ordinances and regulations governing the construction. Applicable codes are as follows:
1. ACI 318. American Concrete Institute.
 2. AHERA. Asbestos Hazard Emergency Response Act, 40 CFR, Part 763.
 3. AISC. American Institute of Steel Construction, Allowable Stress Design - Manual of Steel Construction.
 4. AISI. American Iron and Steel Institute, Specifications for the Design of Cold-Formed Steel Structure Members.
 5. ANSI. American National Standards Institute.
 6. ASCE. American Society of Civil Engineers. References to ASCE 7-10 shall be the edition listed in these State requirements.
 7. ASHRAE. American Society of Heating, Refrigeration, and Air Conditioning Engineers.
 8. ASTM. American Society for Testing Materials.
 9. DCA. Department of Community Affairs. Florida Americans with Disability Implementation Act and the Florida Accessibility Code for Building Construction as adopted by the State Board of Building Codes and Standards, which has become the Florida Building Commission. Florida Energy Efficiency Code for Building Construction (FEEC), as outlined in Chapter 13 of F.B.C.
 10. DOT - AASHTO. American Association of State Highway and Transportation Officials "Standard Specifications for Highway Bridges", as modified by Florida DOT "Structures Design Guidelines for Load and Resistance Factor Design."
 11. FDOT. Florida Department of Transportation. "Standard Specifications for Road and Bridge Construction."
 12. FEMA. Federal Emergency Management Agency.
 13. Florida Building Code 6th Edition 2017.
 14. NEC. National Electrical Code (NFPA 70). Adopted by reference in the FBC.
 15. OSHA. Occupational Safety and Health Administration, U.S. Department of Labor.
 16. SJI. Steel Joist Institute.
 17. TMS. The Masonry Society Standards.
 18. Such other codes and standards as enumerated in the technical specifications sections and included by reference. Such codes and standards shall be "current accepted edition" in effect as of the bid date, except when a specified date is specified in the individual specification sections.

1.6 TOXIC SUBSTANCES

- A. The Contractor shall meet all the requirements of the State of Florida Toxic Substance Law, Chapter 87-202, Laws of Florida. The law states in part, that all toxic substances enumerated in the Florida substance list that are to be used in the construction, repair or maintenance of educational facilities are subject to certain provisions.
- B. Before any such substance may be used, the Contractor shall notify the Owner at least three working days prior to using the substance. The notification shall contain the following: The name of the substance to be used, where the substance is to be used and when the substance is to be used.

END OF SECTION

SECTION 01 3300
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Procedures for submittals during construction, including shop drawings and product data and samples. Refer also to the mechanical and electrical sections for submittal requirements.
- B. Construction progress schedules.

1.2 RELATED REQUIREMENTS

- A. Refer to Division 00 and 01 Section of these specifications.
- B. Section 01 6000 - Product Requirements.

1.3 SHOP DRAWINGS

- A. Present in a clear and thorough manner. Title each drawing with project name and number, identify each element of shop drawings by reference to sheet number and detail, schedule or room number of contract documents.
- B. Identify field dimensions and show relation to adjacent or critical features of work or products.
- C. Minimum sheet size shall be 8-1/2 x 11 inches.

1.4 PRODUCT DATA

- A. Submit only pages which are pertinent and mark each copy of standard printed data to identify products, referenced to specifications section number. Show reference standards, performance characteristic and capacities; wiring and piping diagrams and controls, component parts, finish, dimensions and required clearances.
- B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the work. Delete information not applicable. Indiscriminate submittal of unmarked product data will not be accepted.
- C. As required by Florida Statute 553.842 and Florida Administrative Code 9N-3 State Product Approval, provide the information and approval numbers on all building components that will be utilized on this construction project. Statewide approved products are listed online at www.floridabuilding.org
- D. Manufacturers' Certificates: When required by individual specifications section, submit applicable manufacturer's certificates that products meet or exceed specified requirements.
- E. Manufacturers' Printed Instructions: When required by individual specifications section, submit applicable manufacturer's instructions for delivery, storage, assembly, installation, start-up adjusting and finishing.

1.5 SAMPLES

- A. Submit full range of manufacturer's standard finishes, except when more restrictive requirements are specified, indicating colors, textures or patterns for selection. Early in the construction period, the contractor shall submit the names of all manufacturers and trade names of all materials involving color, texture or pattern selection which are proposed for actual use in the project. Color items, even in the same range, vary among different manufacturer's products, and it is therefore important that samples be submitted and selections be made from items actually intended for use in the work. Color harmony requires that selections be made as a whole and not on a piecemeal basis. Therefore, all color samples and items requiring color selection will be selected once all are submitted.
- B. Submit samples to illustrate functional characteristics of products, including parts and attachments.
- C. Label each sample with identification required for transmittal letter.
- D. Provide field samples of finishes at project, at location acceptable to owner, as required by individual specifications section. Install each sample complete and finished. Acceptable finishes in place may be retained in the completed work, except where otherwise noted or specified.

1.6 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit network analysis system using the critical path method, generally as outlined in Associated General Contractors of America (AGC) publication "The Use of CPM in Construction - A Manual for General Contractors". Other progress schedule methods may be submitted subject to the Owner's review and approval.
- B. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Show projected percentages of completion for each item of work as of time of each application for payment.
- C. Show submittal dates required for shop drawings, product data and samples and product delivery dates.

1.7 CONTRACTOR'S REVIEW

- A. Review all submittals prior to transmittal, determine and verify field measurements, field construction criteria, manufacturers' catalog numbers and conformance of submittal with requirements of contract documents. Submittals without Contractor's review stamp indicating approval will not be processed.
- B. Coordinate submittals with requirements of work and of contract documents.
- C. Sign or initial each sheet of shop drawings and product data and each sample label to certify compliance with requirements of contract documents. Provide notification, at time of submittal, of any deviations from requirements of contract documents.
- D. Do not fabricate products or begin work which requires submittals until return of submittal with Architect's or Engineer's acceptance.

1.8 SUBMITTAL REQUIREMENTS

- A. Transmit submittals in accordance with approved progress schedule and in such sequence to avoid delay in the work.
- B. Apply Contractor's stamp, signed or initialed, certifying to review and approval, verification of products, field dimensions and field construction criteria and coordination of information with requirements of work and contract documents. Do not send submittals until item is approved by Contractor.

- C. Coordinate submittals into logical groupings to facilitate interrelation of the several items.
- D. Submit electronic copies of all shop drawings and product data for each item as specified in individual specifications sections.
- E. Submit under Contractor's standard transmittal letter, each transmittal letter shall be numbered for ease of reference during construction. Identify project by title and number and identify work and product by specifications section number.

1.9 RESUBMITTALS

- A. Make resubmittals under procedures specified for initial submittals and identify changes made since previous submittal. Transmittal letter shall be numbered the same as initial submittal, except with suffix "A", "B", etc. for each time resubmittal occurs until accepted.
- B. Delays caused by the need for resubmittals shall not constitute reason for an extension of contract time.

1.10 REVIEW

- A. Review of shop drawings, product data and samples shall be as promptly as possible and submittals shall be returned to Contractor for distribution within twenty-one calendar days from date received.
- B. The review of submittals will be limited to general design requirements only, and shall in no way relieve the Contractor from responsibility for errors or omissions contained therein or from supplying materials specified.
- C. Submittals reviewed will be marked in one of the following ways: NO EXCEPTIONS TAKEN, EXCEPTIONS AS NOTED, REVISE AND RESUBMIT or REJECTED.

1.11 DISTRIBUTION

- A. Contractor shall distribute copies of shop drawings and product data and samples, which bear stamp of approval to project site file, subcontractors, suppliers, other affected contractors and other entities requiring information.
- B. Shop drawings that do not bear the Architect's or Engineer's shop drawing stamp shall not be allowed on the job site.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. General quality control.
- B. Workmanship.
- C. Manufacturers' instructions.
- D. Testing laboratory services.

1.2 RELATED REQUIREMENTS

- A. Refer to Division 00 and 01 Section of these specifications.

1.3 QUALITY CONTROL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.

1.4 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand code stipulated stresses, vibration and racking.

1.5 MANUFACTURERS' INSTRUCTIONS

- A. When required by individual specifications section, comply with manufacturers' instructions including each step in sequence. If instructions conflict with contract documents request clarification prior to starting work.

1.6 TESTING LABORATORY SERVICES

- A. Contractor shall employ at his sole expense the services of an approved independent testing laboratory to perform tests and other services required by individual specification sections. See mechanical and electrical sections for testing that may be required.
- B. Reports will be submitted giving observations and results of tests, indicating compliance or non-compliance with specified standards and with contract documents.
- C. Contractor shall cooperate with testing laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested. Notify testing laboratory 24 hours prior to expected time for operations requiring testing services. Make arrangements with testing laboratory and pay for additional samples and tests for contractor's convenience.

END OF SECTION

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROL

PART 1 - GENERAL

- 1.1 REQUIREMENTS INCLUDED: The Contractor shall provide the following at his sole expense, except as specified otherwise herein, including all related costs for operation, maintenance and utilities, during the entire construction period until final completion of the project.
- A. Temporary electricity power. Charges relative to the cost of power consumption will be paid by the Owner. However, costs associated with facilities and connections to provide for power are to be paid by the Contractor.
 - B. Heat and ventilation.
 - C. Phone service.
 - D. Water provided by Owner.
 - E. Sanitary facilities.
 - F. Barriers.
 - G. Enclosures.
 - H. Protection of installed work.
 - I. Security. Coordinate with Owner.
 - J. Construction use fire extinguishers.
 - K. Water control.
 - L. Cleaning during construction.
 - M. Offices and sheds at Contractor's option.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Section of these specifications.
 - B. Section 01 7000 - Execution and Closeout Requirements.
- 1.3 ELECTRICITY AND CONSTRUCTION LIGHTING
- A. Provide service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords.
 - B. Contractor shall set temporary power pole with meter if required by owner. Owner will pay the cost of all construction utilities.
 - C. Provide temporary lighting for construction operations. Provide minimum 150 watt incandescent bulbs in plastic or metal guards at 8'-0" O.C. each way throughout the new enclosed construction area. Permanent lighting may be used during construction. Maintain lighting and make routine repairs.

1.4 HEAT AND VENTILATION

- A. Provide as required to maintain specified conditions for construction operations and to protect materials and finishes from damage due to temperature or humidity.
- B. Prior to operation of permanent facilities for temporary purposes, verify that installation is approved for operation.
- C. Provide ventilation of enclosed areas to cure materials, to disperse humidity and to prevent accumulations of dust, fumes, vapors or gases.

1.5 TELEPHONE SERVICE

- A. Provide phone service.

1.6 WATER

- A. Contractor may connect to nearest available existing water service for construction operations as well as potable water.

1.7 SANITARY FACILITIES

- A. Provide and maintain required temporary toilet facilities and enclosures in accordance with requirements of governing State and local health authorities. Contractor will not be allowed to use existing toilet facilities.

1.8 BARRIERS

- A. Construction site as designated by the Owner. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials or water.
- B. Upon issuance of the building permit and notice to proceed, a safety plan shall be provided by the Contractor which clearly delineates areas for construction, safety barriers, exits and construction traffic during the various phases of the project and when conditions change.

1.9 ENCLOSURES

- A. Provide temporary weather-tight closures of any openings in exterior walls to provide acceptable working conditions and protection for materials, to allow for temporary heating or ventilation and to prevent entry of unauthorized persons.

1.10 PROTECTION OF INSTALLED WORK

- A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- B. Provide protective coverings at walls, projections, jambs, sills and soffits of openings. Protect finished floors from traffic and movement of heavy objects and storage.
- C. Prohibit traffic and storage on sodded and landscaped areas.

1.11 SECURITY

- A. Provide security program and facilities to protect work, and Owner's operations from unauthorized entry, vandalism and theft. Coordinate with Owner's security program. Owner will not be responsible for the contractors' losses due to theft or vandalism to property during the construction period.
- B. Owner will assist and cooperate with Contractor's security program.

1.12 CONSTRUCTION USE FIRE EXTINGUISHERS

- A. Provide types, sizes, numbers and locations as would be reasonably effective in extinguishing fires during early stages by personnel at project site. Provide type A extinguishers at locations of low-potential for either electrical or grease-oil-flammable liquids fires; provide type ABC dry chemical extinguishers at other locations; comply with recommendations of NFPA . Post warning and quick-instructions at each extinguisher location and instruct personnel at project site at time of their first arrival on proper use of extinguishers.

1.13 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish and periodically dispose of off-site at approved dump.
- B. Clean interior areas prior to start of finish work and maintain areas free of dust and other contaminants during finishing operations.
- C. Floors shall be kept clean and free from sawdust, concrete, mortar, plaster or grout droppings.

1.14 OFFICES AND SHEDS

- A. Contractor's Field Office: At contractor's option, provide mobile structure or other structure approved by owner, weather-tight, with lighting, electrical outlets, heating, cooling and ventilating equipment.
- B. Storage sheds for tools, materials and equipment: At Contractor's option, provide weather-tight, with heat and ventilation for products requiring controlled conditions, with adequate space for organized storage and access and lighting for inspection of stored materials. Coordinate location with Owner.

1.15 REMOVAL

- A. Remove temporary materials, equipment, services and construction prior to substantial completion review.
- B. Clean and repair damage caused by installation or use of temporary facilities.

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.
- F. Systems demonstration.

1.2 RELATED REQUIREMENTS

- A. Refer to Division 00 and 01 Sections of these specifications.
- B. Section 01 3300 - Submittal Procedures.

1.3 PRODUCTS

- A. Products include material, equipment and systems.
- B. Comply with specifications and referenced standards as minimum requirements.
- C. As required by Florida Statute 553.842 and Florida Administrative Code 9N-3 State Product Approval, provide the information and approval numbers on all building components that will be utilized on this construction project. Statewide approved products are listed online at www.floridabuilding.org
- D. Components required to be supplied in quantity within a specification section and like items shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturers' service.
- E. Do not use materials and equipment removed from existing structures, except as specifically required or allowed by contract documents.

1.4 TRANSPORTATION AND HANDLING

- A. Transport products by approved methods to avoid product damage, deliver in undamaged condition in manufacturers' unopened containers or packaging, dry.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.

1.5 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturers' instructions with seals and labels intact and legible. Store sensitive products in weather-tight enclosures and maintain within temperature and humidity ranges required by manufacturers' instructions.

- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in a well-drained area and prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.

1.6 PRODUCT OPTIONS

- A. Products specified by reference standards or by description only. Any product meeting those standards or descriptions.
- B. Products specified by naming one or more manufacturers with a provision for either pre-bid or post-bid substitutions. Submit a request for substitution for any manufacturer not specifically named.
- C. Products specified by naming several manufacturers: products of named manufacturers meeting specifications: no options, no substitutions allowed.
- D. Products specified by naming only one manufacturer: no options, no substitutions allowed and in full compliance with Florida Statutes, Section 255.04.

1.7 SUBSTITUTIONS

A. Pre-bid substitutions:

1. Bidders may submit bids on approved substitute products only. Acceptance and approval of all products submitted as substitutes remains the sole prerogative of the engineer / architect and will be determined by quality and other overall assimilation of the products into the design of the project. It is requested that each prospective bidder immediately peruse the drawings and project manual upon receipt to determine which, if any, pre-bid substitutions they plan to submit for approval.
2. Bidders having substitute products to be evaluated must submit prior to bid date, the following information, in addition to specific information required in the individual specifications sections for pre-bid substitutions: Complete specifications, full size samples, photographs, available colors and finishes, a clear statement on each substitute product stating exactly where and how the products varies, if any, from the specified products in dimensions, structure, material and design.
3. Upon receipt and thorough evaluation of the requested information, the engineer / architect will do one of the following: Approve by addendum the substitute products per the submitted materials; approve by addendum the substitute products with revisions requiring the vendor to modify his substitute products accordingly; or reject the substitute products. Approval of a manufacturer other than the manufacturer specified does not indicate the approved manufacturer's standard products are acceptable. The approved manufacturers must comply with products as specified. Samples: should samples of substitute products be required for evaluation, said sample must be submitted prior to bid date. Samples submitted by successful bidders will be impounded by the owner to insure that products delivered to site conform in every respect to the sample. The owner will not buy samples and will not assume any costs incidental thereto. Return of samples: samples not destroyed in testing may be claimed by the unsuccessful bidders up to thirty calendar days after bid date, and by successful bidder up to fourteen calendar days after final payment. The owner will assume no responsibility for samples not claimed within the time specified and will not pay for samples damaged in testing.

B. Post-bid substitutions (after award and execution of contract):

1. Document each request with complete data substantiating compliance of proposed substitution with contract documents.

2. Request constitutes a representation that contractor: has investigated proposed product and determined that it meets or exceeds, in all respects, specified product and will provide the same warranty for substitution as for specified product. Will coordinate installation and make other changes which may be required for work to be complete in all respects. Waives claims for additional costs which may subsequently become apparent; however, deductions from contract sum will be considered and must be so noted on request.
3. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate request per provisions specified hereinbefore.
4. Engineer / Architect will determine acceptability of proposed substitution and will notify contractor of acceptance or rejection in writing within a reasonable time.
5. Only one request for substitution will be considered for each product. When substitution is not accepted, provide specified product.

1.8 SYSTEMS DEMONSTRATION

- A. Prior to final review, instruct owner's personnel in operation, adjustment and maintenance of equipment and systems, using the operation and maintenance manual as the basis of instruction.
- B. See Section 01 7000 - Execution and Closeout Requirements.

END OF SECTION

SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Closeout procedures.
- B. Final cleaning.
- C. Prerequisites to final payment.
- D. Record drawings.
- E. Operation and maintenance manuals.
- F. Warranties, guarantees and bonds.
- G. Spare parts and maintenance materials.
- H. Correction during Contractor's one year guarantee period.

1.2 RELATED REQUIREMENTS

- A. Refer to Division 00 and 01 Sections of these specifications.
- B. Section 01 5000 - Temporary Facilities and Control.
- C. Section 01 6000 - Product Requirements.

1.3 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in general conditions of the contract. When the work is substantially complete, in accordance with the definition and requirements for the project to be reviewed for substantial completion, the contractor shall notify the engineer / architect who shall make a substantial completion review and after said review is made, the contractor shall remedy any defects or make any corrections on the engineer's and architect's punch lists to prepare the project for a final completion review.
- B. Prerequisites to substantial completion review: Before the project will be consider the project ready for substantial completion review, all of the following, as a minimum, shall be performed:
 - 1. All general construction completed and all materials and equipment installed and operating as intended. All permanent signage installed throughout the project.
 - 2. All mechanical, controls, data and all electrical work complete, fixtures in place, connected and ready for test.
 - 3. All electric circuit schedules in panels and disconnect switches properly and permanently labeled as specified.
 - 4. All painting and joint sealants completed, checked by the contractor for number of coats and ready for inspection.
 - 5. All doors complete with hardware and in good working order. Relieve any sticking or binding doors prior to the inspection. All permanent keys shall be cut, tagged and turned over to the owner.

6. All glass cleaned and washed.
7. All equipment cleaned, connected and in full working order.
8. Grounds clear of all temporary materials, equipment, services and construction, field offices and storage sheds, surplus materials and equipment and raked clean of all debris with all debris removed from the site.
9. Interior floors cleaned. All interior fixtures, etc., wiped down and clean of all dust and construction debris.
10. Sections of all walks, drives and other permanent features which have been damaged during construction shall be removed and replaced; patches not acceptable.

1.4 FINAL CLEANING

- A. Execute prior to final review.
- B. Clean interior and exterior surfaces exposed to view, remove temporary labels, stains and foreign substances and polish transparent and glossy surfaces. Clean equipment and fixtures to a sanitary condition.
- C. Clean project site, sweep paved areas and rake clean other surfaces.

1.5 PREREQUISITES TO FINAL REVIEW: When the contractor considers the work has reached final completion, and all items on the punch lists have been corrected and final cleaning has been completed, submit notice to owner / engineer / architect that work is complete in accordance with the contract documents and ready for final review.

- A. If more than ten items on the original substantial completion review punch lists are found to be uncorrected, the owner / engineer / architect may terminate the final review at that point until such time as all items are completed.
- B. If all items are found in order, the engineer / architect will recommend final acceptance of the project by the owner, upon receipt of all final closeout documents including, but not limited to, the following: final releases of liens from all subcontractors and suppliers. Guarantees and warranties as outlined in each section of the specifications. Note length of guarantees and warranties may vary from section to section. All O&M manuals, Final reports and all other closeout requirements outlined in the mechanical and electrical sections of the specifications.

1.6 PREREQUISITES TO FINAL PAYMENT (ALL APPLICABLE ITEMS LISTED BELOW SHALL BE SUBMITTED IN DUPLICATE IN ONE COMPLETE PACKAGE):

- A. Contractor's affidavit that responsible representatives of the owner have been properly instructed and informed as to all working characteristics of mechanical and electrical systems and equipment as required under the individual specifications sections and in accordance with the provisions of Section 01 6000 - Product Requirements, as applicable to:
 1. Heating and ventilating and air conditioning - operation and control.
 2. Electrical control switches, panels, fans, motors, etc.
 3. Miscellaneous equipment operation.
 4. Other systems as required - sound, energy management system, data, etc.
- B. Record drawings, operation and maintenance manuals, warranties, guarantees and bonds.
- C. Contractor's affidavit that spare parts and maintenance materials have been delivered to the facilities department of the owner.

- D. Submit satisfactory evidence using the latest editions of the following forms, unless otherwise stipulated by the owner, showing that all labor employed on the project has been paid in full and that all materials and/or equipment and incidentals used directly or indirectly in connection with the project have been paid for in full and that no claims are outstanding against the work.
 - 1. Contractor's Affidavit of Payment of Debts and Claims (A.I.A. Document G706), Conditional Final Releases of Lien.
 - 2. Contractor's Affidavit of Release of Liens (A.I.A. Document G706A).
 - 3. Consent of Surety Company to Final Payment (A.I.A. Document G707).
- E. The contractor shall submit on his letterhead a type written list of all subcontractors used for this project and include their address, telephone number and fax for use by the owner during the warranty period.
- F. Provide all submittals, approvals and certificates required by governing authorities for this project and submit a final statement of accounting giving total adjusted contract sum, previous payments, and sum remaining due.

1.7 RECORD DRAWINGS

- A. Keep record drawings current and do not permanently conceal any work until required information has been recorded.
- B. Procedure:
 - 1. During the progress of the work, the heating and air conditioning and electrical subcontractors shall record to scale on their field set of drawings the exact locations as installed of all underground and otherwise concealed conduit, pipe and duct lines which were not installed exactly as shown on the contract documents. The contractor's superintendent will be responsible for recording any changes in the structural and architectural drawings.
 - 2. Pipe lines and ducts which are installed in furred spaces, pipe chases or other areas which can be readily inspected by the use of access panels or by other means will not be considered as being concealed.
 - 3. A separate set of record drawings shall be prepared for heating and air conditioning and electrical work, unless shown on the same sheets of the contract drawings, in which case the various subcontractors shall also show their changes on the same sheets. Each sheet shall bear the date and printed name and signature of the subcontractor who prepared the record drawing.

1.8 OPERATION AND MAINTENANCE MANUALS

- A. Provide operation and maintenance manuals for: mechanical equipment and controls, electrical equipment and controls and as specified in individual specification sections.
- B. Submit two sets bound in 8-1/2 x 11 inch three-ring side binders with durable plastic covers, unless otherwise specified in individual specifications sections.
- C. Provide a separate volume for each system with a table of contents and index tabs for each volume.
 - 1. Part 1: directory, listing names, addresses and telephone numbers of: engineer, architect, contractor and subcontractor.

2. Part 2: operation and maintenance instructions arranged by system. For each system give names, addresses and telephone numbers of subcontractors and suppliers. List: appropriate design criteria, list of equipment, parts list, operating instructions, maintenance instructions, equipment, maintenance instructions, finishes, shop drawings and product data and warranties.
- 1.9 WARRANTIES, GUARANTEES AND BONDS: For equipment put into use during construction submit within thirty calendar days after first operation.
- A. Execute contractor's applicable documents and assemble documents executed by subcontractors, suppliers and manufacturers. Provide table of contents and assemble all documents in binder with durable plastic cover.
- 1.10 SPARE PARTS AND MAINTENANCE MATERIALS
- A. Provide products, spare parts and maintenance materials in quantities specified in individual specifications sections, in addition to that used for construction of work. Coordinate with owner and deliver to project site.
- 1.11 CORRECTION DURING CONTRACTOR'S ONE YEAR GUARANTEE PERIOD
- A. Subcontractors shall report to the proper officials regarding corrections to be made after job completion. The following procedures shall be enforced.
 1. Owner will notify contractor of deficiency.
 2. Contractor shall then notify subcontractor concerned, who will accomplish agreed upon corrective measures and then notify the owner and secure a release on the item.
 3. Should the contractor fail to perform corrective work within 14 calendar days, owner shall notify engineer / architect. Engineer / Architect will then contact the contractor for corrective work. If work is not begun within three working days from engineer / architect's written notification the surety company may be notified of contractor's non-performance.

END OF SECTION

SECTION 02 4119
SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

- 1.1 **WORK INCLUDED:** This section covers the furnishing of all labor, equipment, materials and resources to accomplish the following:
- A. The Contractor shall carefully coordinate with the Owner during all the demolition work and shall adjust his schedule for this work in accordance with the Owner's requirements to minimize disruption of work in the adjacent spaces and buildings.
 - B. Complete wrecking of areas and the removal and disposal of demolished materials as shown on the Drawings.
 - C. Demolition and removal as noted on the Architectural, Mechanical and Electrical Plans.
 - D. It is the responsibility of the Contractor to carefully review the Contract Documents and remove any items identified on the Contract Documents or required to accomplish the new construction. Any such interference with new construction encountered after the completion of demolition work shall be remedied by the Contractor at no expense to the Owner.
- 1.2 **RELATED REQUIREMENTS**
- A. Refer to Division 00 and 01 Sections of these specifications.
 - B. All work of this Section shall be carried out in strict accordance with OSHA Regulations and other governing Codes.
- 1.3 **RELATED WORK**
- A. Section 01 0145 - Cutting and Patching.
- 1.4 **SUBMITTALS:** Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided.
- A. **Demolition Schedule:** Submit proposed methods and operations of temporary shoring and demolition for review prior to the start of work. Include in the schedule the coordination for shut-off, capping and continuation of utility services as required.
- 1.5 **JOB CONDITIONS**
- A. **Occupancy:** Areas to be demolished will be vacated and discontinued in use prior to the start of the work.
 - B. **Condition of Structures:** The Owner assumes no responsibility for the actual condition of structures to be demolished. The Contractor shall field verify these areas and remove as required.
 - C. **Partial Removal:** Salvaged items must be transported from the site as they are removed.
 - D. **Protections:** Ensure the safe passage of persons around and in the area of demolition. Conduct operations to prevent injury to persons, adjacent buildings, structures and other facilities.
 - E. **Damages:** Promptly repair damages caused to adjacent facilities by demolition operations at no cost to the Owner.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide all materials, suitable and in adequate quantity, required to accomplish the work as specified herein.

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Pollution Controls: Comply with governing regulations pertaining to environmental protection. Clean adjacent areas of the spaces and improvements of dust, dirt and debris caused by demolition operations, as directed by the Owner.

3.2 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove from the site debris, rubbish and other materials resulting from demolition operations and dispose of in an approved dump.
- B. Title to Materials: Title to all materials and equipment to be removed, except as specified and/or noted otherwise, is vested in the Contractor upon receipt of the Notice to Proceed. The Owner will not be responsible for the condition or loss of, or damage to, such property after Notice to Proceed. Materials and equipment shall not be viewed by prospective purchasers or sold on the site. Salvage items shall be transported from the site as they are removed.
- C. Salvaged Materials and Equipment: Carefully remove materials and equipment that are listed and indicated, as applicable, to be removed by the Contractor and that are to remain the property of the Owner and deliver to a storage site on campus as directed by Owner. Remove items in a manner that will prevent damage.

3.3 CLEANUP

- A. Debris and Rubbish: Remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent areas.
- B. Regulations: Comply with applicable Federal, State and local hauling and disposal regulations.

END OF SECTION

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Cast-in-place concrete slabs on grade for new underground trenching/cutting as required for new plumbing piping.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 RELATED WORK
- A. Section 03 5000 – Concrete Finishing
- 1.4 REFERENCES
- A. ACI 301 - Specifications for Structural Concrete for Buildings.
 - B. ASTM Standards and Test Procedures as referenced herein.
 - C. ACI 318 - Building Code Requirements for Reinforced Concrete.
- 1.5 REGULATORY REQUIREMENTS
- A. Applicable Codes: The American Concrete Institute Building Code (ACI-318) and the Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI-318).
- 1.6 TESTING
- A. Testing laboratory services shall be performed under provisions of Section 01 4000, at the Contractor's sole expense.
 - B. A set of four concrete test cylinders shall be taken for up to a maximum of every 25 cubic yards of concrete placed each day. One cylinder shall be tested at the expiration of seven days after concrete is placed; two at the expiration of twenty-eight days after concrete is placed, and the fourth held in reserve for additional testing in the event of failure which might indicate a defective cylinder.
 - C. Two additional test cylinders shall be taken during cold or hot weather and cured on site under same conditions as represented concrete.
 - D. One slump test shall be taken for each set of test cylinders taken.
 - E. Tests shall be made by an independent testing laboratory under the direction of an Engineer registered in the State of Florida. Test cylinders shall be prepared and stored by the testing laboratory and said laboratory shall be charged with the full responsibility for cylinder handling and curing prior to testing. The testing laboratory shall transport all cylinders, at the proper time, to the testing facility and, after performance of tests, transmit the results.
 - F. If test cylinders fail under laboratory tests to meet the strength requirements specified for the particular type of concrete involved, the Owner shall have the right to order such changes in mix and water-cement ratio as necessary to secure the strength required. The Owner shall also have the right to order additional testing at the Contractor's sole expense, including load tests on any portion of the structure where test cylinders fail to show proper strength. Load tests shall be made

in accordance with applicable Sections of ACI 301 for that portion of the structure affected. If members or portions of the structure show evident failure, such changes or modifications as are necessary to make the structure adequate for the rated capacity shall be made at the Contractor's sole expense.

- G. Strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:
 - 1. Every arithmetic average of any three consecutive strength tests equals or exceeds $f = c$.
 - 2. No individual strength test (average of two cylinders) falls below $f > c$ by more than 500 psi (3450 kPa)

1.7 SUBMITTALS: Submittals during construction shall be made in accordance with section 01 3300. In addition, the following specific information shall be provided:

- A. Provide product data for specified products.
- B. Submit manufacturers' instructions for specified products.
- C. Submit concrete mix design for each type of concrete based on either laboratory trial batch or field experience methods in accordance with ACI 318-05 Chapter 4. Concrete design mixes shall include a specification for water added in the field to the mix in accordance with the mix design provisions of ACI 318-05 Chapter 4. Submit for approval.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.
- B. Like items of materials or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I Portland cement; grey color.
- B. Fine and Coarse Aggregates: Natural aggregates, free from deleterious coating, thoroughly washed before use; conforming to ASTM C33.
- C. Water: Clean and not detrimental to concrete.

2.3 ADMIXTURES

- A. Air Entrainment: ASTM C260, except it shall be nontoxic after 30 days and shall contain no chlorides.
- B. Chemical Admixture: ASTM C494, Type A - water reducing or Type D - water reducing and retarding, except shall contain no chlorides, shall be nontoxic after 30 days, and shall be compatible with the air-entraining admixtures. Super plasticizer shall comply with ASTM C494 Type F water reducing - high range or ASTM C494, Type G - water reducing, high range and retarder, shall be added at the site to mixed and batched concrete and shall be nontoxic after 30 days and shall be compatible with the air-entraining admixture and shall contain no chlorides.

2.4 ACCESSORIES

- A. Bonding Agent: As manufactured by Sika Chemical Corporation Lyndhurst, NJ; or Adhesive Engineering Company, San Carlos, CA; or equal. Product shall be recommended by manufacturer as suitable to meet job requirements with regard to surface, pot life, set time, vertical or horizontal application, forming restrictions, etc. Furnish manufacturer's specific instructions for this job application.
- B. Non-Shrink Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents; SET nonshrink grout as manufactured by Master Builders Co., Cleveland, OH; Crystex as manufactured by L&M Construction Chemicals, Inc., Omaha, NE; or equal.
- C. Absorptive cover shall be burlap cloth weighing approximately 9 oz. per sq. yd., complying with AASHTO M182, Class 2.
- D. Moisture-retaining cover shall be waterproof paper, or polyethylene film, or polyethylene-coated burlap. All moisture-retaining cover materials shall comply with ASTM C-171.

2.5 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94. Delivery tickets shall contain time of departure from plant, design mix designation, design strength and shall indicate any changes to concrete mix such as added water, added superplasticizer, etc.
- B. Provide concrete with the following characteristics:

<u>Unit</u>	<u>Measurement</u>
Comprehensive Strength (28 days):	3000 psi
Concrete Aggregate Size (maximum):	1-inch
Masonry Grouting Aggregate Size (maximum):	3/8-inch
Air Entrainment:	1-1/2 to 4-1/2 % by volume
Use Slump Range:	
Slab on Grade or Fill	4 inches plus or minus 1 inch
Footings, Beams, Pile Caps	4 inches plus or minus 1 inch
Columns	2-1/2 to 5 inches
Masonry grouting	8 to 11 inches
- C. Use admixtures in cold weather or hot weather as required only when approved. Use of admixtures will not relax cold weather placement requirements.
- D. Add air entraining admixture to concrete mix for exposed concrete work above grade and as otherwise required when approved.
- E. When air temperature is between 85 and 90 degrees, the mixing and delivering time shall be less than 75 minutes. When air temperature is higher than 90 degrees, the mixing and delivering time shall be less than 60 minutes.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, held securely, and will not cause hardship in placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Apply bonding agent in accordance with manufacturer's instructions.

- B. Install vapor barrier as specified in Section 07 2600. Do not disturb or damage vapor barrier while placing concrete.

3.3 PLACING CONCRETE

- A. Notify inspector minimum 48 hours prior to commencement of concreting operations.
- B. Place concrete in accordance with ACI 301.
- C. Concreting shall be carried on at such a rate that concrete is at all times plastic and flows readily into spaces between reinforcement.
- D. Depositing of Concrete: Concrete shall be deposited as nearly as is possible in its final location and in such a manner that it will not show segregation. After operation has started, the unit of operation shall be carried on continuously and as rapidly as possible.
- E. After concreting is started, it shall be carried on as a continuous operation until placing of a panel or section, as defined by its boundaries or predetermined joints, is completed.
- F. Compacting: Concrete shall be deposited in horizontal layers not to exceed 18-inches in depth and thoroughly compacted, by means of recognized methods of mechanical vibration, into all parts of the forms and until air pockets are worked out.
- G. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- H. All concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms.
- I. Surface of concrete construction joints shall be cleaned and laitance removed. Immediately before new concrete is placed, all construction joints shall be wetted and standing water removed.
- J. Maintain minimum concrete cover around reinforcing as follows:

<u>Item</u>	<u>Coverage</u>
Slabs on Fill	3/4 inches
- K. The following concrete shall be prohibited: Partially hardened concrete, contaminated concrete, retempered concrete and concrete that is re-mixed after it has taken its initial set.

3.4 FINISHING

- A. Provide concrete surfaces to be left exposed with smooth rubbed finish.
- B. Formed concrete surfaces not exposed shall be finished with the texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4-inch in height rubbed down or chipped off.
- C. Finish floors in accordance with Section 03 3500.

3.5 COLD WEATHER PLACING

- A. Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with ACI 306 and as follows.
- B. When air temperature has fallen to or is expected to fall below 40° F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50° F, and not more than 80° F at point of placement.
- C. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators in mix designs.

3.6 HOT WEATHER PLACING

- A. When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as follows.
- B. Cool ingredients before mixing to maintain concrete temperature at time of placement below 95° F. Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is used to calculate total amount of water. Use of liquid nitrogen to cool concrete is Contractor's option.
- C. Cover reinforcing steel with water soaked burlap, so that steel temperature will not exceed the ambient air temperature immediately before concrete is placed.
- D. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed when temperatures exceed 90° F.
- E. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity or other adverse placing conditions.

3.7 CONCRETE CURING AND PROTECTION

- A. Concrete shall be maintained above 50° F and in a moist condition for at least the first 7 days after placement.
- B. Protect freshly placed exposed concrete slab surfaces from premature drying. Start moisture curing as soon as free water has disappeared from concrete surface after placing and finishing. Begin final curing by moisture curing or moisture-cover curing immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. If forms are removed before 7 days, cure formed concrete by methods specified below, as applicable. Cure other unformed surfaces by application of appropriate moisture curing method.
- C. Moisture curing shall be performed by keeping concrete surface continuously wet by continuous water-fog spray, or by covering concrete surface with absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Absorptive cover shall be placed to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.
- D. Provide moisture-cover curing by covering concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3-inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3.8 PATCHING

- A. Immediately after removal of forms, all concrete surfaces shall be inspected. All honey-comb voids, stone pickets and tie holes shall be patched before the concrete is thoroughly hardened.
- B. Defective areas shall be chipped away to a depth of not less than 1-inch, with the edges perpendicular to the surface. The area to be patched and a space at least 6-inches wide entirely surrounding the area to be patched shall be wetted to prevent absorption of water from the patching mortar.
- C. Patching mortar shall be made of the same material and in the same proportions as used for the concrete, except that the coarse aggregate shall be omitted. Non-shrink grout specified herein may be used for patching mortar.

- D. The patching mortar shall be thoroughly compacted into place, all holes filled solid using an approved tamping device, and shall be screened off so as to leave patch slightly higher than surrounding area. It shall be then left undisturbed for a period of one or two hours, to permit initial shrinkage, before being finally finished. The patch shall be finished in such a manner as to match the surrounding surface.
- E. Where defective work is excessive, secure approval to patch. Permission to patch does not relieve the Contractor of the responsibility of removing defective work if patching cannot be done satisfactorily.

3.9 DEFECTIVE CONCRETE

- A. Modify or replace concrete not conforming to required levels and lines, details, and elevations.
- B. Repair or replace concrete not properly placed or of the specified type as directed.

3.10 FIELD QUALITY CONTROL

- A. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature and test samples taken.

3.11 PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperature, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

END OF SECTION

SECTION 03 3500
CONCRETE FINISHING

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Finish slabs on fill or grade.
 - B. Moisture curing materials, etc.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 RELATED WORK
- A. Section 03 3000 – Cast-In-Place Concrete
- 1.4 REFERENCES
- A. ACI 301 - Specifications for Structural Concrete for Buildings.
 - B. ASTM Standards and Test Procedures as referenced herein.
 - C. Federal Specifications as referenced herein.
- 1.5 SUBMITTALS
- A. Provide product data for specified products and applicable manufacturer's instructions.
- 1.6 DELIVERY, STORAGE AND HANDLING
- A. Deliver, store and handle materials under provisions of Section 01 6000.

PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.
 - B. Like items of materials or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, some parts and manufacturer's service.
- 2.2 MATERIALS
- A. For curing materials for moisture curing of interior slabs, see Section 03 3000.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify floor surfaces are acceptable for application of this work.
- B. Ensure floor surfaces are depressed where required to accommodate finish materials, such as ceramic tile.
- C. Beginning of installation means acceptance of surfaces.

3.2 INTERIOR FLOOR FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301.
- B. Uniformly spread, screed, tamp with a jitterbug and wood float concrete to a true, even plane.
- C. Manually float and lightly rake surfaces which will receive ceramic tile with full bed setting system.
- D. Steel trowel surfaces to receive resilient flooring.
- E. Steel trowel surfaces which will be left exposed or painted.
- F. The finishing tolerance for concrete slabs which receive resilient coverings shall be 1/8" maximum in 10 feet.

3.3 TOLERANCES

- A. Maintain surface flatness with maximum variation of 1/8-inch in 10 feet.
- B. In areas of floor drains, maintain floor level at walls and slope surface uniformly to drains at 1/4 inch per foot.

3.4 CURING

- A. Cure slab surfaces in accordance with ACI 301. Do not use curing compounds on any interior floor slabs. Apply curing compound on exterior slabs only. Apply in accordance with manufacturer's instructions.

END OF SECTION

SECTION 05 5000
METAL FABRICATIONS

PART 1 - GENERAL

- 1.1 **WORK INCLUDED:** This section covers the work necessary to furnish and install, complete, the following:
- A. Miscellaneous metal fabrications and castings.
 - B. Anchoring Systems.
 - C. Equipment Hangers and Supports as required.
 - D. The tabulation of items herein is not intended to be all-inclusive. It shall be the Contractor's responsibility to provide all metal fabrications and castings shown on the Drawings, specified, or which can reasonably be inferred as necessary for the completion of this project.
- 1.2 **GENERAL**
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 **RELATED WORK**
- A. Section 09 9000 - Painting and Coating.
- 1.4 **REFERENCES**
- A. ASTM Standards and Test Procedures.
 - B. AWS D1.1 - Structural Welding Code.
- 1.5 **SUBMITTALS**
- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories of miscellaneous metal fabrications and castings as specified herein.
 - B. Manufacturer's Mill Certificate: Submit certification that products meet or exceed specified requirements.
- 1.6 **FIELD MEASUREMENTS**
- A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

- B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 MATERIALS: Unless otherwise shown or specified, conform to the following:

- A. Steel Sections: ASTM A36.
- B. Steel Tubing: ASTM A500, Grade B.
- C. Pipe: ASTM A 501 OR ASTM A53, Types E or S, Grade B, Schedule 40.
- D. Bolts, Nuts, and Washers: ASTM A325.
- E. Anchor Bolts: ASTM A307, or A36.
- F. Welding Materials: AWS D1.1; type required for materials being welded.
- G. Stainless Steel
 - Bars and Shapes: ASTM A 276, Type 316
 - Steel Plate, Sheet and Strip: ASTM A 167, Type 316
 - Bolts: ASTM A 193, Type 316
 - Nuts: ASTM A 194, Type 316
- H. Aluminum, Structural Shapes and Plates: Alloy 6061-T6, or 6063-T6, ASTM B209.
- I. Galvanized Bolts: ASTM A 307, A 153
- J. Cast Iron: ASTM A 48, Class 30
- K. Shop and Touch-Up Primer: Rust-inhibitive primer single packaged steel primers with anti-corrosive pigment loading; may be alkyd, vinyl epoxy ester, chlorinated rubber; 40% volume solids minimum.
- L. Isolation Coating: Single-component, coal-tar pitch based bituminous paint, 68% minimum solids by volume, brush applied, on coat.

2.3 SHOP PAINT PRIMER

- A. Prepare ferrous metal surfaces in accordance with SSPC SP-2 or SP-3; insure that all oil, grease, dirt, loose rust, mill scale and other foreign substances are removed from all surfaces.
- B. Shop prime; Do not prime at welds, bolts and where embedded in concrete. Apply one (1) coat of rust-inhibitive primer at 2 mils minimum dry film thickness.

2.4 GALVANIZING

- A. Galvanizing of steel plates, shapes, bars (and products fabricated from these items) shall conform to ASTM A123. Pipe, welded or seamless steel, shall conform to ASTM A120. Material thinner than 1/8 inch shall either be galvanized before fabrication in conformance with the requirements of ASTM A525, Coating Designation G 210, or after fabrication in conformance with the requirements of ASTM A123.
- B. All welded areas shall be thoroughly cleaned prior to galvanizing to remove all slag or other material that would interfere with the adherence of the zinc coating. When it is necessary to straighten any sections after galvanizing, such work shall be performed without damage to the zinc coating.
- C. Components of bolted assemblies shall be galvanized separately before assembly.

2.5 ANCHORING SYSTEMS

- A. Wedge Anchors: Stainless steel, manufactured by ITT Phillips Drill Division or Hilti Kwik-Bolt, stud type, manufactured by Hilti, Inc.; or equal. Furnish sizes shown on Drawings or as required to develop full strength of materials being anchored or connected.
- B. Expansion Anchors: Expansion anchors shall not be used except in dry areas where future corrosion is not a problem. In wet or damp areas, use wedge anchors as specified above. Self-drilling anchors, snap-off type or flush type. ITT Phillips Drill Division or Hilti HDI Drop-In Anchors, Hilti, Inc.; or equal. Plastic anchors not allowed.
- C. Toggle Clamps: Toggle clamps shall be stainless steel and designed similar to Series 235-USS, manufactured by De-Sta-Co, Division of Dover Corporation; Series CL-351-TC, manufactured by Carr Lane; or equal.

2.6 EQUIPMENT HANGERS AND SUPPORTS

- A. Provide unistrut framing system, as manufactured by Unistrut Corporation; or equal; unless specified otherwise in applicable Mechanical / Plumbing /Electrical Sections; sizes, quantities and configurations as detailed on the Drawings or as required to properly support items of equipment. Provide 1/2" - 3/4" - 1" diameter threaded rods depending on weight of equipment to be supported. Length as required.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Make provision for erection loads with temporary bracing. Keep work in alignment.
- B. Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate trades.

3.2 WORKMANSHIP

- A. Workmanship of all metal fabrications and castings specified under this Section shall be the highest grade and equal to the best practice of modern shops for the respective work. Provide all necessary rabbets, lugs and brackets so that the work can be assembled in a neat, substantial manner. Conceal fastenings where practical. Drill metal fabrications as required for attaching hardware or other materials; torch cut holes are not permitted. Weld connections, unless otherwise shown or required.

3.3 ELECTROLYTIC PROTECTION

- A. Where aluminum is in contact with dissimilar metals, or to be embedded in masonry or concrete, protect surfaces with isolation coating. Allow paint to dry before installation of the material. Protect painted surfaces during installation; should coating become marred, prepare and touch up surface per paint manufacturer's instructions.

3.4 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Install in accordance with the shop drawings, the Drawings, and these Specifications. Perform field welding and erection work by skilled mechanics. The completed installations shall, in all cases, be rigid, substantial and neat in appearance. Erect structural steel in accordance with the applicable portions of AISC Code of Standard Practice.
- C. Install pre-manufactured and prefabricated products in accordance with manufacturers' printed instructions.

- D. Touch-up Painting: Immediately after erection, clean field welds, bolted connections and abraded areas of the shop paint primer. Apply touch-up paint primer by brush or spray which is the same thickness and material as that used for the shop paint primer.
- E. Galvanizing Repair: Galvanized surfaces that are abraded or damaged at any time after the application of the zinc coating shall be repaired by solvent cleaning followed by hand or power tool cleaning the damaged areas, removing all loose and cracked coating; after which the cleaned areas shall be painted with two coats of galvanizing repair paint.

END OF SECTION

SECTION 06 1053

MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. General framing, plates, blocking, braces, furring and nailers.
 - B. Rough carpentry hardware, including, but not limited to, nails, screws, toggle bolts and other anchorage devices.
 - C. Treated wood products shall be used where in contact with concrete or CMU.
 - D. All pressure treated wood shall be arsenic-free.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300.
- 1.4 RELATED WORK
- A. Section 05 5000 - Metal Fabrications
 - B. Section 06 4100 – Architectural Wood Casework
- 1.5 FIELD MEASUREMENTS
- A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported for clarification prior to starting fabrication.
- 1.6 DELIVERY, STORAGE AND HANDLING
- A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.
 - B. Immediately upon delivery to site, place materials in an area protected from weather.
 - C. Store materials a minimum of 6 inches above ground on wood blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.
 - D. Do not store materials in wet or damp portions of building.

PART 2 - PRODUCTS

2.1 QUALITY ASSURANCE

- A. Lumber grading rules and wood species shall be in conformance with U.S. Product Standard PS 20 and the National Forest Products Association. The wood members shall conform to the requirements above and provide design values equal to those published in the "Design Values for Wood Construction" of National Design Specification for Wood Construction, published by the National Forests Products Association.

2.2 GRADE MARKS

- A. Each piece of lumber shall be stamped with the grade as determined by an approved grading association indicating conformance with U.S. Product Standard PS 20.
- B. Moisture content shall not exceed 19 percent, unless otherwise specified.
- C. Preservative and pressure treated material shall conform to American Wood Preservers Association Standards (AWPA) and bear the appropriate American Wood Preservers Bureau (AWPB) quality mark designation.

2.3 LUMBER

- A. Dimensions given are nominal. Surface four sides (S4S); unless indicated otherwise, lumber shall be No. 2 Southern Yellow Pine for general framing, plates, blocking, braces, studs, furring and nailers.

2.4 PRESSURE TREATED WOOD

- A. Provide arsenic free pressure treated wood in accordance with AWPA C2 and the quality control standards. AWPB LP-2: above ground application in contact with masonry or concrete. AWPB LP-22: round contact application.

2.5 ROUGH CARPENTRY HARDWARE

- A. Nails: Steel common nails in accordance with the fastening schedule of the Florida Building Code, sizes as indicated on Drawings or as required. Use hot-dipped zinc-coated nails wherever exposed to exterior, high humidity and treated wood locations.
- B. Bolts and Screws: Conforming to ASTM A 307, sizes as indicated on Drawings, or as required. Use galvanized where exposed to exterior, high humidity and treated wood locations.
- C. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or ballistic fasteners for anchorages to steel. No plastic anchors of any type allowed.

PART 3 - EXECUTION

3.1 GENERAL

- A. Use only skilled workers and the highest standards of the craft. Plan work in advance and perform in proper sequence to facilitate prompt and continuous progress of the work. Lay out, cut, fit and install all rough carpentry items. Anchor sufficiently to ensure rigidity and permanence.
- B. Install items accurate to dimension, true to line, level and square unless indicated otherwise on Drawings. Provide for installation and support of other work.
- C. Provide pressure treated wood for all wood blocking, furring and nailing strips in contact with concrete and concrete masonry units.

END OF SECTION

SECTION 06 4100

ARCHITECTURAL WOOD CASEWORK

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Prefabricated millwork and installation and storage of uninstalled millwork.
 - B. High pressure decorative laminate and other related items as noted on the drawings.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 RELATED WORK
- A. Section 06 1053 – Miscellaneous Rough Carpentry
- 1.4 REFERENCES
- A. ASTM standards and ANSI standards as referenced herein.
 - B. Manufacturers' recommendations and specifications.
 - C. National Electrical Manufacturer's Association (NEMA): standards LQ1 and LD3 for plastic laminates.
 - D. American National Standard Institute (ANSI): A20B.1, grade 1-M-2, "Mat-Formed Wood Particleboard".
 - E. PS 1 - construction and industrial plywood.
 - F. PS58 - basic hardboard.
- 1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:
- A. Qualifications: Submit complete information regarding the subcontractor's experience and past projects as outlined in this section.
 - B. Samples: Submit color and pattern samples of each finish to be applied by the millwork manufacturer for selection.
 - C. Manufacturers' Literature: Submit manufacturers' descriptive literature of specialty items, including but not limited to, plastic laminates and cabinet hardware as specified or referenced herein. Manufacturers' literature shall be clearly marked for each proposed item. Indiscriminate submittal of unmarked literature will not be accepted.
 - D. Shop Drawings: Prior to fabrication, shop drawings shall be submitted for review. Shop drawings shall completely describe and illustrate all features of the design, materials, fabrication, profiles and layout of all laminate clad cabinet items.

1.6 FIELD MEASUREMENTS

- A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the drawings and any discrepancies shall be reported for clarification prior to starting fabrication, application or installation.

1.7 QUALITY ASSURANCE

- A. The "Quality Standards", Section 1600 - Modular Casework of the Architectural Woodwork Institute (AWI) shall apply as a minimum, and by reference are hereby made a part of these specifications. In the event of conflict between these specifications and AWI Section 1600, then these specifications shall take precedence.

1.8 WARRANTY

- A. This Contractor shall fully guarantee all items furnished and installed under this section, including materials and workmanship for a period of one year from date of substantial completion.
- B. Millwork shall be guaranteed against chipping, delamination, warping of doors and all caulking associated with this installation, for a period of one year from date of substantial completion.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.
- B. Store millwork and related materials in dry and well-ventilated interior locations under constant minimum ambient temperature of 65 degrees F. and maximum relative humidity of 70 percent.
- C. Do not store any millwork on project site until building has been secured with lockable doors and windows and complies with the conditions set forth above.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products of millwork subcontractors, meeting the requirements specified below, will be acceptable for the work of this section.
- B. Submittals shall be accompanied by the following information:
 - 1. Complete construction details, technical literature/specifications and color chart, in such detail as necessary to determine that the proposed product is in conformance with these specifications.
 - 2. Full range of colors available in proposed HPL material.
- C. All millwork items specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance and spare parts.
- D. All high pressure laminate shall be as manufactured by Wilsonart or Formica.

2.2 GENERAL INFORMATION AND DEFINITIONS

- A. Assembly: All laminates shall be plant assembled. Where design, delivery or site conditions require, laminate clad cabinets shall be assembled in component units with provisions made for field connecting.
- B. Colors of Plastic Laminate: Provide full range of all colors available for verification during construction submittals.

- C. Exposed Surfaces: Shall be covered with high pressure plastic laminate.
- D. Concealed Surfaces: Surfaces not normally visible after installation i.e., stretchers, blocking and vertical partitions shall be considered concealed surfaces.

2.3 PREFABRICATED MILLWORK

- A. Surface materials and edging requirements for laminate cladding:
 - 1. Exposed Surfaces - Wilsonart, design group I, matte # 6 finish, high pressure laminate, nominal 0.028-inch thick.
 - 2. Directions and matching of patterns or grains shall be as selected.
- B. Thickness and materials for laminate clad cabinet components shall be 3/4-inch.
- C. Joinery and fastening of cabinet body members:
 - 1. No nails, screws or other fastening may be visible on exposed surfaces.
 - 2. Rails or top panels shall be provided where base cabinet will have a separate top in order to permit concealed fastening of the separate top.

PART 3 - EXECUTION

3.1 INSPECTION AND COORDINATION

- A. Examine all grounds, wood blocking and supports of casework for adequate anchorage, foreign material, moisture and unevenness that would prevent quality installation of millwork casework. Do not proceed with installation until all defects are corrected and blocking is in place.
- B. Contractor shall coordinate with other trades for backing and reinforcement as required for support or attachment of millwork.

3.2 INSTALLATION

- A. Set and secure millwork in place rigid, plumb and level.
- B. Carefully scribe millwork which abuts other building materials, leaving gaps within 1/16-inch tolerance. Do not use additional overlay trim for this purpose.
- C. Install matching filler and scribe panels with concealed screws or adhesive where shown or required for a complete and finished installation.

3.3 ADJUSTING AND CLEANING

- A. Replace chipped or cracked plastic laminate with full sheet to nearest joint or edge. Patching or other repairs not acceptable.
- B. Clean and wipe down all millwork prior to substantial completion review.

END OF SECTION

SECTION 07 2600
VAPOR RETARDERS

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Under-slab 15 mil vapor barrier retarder.
 - B. Install vapor barrier under all new concrete slabs on grade.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 REFERENCES
- A. ASTM standards and test procedures as referenced herein.
- 1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300.
- 1.5 DELIVERY, STORAGE AND HANDLING
- A. Deliver, store and handle materials as recommended by the manufacturer.
 - B. Deliver materials to the site in original packages with the manufacturer's labels thereon.

PART 2 - PRODUCTS

- 2.1 BARRIER
- A. Barrier at slabs on grade shall be minimum 15-mil minimum, Class A installation, polyurethane material equal to Stego Wrap. All joints and penetration shall be staggered and taped. Caulk polyurethane sealer around all openings in the slab, including cracks, expansion joints and pipe penetrations.

PART 3 - EXECUTION

- 3.1 PREPARATION
- A. Verify substrate materials are dry and clean and ready to receive work.
 - B. Coordinate the work of all trades so that all items to be placed under the slab are in place prior to the laying of any barrier.
 - C. Before beginning installation, inspect and approve quality of subsurface waterproofing and drainage to insure that it is acceptable.
- 3.2 INSTALLATION – VAPOR BARRIER
- A. Under-slab barrier: Install barrier under all concrete floor slabs on grade or fill. After base for the slab has been leveled and tamped, and after soil treatment work has been performed, apply the barrier with the roll width parallel to the direction of the pour with all joints lapped and continuously taped 12 “ minimum.

- B. Caution shall be maintained to provide a puncture-free barrier. Any tears or holes shall be repaired by removing defective sheet and replacing with a new sheet.
- C. All penetrations in barrier shall be sealed with same material lapped 12" from edge of penetration and taped.
- D. Barrier shall be turned up at foundation wall behind the expansion joint material and sealed to the foundation wall so as to completely seal the joint.

3.3 CLEANUP

- A. Upon completion of the barrier installation clean up all waste materials and debris resulting from this operation and dispose of such waste materials off the site.

END OF SECTION

SECTION 07 9000
JOINT PROTECTION

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Sealants for all joints related to buildings and structures.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 RELATED WORK
- A. Section 09 9000 – Painting and Coating
- 1.4 REFERENCES
- A. Federal Specifications as referenced herein.
- 1.5 ENVIRONMENTAL CONDITIONS
- A. The ambient temperature shall be between 40 and 90 degrees F when sealant is applied.
 - B. Surfaces shall be dry to the touch.
- 1.6 QUALITY ASSURANCE
- A. Applicator shall have a minimum of two years of experience installing sealants in projects of similar scope.
 - B. Color(s) of sealants selected shall be utilized throughout the project; the use of multiple colors on a given bead run shall not be accepted.
- 1.7 SUBMITTALS
- A. Samples and Certificates: Submit small samples of each sealant type specified herein showing full color range. Samples shall be accompanied by a Certificate of Compliance with requirements specified herein for each sealant type.
 - B. Applicator's Affidavit: Submit applicator's affidavit of qualification compliance.
- 1.8 GUARANTEE
- A. Installed sealants and accessories shall be guaranteed for a period of five years from date of Substantial Completion. Written guarantee shall include coverage of installed sealants and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion or do not cure.
- 1.9 DELIVERY, STORAGE AND HANDLING
- A. Deliver all sealants to the site in sealed containers, each bearing manufacturer's name and product designation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting all of the requirements specified herein, will only be considered upon submission of complete data in the form of a shop drawing with detailed information on proposed products.

2.2 SEALANTS

- A. Sealants shall be self-leveling for horizontal and sloping joints with a maximum slope of 1 percent. Non-sag sealants shall be used for steeper sloped joints, vertical joints and overhead joints. Silicone sealants are not acceptable except at plumbing fixtures.
- B. Vertical Joints: Two-part polyurethane sealant conforming to Federal Specification TTS-00227E, Type II, N/S; Mameco Vulken 227; Pecora Dynatrol II, or equal. Color to be selected.
- C. Horizontal Joints: Two-part polyurethane sealant conforming to Federal Specification TT-S-00227E, Type I, Class A, S/L; Mameco Vulkem 245; Pecora NR-200; or equal. Color to be selected.
- D. Plumbing Fixtures: Dow Corning 784 Silicone Sealant or approved equal. Color to be selected during construction submittals.

2.3 BACKUP MATERIAL

- A. Use closed-cell polyethylene foam rod conforming to ASTM D 1751 and compatible with sealant used. Size as shown or as recommended by manufacturers for all joints greater than 3/16 inch.

2.4 BOND BREAKER

- A. As recommended by sealant manufacturer.

2.5 PRIMER

- A. As recommended by sealant manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. All surfaces to be sealed shall be clean, dry, sound and free of dust, loose mortar and other foreign materials. Mask adjacent surfaces where necessary to maintain neat edge. Starting of work will be construed as acceptance of all subsurfaces.

3.2 INSTALLATION

- A. Apply all materials following manufacturer's recommendation and instructions.
- B. Fill sealant joint completely from back to top, without voids.
- C. Tool sealant joints slightly concave after sealant is installed on vertical and horizontal joints that are flush with adjacent surfaces. On flashing reglets (if required), sealant shall be installed with convex surface to shed water.

3.3 CLEANING

- A. The surfaces next to the sealed joints shall be cleaned of smears or other soiling resulting from sealant applications. At no additional cost to Owner, replace or repair to Owner's satisfaction any damaged surfaces resulting from sealant application or cleaning.

END OF SECTION

SECTION 09 1000
FINISH SCHEDULE

REMARKS

1. ALL COLOR SELECTIONS SHALL BE MADE (OR VERIFIED IF SPECIFIED) DURING CONSTRUCTION AFTER SHOP DRAWINGS AND SAMPLES ARE RECEIVED.
2. EXISTING HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED THE SAME COLOR AS THE WALL THEY ARE IN, UNLESS NOTED OTHERWISE.
3. THE EXISTING CONCRETE SLAB ON GRADE FLOOR IS TO REMAIN.
4. NEW PAINT IN SELECTED AREAS OF EXISTING WALLS AS NOTED ON THE RENOVATION PLAN.
5. THE EXISTING SUSPENDED ACOUSTICAL TILE CEILING SYSTEM IS TO REMAIN.

FINISH SCHEDULE

SPACE #	SPACE NAME	FLOOR	WALL FINISHES				BASE	CL'G.	CL'G. HT.	REMARKS
			NORTH	SOUTH	EAST	WEST				
001	NEW TEMPORARY CHEMISTRY LAB	EXIST.	PAINT	PAINT	PAINT	PAINT	N/A	EX.	EX.	1, 2, 3, 4, 5

END OF SECTION

SECTION 09 9000
PAINTING AND COATING

PART 1 - GENERAL

- 1.1 **WORK INCLUDED:** This section covers the work necessary to furnish and install:
- A. All Field Painting. It is the intent that the Painting Contractor shall be responsible for painting or finishing of existing gypsum board, concrete and masonry surfaces and above ceiling piping and ductwork that may be exposed to view, whether specifically mentioned or not, except where scheduled and/or specifically noted otherwise on the Drawings.
 - B. Any painting of mechanical piping and equipment shall be the responsibility of the Painting Contractor.
 - C. Shop painting of fabricated items shall be as specified in other Sections. However, the painting of any exposed steel fabrications and shop primed metal surfaces after erection is included in this Section.
 - D. Certain items are manufactured prefinished and except for spot touch up of damaged areas, shall not be again painted. The damaged areas which cannot be touched up without noticeable differences between the manufacturer's finish and field finished areas, and items which have been prefinished in colors other than that specified shall be brought to attention for determination of treatment to be used, if any, to correct the situation.
 - E. Refer to Section 09 0000 Finish Schedule. All color selections shall be submitted for verification and/or selection during submittal phase of construction
- 1.2 **RELATED REQUIREMENTS**
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 **SURFACES NOT REQUIRING PAINTING:** Unless otherwise specifically scheduled and/or indicated in the Specifications or on the Drawings, the following areas or items will not require painting:
- A. Nonferrous and corrosion-resistant ferrous alloys such as copper, bronze, aluminum, chromium plate and stainless steel, except where: required for insulation between dissimilar metals and aluminum is in contact with concrete or masonry.
- 1.4 **QUALITY ASSURANCE**
- A. Painting Contractor: Shall be regularly engaged in the application of paints and coatings specified and shall have previous experience within the last three years on projects similar in scope. Upon request, submit evidence of qualification compliance with complete references.
- 1.5 **SUBMITTALS**
- A. Product Data: For each paint system used, obtain from paint manufacturer for submittal, paint or coating manufacturers' technical product data sheets, including application instructions and paint colors available for each product used. The required information shall be submitted on a system-by-system basis; indiscriminate submittal of paint or coating manufacturer's literature will not be accepted.

1.6 ENVIRONMENTAL CONDITIONS

- A. Paints and coatings shall not be applied in extreme heat, ambient temperatures below 40 degrees F., or relative humidity in excess of 90 percent, unless otherwise recommended by the paint or coating materials manufacturer, nor in dust, smoke-laden atmosphere or damp weather.

1.7 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be delivered to the project site in unopened containers that plainly show at the time of use the designated name, date of manufacture, color, and name of manufacturer. Paint and coating materials shall be stored in a suitable protected area that is heated or cooled as required to maintain temperatures within the range recommended by the paint or coating manufacturer.
- B. Paint and coating material shall be kept sealed when not in use.
- C. Store paint materials at minimum ambient temperature of 45 degrees F. and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturers' instructions.
- D. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.8 SAFETY

- A. Painting shall be performed in strict accordance with the safety recommendations of the applicable paint or coating materials manufacturer; with the safety recommendations of the National Association of Corrosion Engineers contained in the publication "Manual for Painter Safety"; and with applicable Federal, State and local agencies having jurisdiction.

1.9 GUARANTEE

- A. The Contractor shall provide a written guarantee against defects in materials and workmanship for a period of two years from the date of Substantial Completion of the project. Any defects occurring during this warranty period shall be repaired at no cost to the Owner. This guarantee shall include, but shall not be limited to, blistering, peeling, cracking, sagging, flaking, chalking or alligating.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products of Sherwin-Williams are approved with equal products acceptable.

2.2 FILM THICKNESS

- A. Coverage is listed as either total minimum dry film thickness in mils (MDFT); or the spreading rate in square feet per gallon (SFPG). Per coat determinations are listed as MDFTPC or SFPGPC. The number of coats is the minimum required irrespective of the coating thickness. Additional coats may be required to obtain the minimum required paint thickness, depending on method of application, differences in manufacturers' products, and atmospheric conditions. Maximum film build per coat shall not exceed the coating manufacturer's recommendations.

2.3 PAINT AND COATING MATERIALS

- A. Accessory Materials: Shellac, turpentine, linseed oil, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, shall be commercial quality and as recommended by the manufacturer of the applicable paint or coating materials.
- B. Masonry CMU: Latex System. Coat 1: B28W02600 – ProMar 200 Zero VOC Interior Latex Primer White. Coat 2: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White. Coat 3: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White.

- C. Drywall - Walls: Latex System. Coat 1: B28W02600 – ProMar 200 Zero VOC Interior Latex Primer White. Coat 2: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White. Coat 3: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White.
- D. Hollow Metal Frames: Urethane System. Coat 1: B66W00310 - Pro Industrial Pro-Cryl Universal Primer Off White. Coat 2: B65W00181 Hydrogloss Single Component Waterbased Urethane Extra White. Coat 3: B65W00181 Hydrogloss Single Component Waterbased Urethane Extra White.
- E. Conduit and Piping exposed to View – Acrylic System. Coat 1: B66W00310 - Pro Industrial Pro-Cryl Universal Acrylic Primer Off White. Coat 2: B66W00661 - Pro Industrial High Performance Acrylic – Eg-Shel Extra White. Coat 3: B66W00661 - Pro Industrial High Performance Acrylic – Eg-Shel Extra White.
- F. PVC or Plastic exposed to view - Acrylic System. Coat 1: B51W00620 – PrepRite ProBlock Interior/Exterior Latex Primer/Sealer White. Coat 2: B66W00661 - Pro Industrial High Performance Acrylic - Eg-Shel Extra White. Coat 3: B66W00661 - Pro Industrial High Performance Acrylic – Eg-Shel Extra White.

2.4 COLORS

- A. Color selections will be made/verified under provisions of Section 01 3300.
- B. Where more than one coat of paint or coating material is applied within a given system, color shall be tinted slightly differently, but in the same hue as top coat to provide a visual reference that the required coats have been applied.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Beginning of paint and coating application means acceptance of surfaces.

3.2 PREPARATION

- A. Remove electrical plates, hardware, light fixture trim and fittings prior to preparing surfaces or finishing.
- B. Correct minor defects and clean surfaces which affect work.
- C. Shellac and seal marks which may bleed through surface finishes.
- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Galvanized, Copper and Other Non-Ferrous Metal Surfaces: Remove surface contamination and oils and wash with solvent. No painting required of copper.
- F. Unit Masonry Surfaces: Remove dirt, loose mortar, scale, salt or alkali powder and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- G. Plaster Surfaces: Fill hairline cracks, small holes and imperfections with patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

- H. Uncoated Steel Surfaces: Remove grease, scale, dirt and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting and clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned.
- I. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- J. Interior Wood Surfaces: Wipe off dust and grit prior to priming. Seal knots, pitch streaks and sappy sections with shellac or other knot sealer. Fill nail holes and cracks after primer has dried with wood putty approved by the paint material manufacturer; sand between coats.

3.3 PROTECTION

- A. Protect elements surrounding the work from damage or disfiguration. Repair damage to other surfaces caused by work.
- B. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces. Remove empty paint containers from site.

3.4 APPLICATION

- A. General: Paint and coating manufacturers' printed instructions for applying each type of paint or coating shall be furnished prior to application. Apply all paints and coatings in strict accordance with the paint manufacturers' recommendations. Sufficient time shall be allowed between coats to assure thorough drying and/or curing of previously applied paint or coatings.
- B. Damaged Coatings: Damaged coatings, pinholes or holidays shall have the edges feathered and repaired in accordance with the recommendations of the paint manufacturer.
- C. Unsatisfactory Application: If the item has an improper finish color or insufficient film thickness, the surface shall be cleaned and top coated with the specified paint material to obtain the specified color and coverage. Specific surface preparation information to be secured from the paint or coating manufacturer. Work shall be free of runs, bridges, shiners, laps or other imperfections. Evidence of these conditions shall be cause for rejection.

3.5 CLEANING

- A. All cloths and waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day.
- B. Upon completion of the work, all staging, scaffolding and containers shall be removed from the project site. Paint spots, oil or stains upon adjacent surfaces and floors shall be completely removed and the entire job left clean.

END OF SECTION

SECTION 10 0000

SPECIALTIES

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the Work necessary to furnish and install, complete, the following:
- A. Tactile exit signage.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 REFERENCES
- A. Manufacturer's recommendations, specifications and installation instructions.
- 1.4 SUBMITTALS: Submittals during construction shall be made. In addition, the following specific information shall be provided:
- A. Manufacturer's Literature: Catalog data for each item.
 - B. Shop Drawings: Shop Drawings as required for backing and preparation for built-in items.
- 1.5 DELIVERY, STORAGE AND HANDLING
- A. Deliver, store and handle materials or equipment per manufacturer recommendations.
- 1.6 WARRANTY
- A. Provide a written guarantee against defects in materials and workmanship for a period of one year from the date of Substantial Completion of the Project. Any defects occurring during this warranty period shall be repaired at no cost to the Owner.

PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered.
 - B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- 2.2 SIGNAGE
- A. Exit signs adjacent to the latch side of doors as indicated on the Life Safety Plan, stating "EXIT" in 1" high letters with appropriate Braille characters below. Color shall be white letters on red field.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturers' printed instructions applicable references at locations shown on Drawings. Equipment shall be plumb and level.

END OF SECTION

SECTION 31 3116
TERMITE CONTROL

PART 1 - GENERAL

- 1.1 **WORK INCLUDED:** This section covers the work necessary to furnish and install, complete, the following:
- A. The soil treatment for subterranean termite control.
- 1.2 **RELATED REQUIREMENTS**
- A. Refer to Division 00 and 01 Sections of these specifications.
- 1.3 **RELATED WORK**
- A. Section 07 2600 – Vapor Retarders
- 1.4 **QUALITY ASSURANCE**
- A. Termite control shall comply with the requirements set forth in the Florida Building Code, Termite Protection Standards.
 - B. Soil treatment shall be performed by a pest control firm licensed and/or otherwise approved by the appropriate Federal, State or local health agency.
 - C. Pest control firm shall be a member of the Florida Pest Control Associates, Inc. Provide a copy of the membership prior to beginning application work.
- 1.5 **SUBMITTALS:** Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:
- A. Applicator's compliance affidavit.
 - B. Applicator's written guarantee.
 - C. Manufacturer's literature of chemicals proposed for use, indicating composition by percentage, dilution schedule and intended applicable rate.
- 1.6 **WARRANTY**
- A. Provide warranty for material and application for one year from date of final completion.
 - B. Cover against invasion or propagation of subterranean termites, damage to buildings or contents of buildings caused by termites. Provide repairs to building or contents of building if caused at no additional cost to Owner.
 - C. Inspect work annually and report in writing to Owner. Owner reserves right to renew warranty on an annual basis for an additional five years.

PART 2 - PRODUCTS

2.1 CHEMICALS

- A. Use working solutions containing any one of the following chemicals at the listed minimum concentrations:

1. TERMIDOR 80 WG as manufactured and/or supplied by the BASF Chemical Company. Active ingredients:
 - a. Fipronil: 5-amino-1-(2, 6-dichloro-4-(trifluoromethyl)
 - b. Phenyl-4-(1, R, S) – (trifluoromethyl) sulfinyl-1-H-pyrazole-3-carbonitrile.
- B. Other Chemicals may be used provided:
 1. They have legal approval by the appropriate Federal, State or local health agency.
 2. That no toxic effects to humans, beneficial plant or animal life will result from the chemical used.

PART 3 - EXECUTION

3.1 GENERAL

- A. Duplicate treatment certificates shall be provided, one posted at site, one submitted with permit application.
- B. Do not begin soil treatment work until all preparations for slab placement have been completed. Soil poisoning shall be completed prior to placement of underslab vapor barrier.
- C. Do not apply soil treatment when surface water is present.
- D. Unless the treated areas are to be immediately covered, precautions shall be taken to prevent disturbance of the treatment by human or animal contact with the treated soil.

3.2 LOCATION

- A. Apply soil treatment to all areas beneath concrete floor slabs and along the interior sides of all foundation walls.

3.3 RATE OF APPLICATION

- A. Building Areas: Apply soil poison at the minimum rate of one gallon of working solution per 10 square feet of area under new floor slabs.
- B. Miscellaneous: Apply soil treatment at the rate of gallons of working solution per lineal feet as recommended by the manufacturer immediately below expansion and control joints, and all areas where floor slabs will be penetrated by construction features, such as plumbing pipes, electrical conduit, etc.

3.4 RETREATMENT

- A. If inspection identifies the presence of termites, retreat soil and retest.
- B. Use same chemicals as for original treatment.

END OF SECTION

FLORIDA GATEWAY COLLEGE

BUILDING 31 - TEMPORARY CHEMISTRY LAB RENOVATIONS

FGC BID NUMBER: ITB NO. 19-1-01 - LAKE CITY, FLORIDA

DESIGN CRITERIA

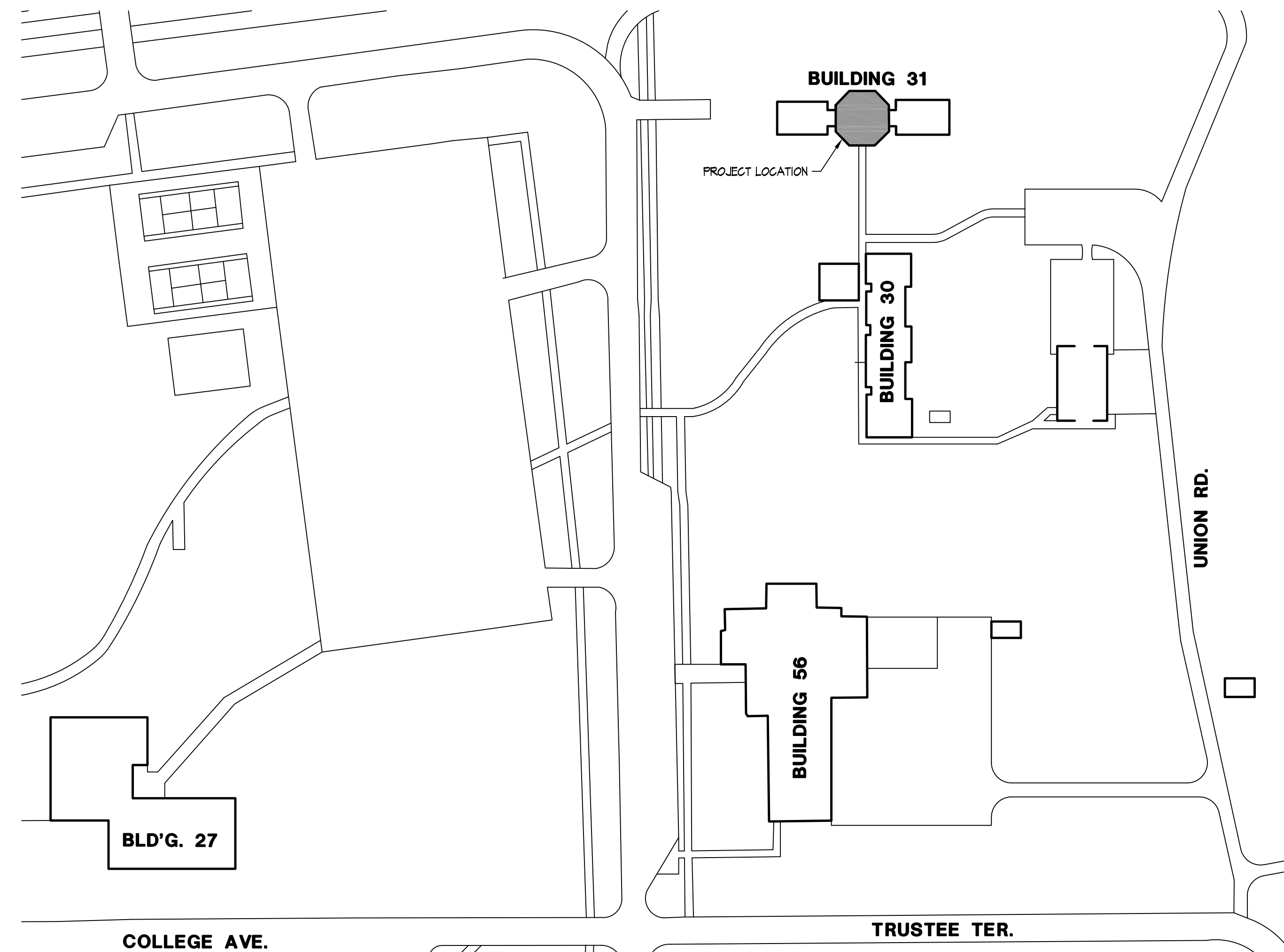
1. FLORIDA BUILDING CODE 6TH EDITION 2017
2. FLORIDA FIRE PREVENTION CODE 6TH EDITION
3. EXISTING BUILDING AREA (CONDITIONED) = 1368 SF AND IS UNCHANGED BY RENOVATIONS
4. EXISTING BUILDING HEIGHT = ONE STORY AND IS UNCHANGED BY RENOVATIONS
5. OCCUPANCY CLASSIFICATION = BUSINESS GROUP B
6. EXISTING BUILDING CONSTRUCTION IS TYPE IIB
7. TOTAL EXITS REQUIRED = 2 WITH 3 EXITS PROVIDED
8. STRUCTURAL FIRE-RESISTANT RATING REQUIREMENTS = 0 HOURS
9. FIRE SPRINKLER SYSTEM IS NOT REQUIRED OR PROVIDED
10. MAXIMUM EXIT ACCESS TRAVEL DISTANCE = 200'-0" AND MAXIMUM EXIT ACCESS TRAVEL DISTANCE PROVIDED = 44'-2"
11. EGRESS CALCULATIONS = 17 OCCUPANTS X 0.2" = 3.4" EGRESS WIDTH REQUIRED WITH 136" EGRESS WIDTH PROVIDED - UNCHANGED BY RENOVATIONS

OCCUPANT LOAD CALCULATIONS

1. SPACES CALCULATED AT 50 SF PER OCCUPANTS = ROOM 001
2. TOTAL MAXIMUM OCCUPANT LOAD = 17 OCCUPANTS

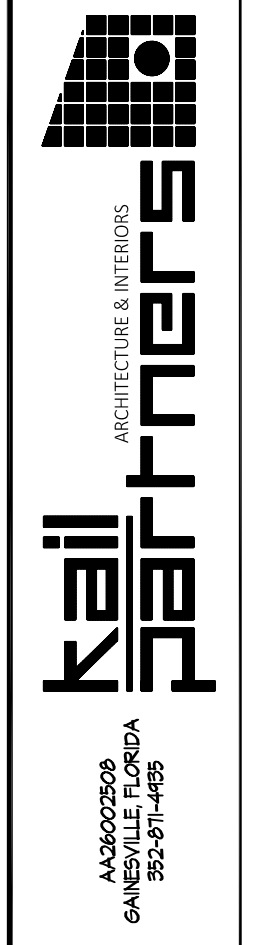
SHEET INDEX

- G-1 GENERAL PROJECT COVER SHEET
- A-1 DEMOLITION PLAN AND RENOVATION PLAN
- A-2 LIFE SAFETY PLAN AND REFLECTED CEILING PLAN
- M1 MECHANICAL PLANS
- M2 LAB HOOD EXHAUST DETAILS
- M3 MECHANICAL SPECIFICATIONS
- P1 PLUMBING PLANS
- P2 PLUMBING RISERS
- P3 PLUMBING SPECIFICATIONS
- E1 ELECTRICAL PLANS
- E2 ELECTRICAL LIGHTING PLAN
- E3 ELECTRICAL RISER AND PANEL SCHEDULE
- E4 ELECTRICAL SPECIFICATIONS



ARCHITECTURAL SITE PLAN
 NTS

FLORIDA GATEWAY COLLEGE
 BUILDING 31 - TEMPORARY CHEMISTRY LAB RENOVATIONS
 FGC BID NUMBER: ITB NO. 19-1-01 - LAKE CITY, FLORIDA

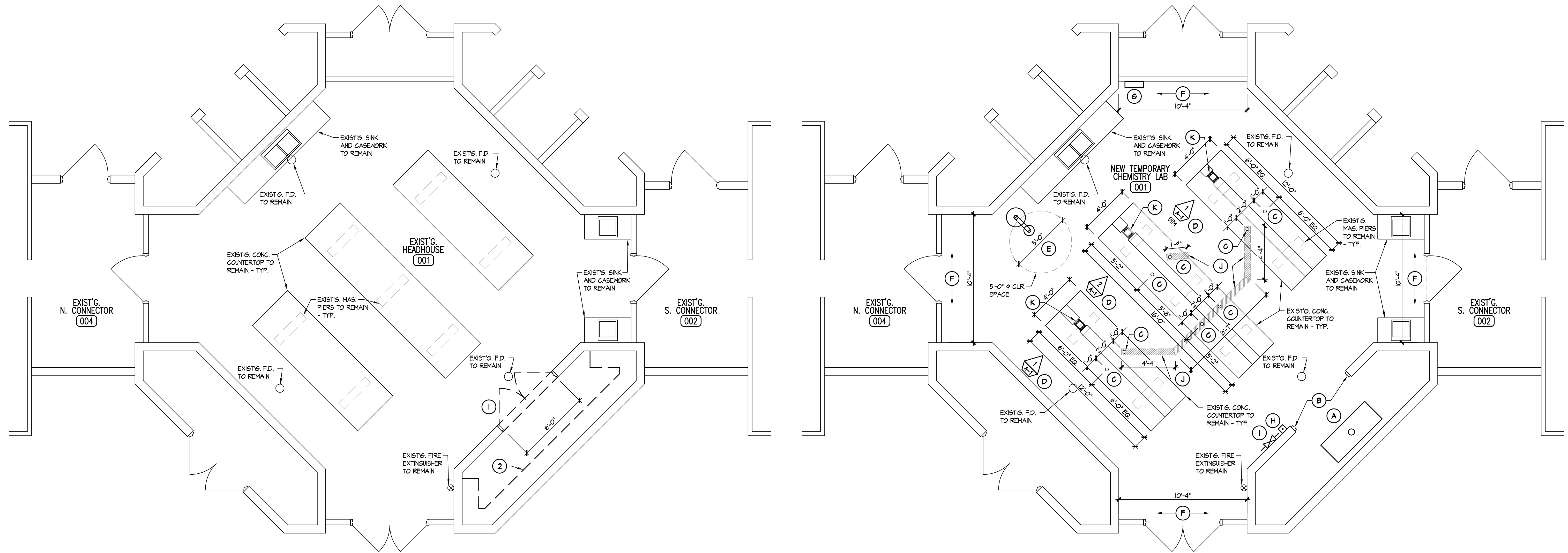


ROY DANIEL KAIL, JR.
 ARCHITECT
 KAIL PARTNERS
 AA26002508

DATE
 10/1/18

1838

G-1



DEMOLITION PLAN
 1/4" = 1'-0"

NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL
 BE FIELD VERIFIED BY BIDDERS
 DURING THE BIDDING PHASE

DEMOLITION NOTES

- 1 REMOVE EXIST'G. DOOR - EXIST'G. DOOR FRAME TO REMAIN - SAWCUT AND REMOVE EXIST'G. CONC. THRESHOLD (APPROX. 4" HIGH) AT DOOR OPNG. - GRIND CONC. LEVEL TO MATCH EXIST'G.
- 2 REMOVE EXIST'G. SHELVES.
- 3 PATCH, GRIND AND LEVEL EXIST'G. SURFACES AS REQD. TO PREP FOR NEW FINISHES - TYPICAL NOTE THROUGHOUT
- 4 COORD. W/ MEP DOCUMENTS FOR ADDITIONAL DEMOLITION SCOPE OF WORK - TYPICAL NOTE THROUGHOUT

GENERAL NOTES

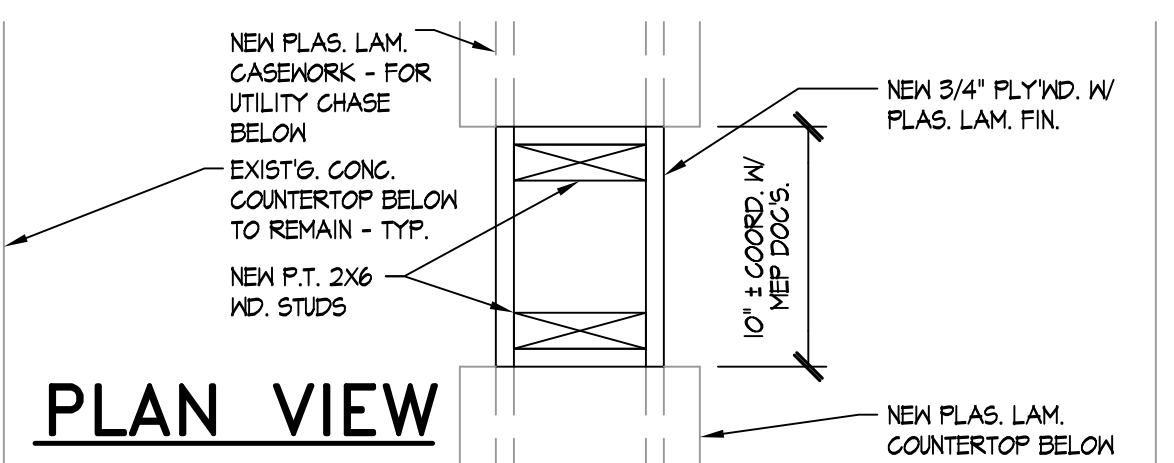
1. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO PERFORMING DEMOLITION AND SHALL PERFORM DEMOLITION REQUIRED TO ACCOMPLISH THE RENOVATIONS IN THIS PROJECT - DISCREPANCIES SHALL BE REPORTED PRIOR TO DEMOLITION
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF ALL MATERIALS
3. FLORIDA GATEWAY COLLEGE HAS FIRST RIGHT OF REFUSAL ON ANY SALVAGED EQUIPMENT, FIXTURES AND/OR MATERIALS
4. FACILITIES OR PORTIONS OF FACILITIES SHALL NOT BE OCCUPIED DURING CONSTRUCTION, UNLESS EXITS, FIRE DETECTION AND EARLY WARNING SYSTEMS, FIRE PROTECTION, AND SAFETY BARRIERS ARE CONTINUOUSLY MAINTAINED AND CLEARLY MARKED AT ALL TIMES

RENOVATION PLAN
 1/4" = 1'-0"

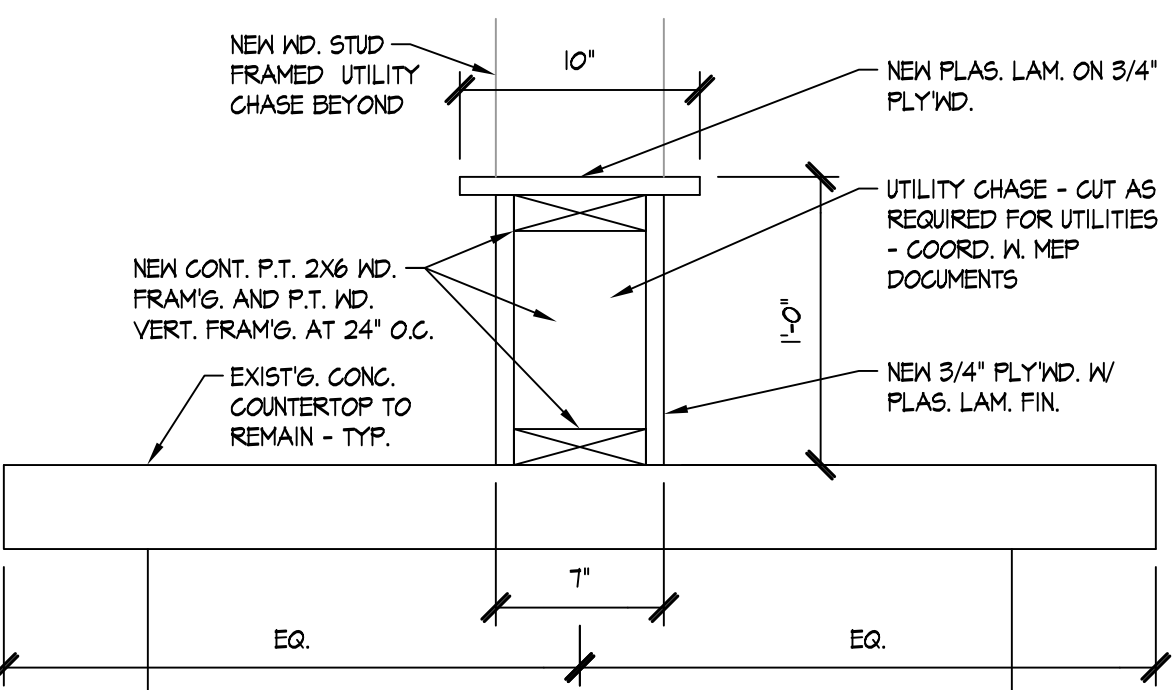
NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL
 BE FIELD VERIFIED BY BIDDERS
 DURING THE BIDDING PHASE

RENOVATION NOTES

- (A) NEW FUME HOOD - COORD. W/ MEP DOCUMENTS AND ROOF PENETRATION DETAIL
- (B) PATCH EXIST'G. H.M. FRAME AFTER DOORS REMOVED AND PAINT
- (C) SAWCUT NEW 3" Ø HOLE INTO EXIST'G. CONC. SLAB COUNTERTOP - COORD. W/ MEP DOCUMENTS
- (D) NEW PLAS. LAM. CASEWORK ABOVE EXIST'G. CONC. COUNTERTOP - COORD. W/ MEP DOCUMENTS
- (E) RELOCATED EMERGENCY DOUSING SHOWER W/ EYE WASH STATION - COORD. W/ PLUMB'G. DOCUMENTS - SHOWER PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR
- (F) NEW PAINT - COORD. W/ FINISH SCHEDULE
- (G) RELOCATED FIRE BLANKET CABINET - PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR
- (H) NEW EMERS. ELEC. DISCONNECT PUSH BUTTON - COORD. W/ MEP DOCUMENTS
- (I) NEW GAS/WATER MASTER CONTROL VALVE - COORD. W/ MEP DOCUMENTS
- (J) SAWCUT EXIST'G. CONC. SLAB ON GRADE AS REQD. TO CONNECT NEW DRAIN PIPE TO EXIST'G. UNDERSLAB PIPING - COORD. W/ MEP DOCUMENTS - POUR SLAB BACK LEVEL W/ EXIST'G. OVER VAPOR BARRIER AND COMPACTED AND TREATED FILL
- (K) NEW POWER POLE AND WD. STUD FRAMED UTILITY CHASE - COORD. W/ MEP DOCUMENTS - EXTEND CHASE FROM COUNTERTOP TO THE EXIST'G. SUSP. CL'G.
- (L) PATCH, GRIND AND LEVEL EXIST'G. SURFACES AS REQD. TO PREP FOR NEW FINISHES - TYPICAL NOTE THROUGHOUT
- (M) COORD. W/ MEP DOCUMENTS FOR ADDITIONAL RENOVATION SCOPE OF WORK - TYPICAL NOTE THROUGHOUT

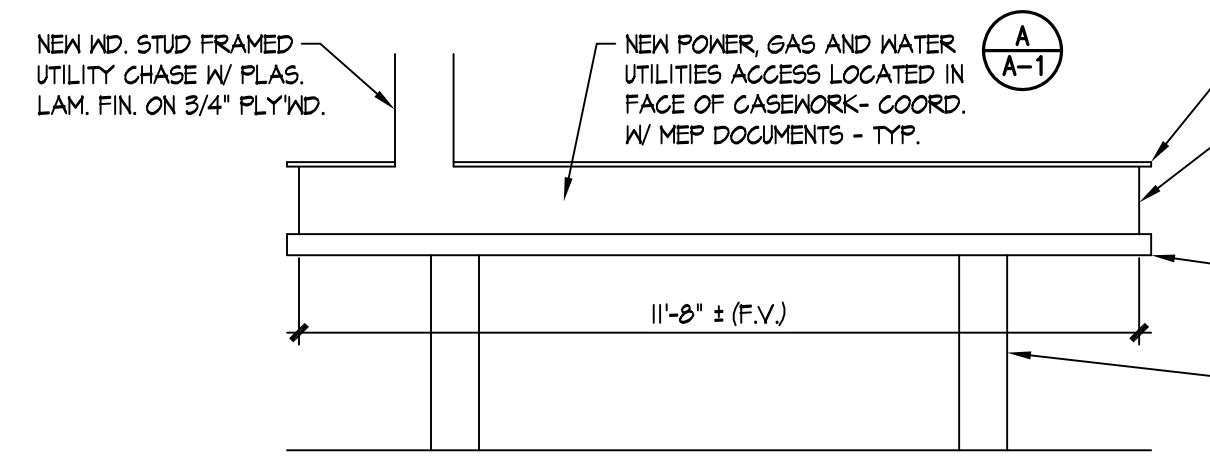


PLAN VIEW



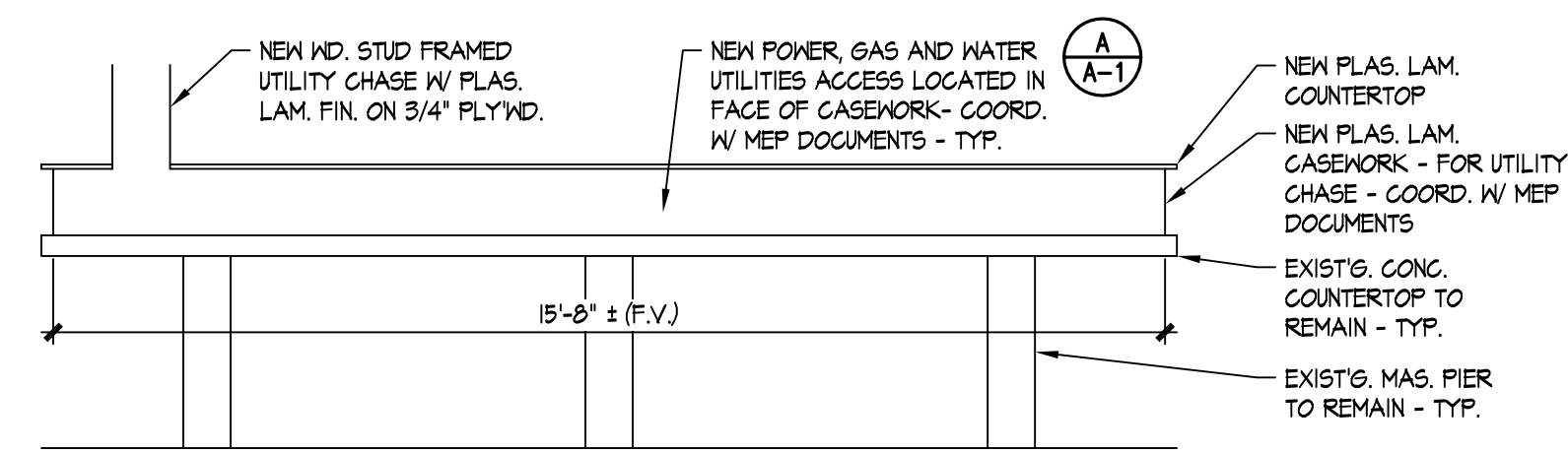
SECTION VIEW

CASEWORK DETAIL
 1 1/2" = 1'-0"



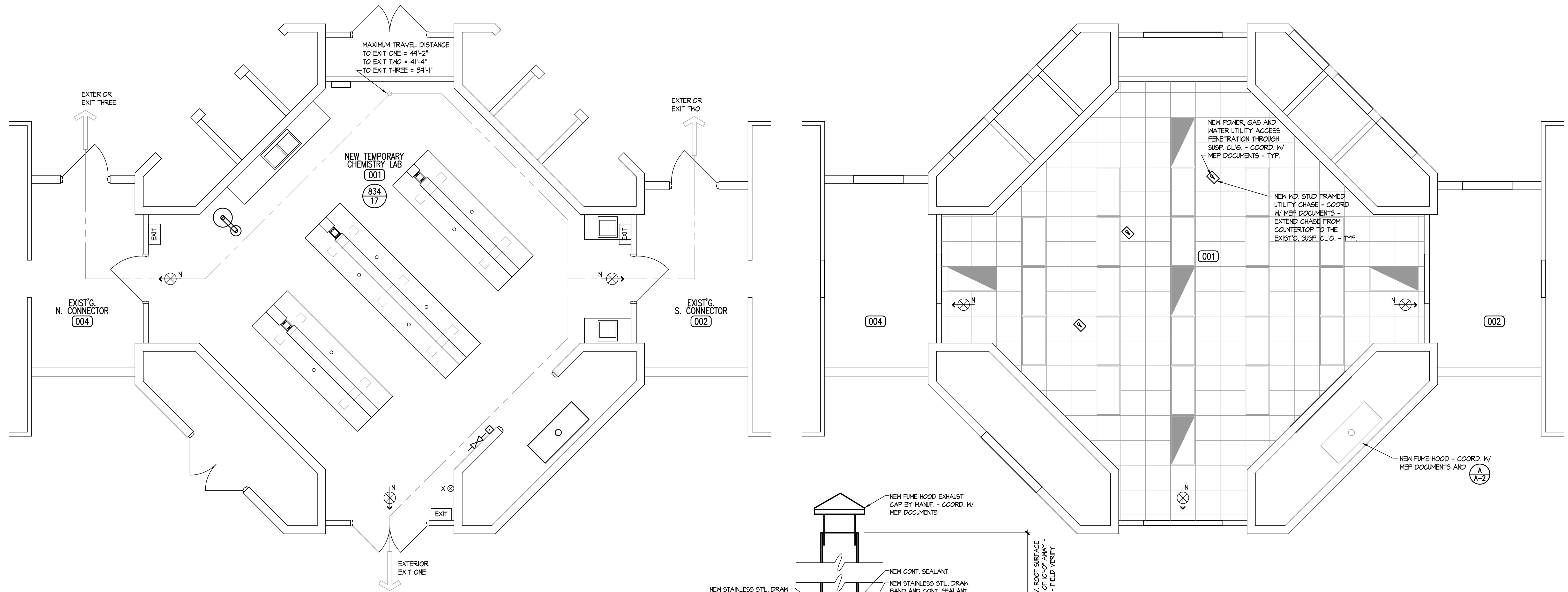
INTERIOR ELEVATION 1
 3/8" = 1'-0"

SIM. ON EA. SIDE OF CASEWORK



INTERIOR ELEVATION 2
 3/8" = 1'-0"

SIM. ON EA. SIDE OF CASEWORK



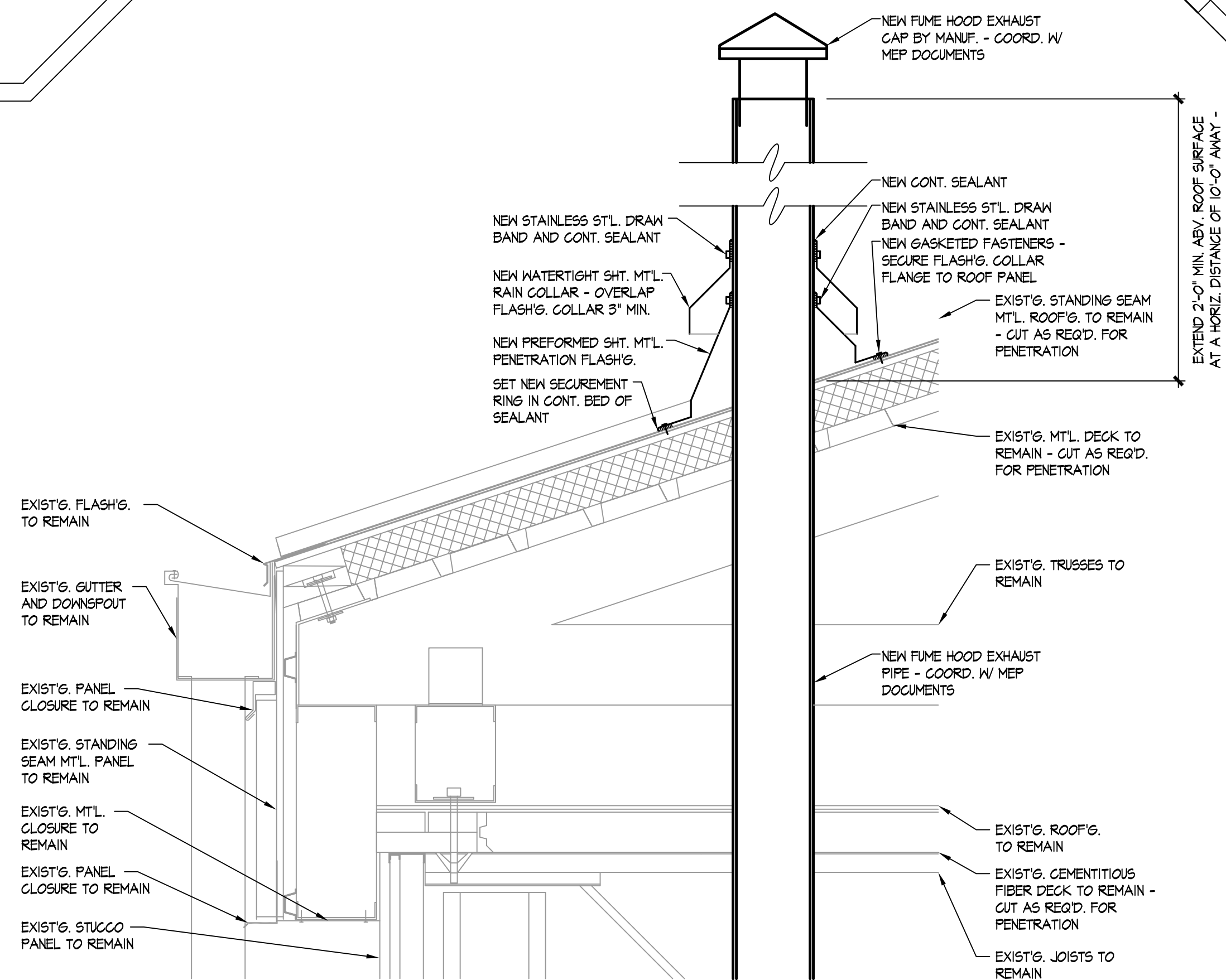
LIFE SAFETY PLAN
 1/4" = 1'-0"

LIFE SAFETY LEGEND

- NEW EXIT SIGN - COORD. W/ MEP DOCUMENTS
- ROOM SQUARE FOOTAGE
ROOM OCCUPANT LOAD
- EXIST'G. FIRE EXTINGUISHER TO REMAIN
- NEW TACTILE SIGNAGE
- NEW EMERG. ELEG. DISCONNECT PUSH BUTTON - COORD. W/ MEP DOCUMENTS
- NEW GAS/WATER MASTER CONTROL VALVE - COORD. W/ MEP DOCUMENTS

GENERAL NOTES

- 1 PROVIDE AND POST GRAPHIC DIAGRAM OF EMERGENCY EVACUATION ROUTES ADJACENT TO THE PRIMARY AND SECONDARY EXIT DOORS AS REQUIRED BY AHJ

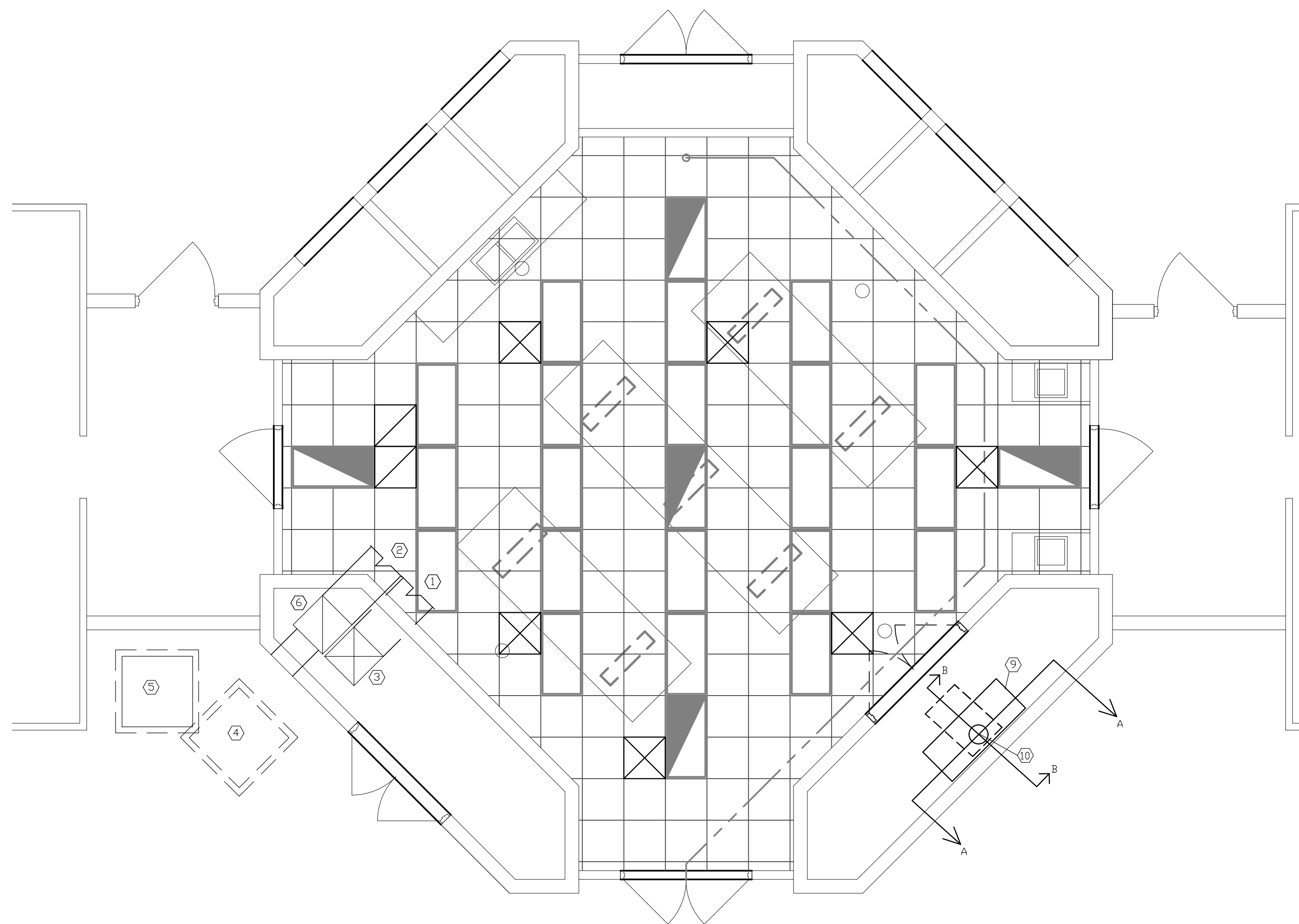


**FUME HOOD
 ROOF PENETRATION DETAIL**
 1 1/2" = 1'-0"

REFLECTED CEILING PLAN
 1/4" = 1'-0"

CEILING LEGEND

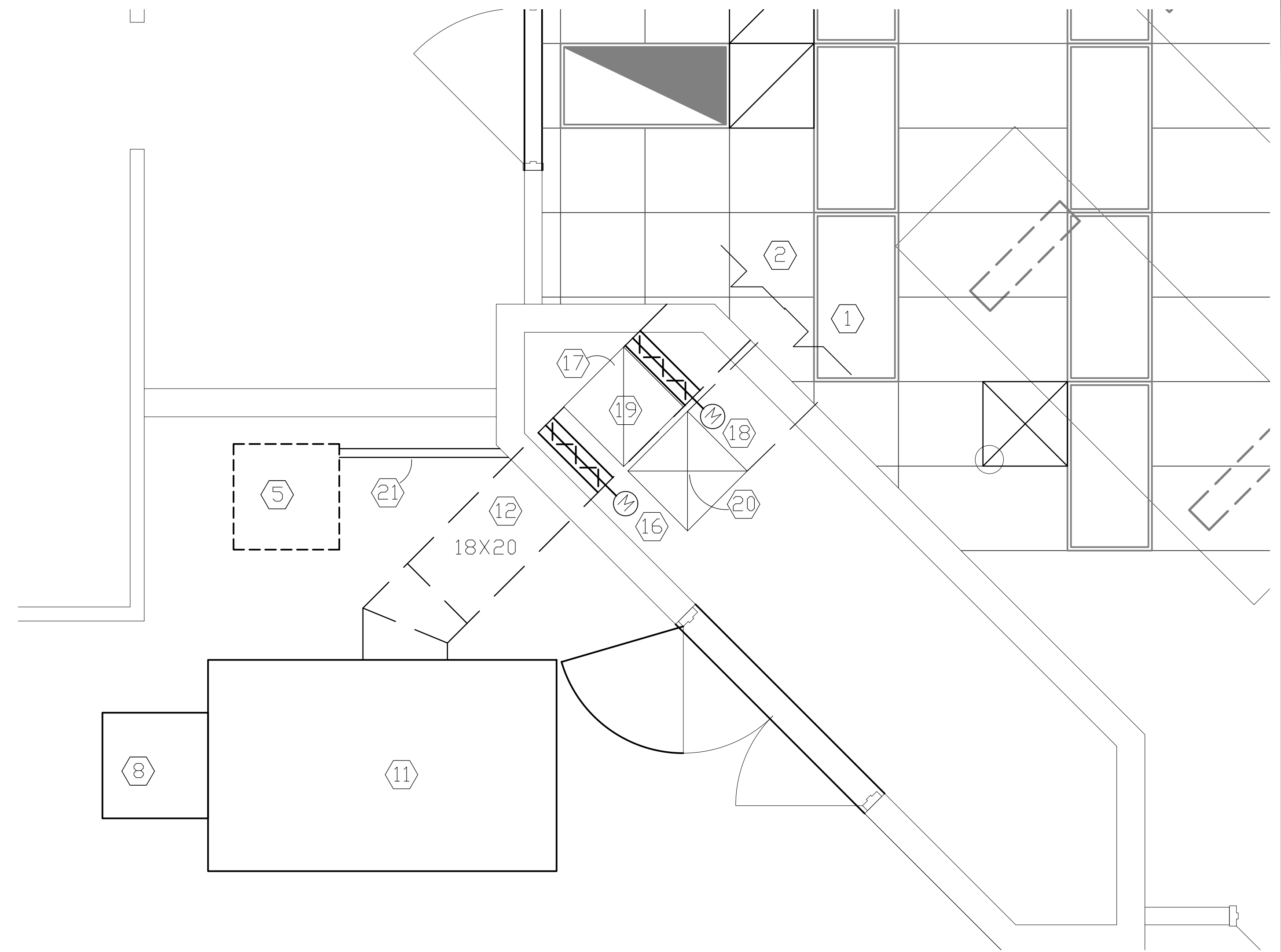
- EXIST'G. SUSPENDED ACOUSTICAL TILE AND GRID CEILING SYSTEM TO REMAIN
- EXIST'G. LIGHT FIXTURE TO REMAIN
- EXIST'G. EMERGENCY LIGHT FIXTURE TO REMAIN
- NEW EXIT SIGN - COORD. W/ MEP DOCUMENTS



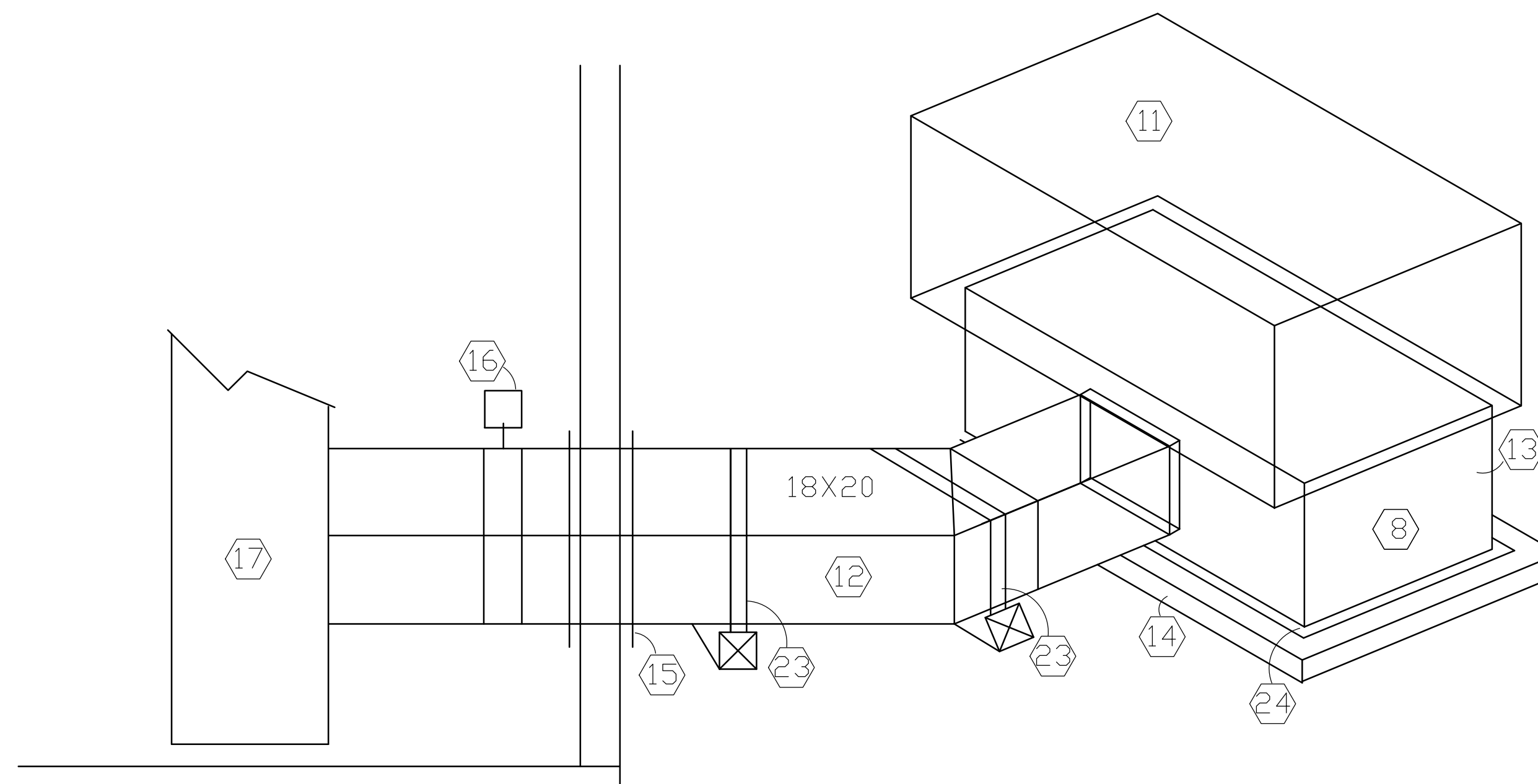
MECHANICAL PLAN
SCALE 1/4"=1'0"

KEYED NOTES SHEET M1

- ① ALL EXISTING SUPPLY DUCT AND DIFFUSERS IN THIS AREA TO REMAIN.
- ② EXISTING RETURN DUCT AND GRILLES TO REMAIN.
- ③ EXISTING AIR HANDLER TO REMAIN.
- ④ EXISTING CONDENSING UNIT TO BE RELOCATED.
- ⑤ EXISTING CONDENSING UNIT IN RELOCATED POSITION.
- ⑥ EXISTING RETURN DUCT TO BE MODIFIED.
- ⑦ NEW RTU-1, SEE DETAIL.
- ⑧ MIXING BOX - RUSKIN MODEL 50-307-1.
- ⑨ NEW LAB HOOD SEE M2.
- ⑩ NEW HOOD EXHAUST UP THRU ROOF TO NEW EXHAUST FAN.
- ⑪ NEW RTU-1 DN 28" HIGH SUPPLY PLENUM.
- ⑫ NEW 18X20 PRECONDITIONED AIR DUCT, WRAPPED WITH 2" RUBBER INSULATION, GLUED PER MFR RECOMMENDATIONS AND PAINTED WITH WHITE ACRYLIC LATEX PAINT.
- ⑬ INSULATED SUPPLY PLENUM, 28" HIGH.
- ⑭ 4" THICK CONCRETE PAD WITH WIRE MESH REINFORCING, 6" O.C.
- ⑮ INSTALL 2" X 1/4" ANGLE AROUND NEW DUCT OPENING. FILL AREA BETWEEN DUCT AND NEW OPENING WITH EXPANDABLE FOAM INSULATION.
- ⑯ NEW LOW LEAKAGE VOLUME DAMPER VD-1 IN PRE-CONDITIONED SUPPLY.
- ⑰ EXTEND NEW PRE-CDN AIR SUPPLY TO EXISTING RETURN AIR FROM EXISTING UNIT.
- ⑱ INSTALL NEW LOW-LEAKAGE RETURN AIR DAMPER IN EXISTING DUCTWORK.
- ⑲ REPLACE & MODIFY AS REQUIRED, THE EXISTING RETURN FROM WALL PENETRATION DDWN TO UNIT.
- ⑳ EXISTING SUPPLY DUCT TO REMAIN.
- ㉑ RELOCATE REFRIGERANT LINES AS REQUIRED.
- ㉒ SUPPORT DUCT ON PRE-CAST CONCRETE 'LINTELS'.
- ㉓ STRAP DUCTWORK TO 'LINTELS'.
- ㉔ SECURE UNIT WITH #6 X 1 1/2" TAP-CONS TO SLAB AT 12" O.C.
- ㉕ SECURE UNIT TO CURB PER MFR INSTRUCTIONS.



NEW MECHANICAL PLAN
SCALE 1/4"=1'0"



RTU-1 ISOMETRIC DETAIL
NTS

MECHANICAL LEGEND	
	NEW SHEETMETAL SUPPLY OR MAKEUP AIR DUCTWORK
	NEW SHEETMETAL EXHAUST DUCTWORK
	SUPPLY DIFFUSER, SEE DESIGNATION FOR TYPE
	RETURN GRILLE, SEE DESIGNATION FOR TYPE
	EXHAUST GRILLE, SEE DESIGNATION FOR TYPE
	DIFFUSER/GRILLE TYPE SEE SCHEDULE
	TURNING VANES
	MANUAL VOLUME DAMPER
	MOTORIZED CONTROL DAMPER
	CONDENSATE DRAIN PIPING
	CONDENSATE DRYWELL, SEE DETAIL
	THERMOSTAT
	TEMP SENSOR DUCT MTD
	HUMIDISTAT
	HUMIDITY SENSOR DUCT MTD
	DUCT MOUNTED SMOKE DETECTOR
	EXTENT OF EXISTING TO BE REMOVED OR POINT OF CONNECTION BETWEEN NEW AND EXISTING.



100% Outside Air Packaged RTU with Humiditrol

Unit Data				Supply Fan Data				Cooling Data				Electric Heater Data			Unit Electrical			Notes					
Tag	Nominal Capacity	Lennox Model	Total Weight	Outdoor Sound Rating	Fan AirFlow (cfm)	Fan ESP / TSP (in.WC)	Fan Power (hp)	Fan RPM (rpm)	Outdoor Air Flow (cfm)	Outdoor DB (°F)	Coil EAT DB/WB (°F)	Coil LAT DB/WB (°F)	Capacity Total (Btuh)	Capacity Sensible (Btuh)	Coil MRR (lb/hr)	ARI EER / IEER (#)	Electric Heater (kW)	Electric Output (Btuh)	Electric Heat Rise	System Voltage (V/Ph/Hz)	System MCA (amp)	System MOCP (amp)	
RTU-1	8 (ton)	LCH102H4B (#)	1,117 (lb)	88 Rating	1270 (cfm)	0.50 / 0.64 (in.WC)	2 (hp)	671 (rpm)	1270 (cfm)	95.0 (°F)	95.0 / 80.0 (°F)	56.9 / 56.7 (°F)	101,362 (Btuh)	48,954 (Btuh)	30.3 (lb/hr)	12.4 / 12.9 (#)	15 (SCR) (kW)	38,469 (Btuh)	28.1 Rise	208/3/60 (V/Ph/Hz)	49 (amp) MCA	50 (amp) MOCP	1 thru 11

Notes:

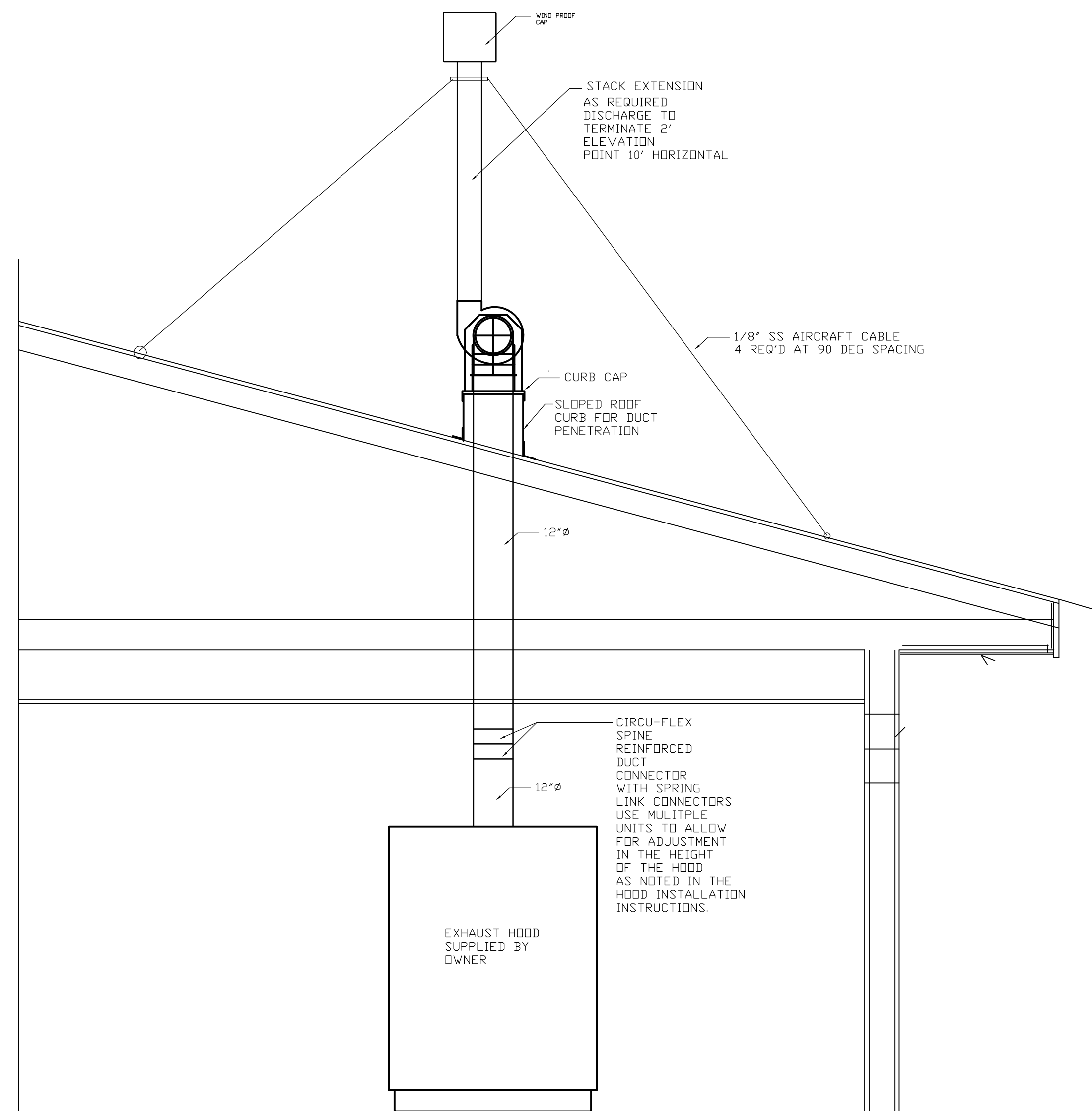
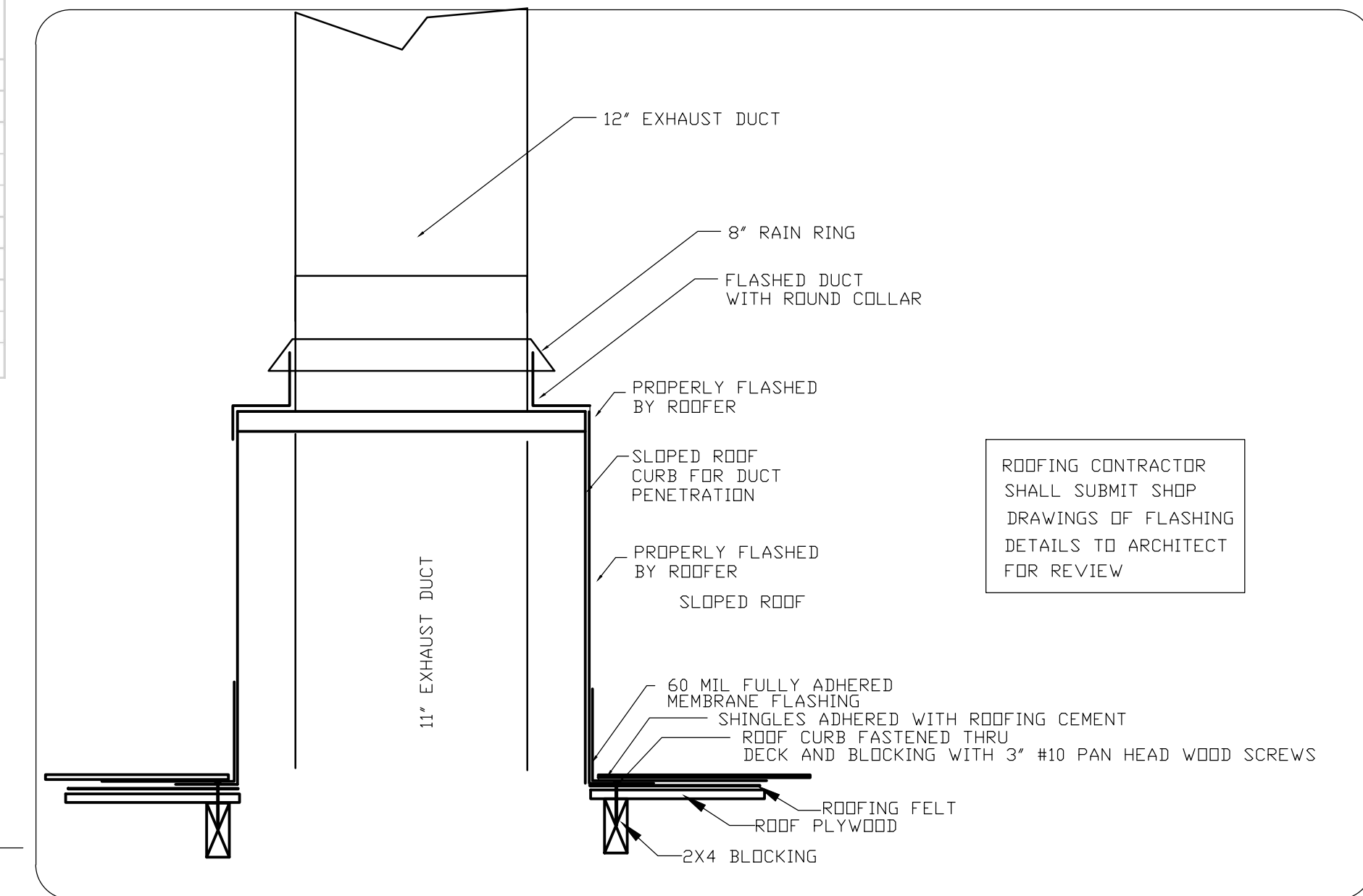
- Factory installed HGRH coil, fresh air tempering (FAT) control, SCR KW with blower proving switch
- High-efficiency, two-stage compressor
- Direct drive fan motors with multi-stage air volume (MSAV) via ECM motors
- ECM CU fans are staged to match compressor capacity
- Hinged access doors with HEX latch, coil guard, motorized OA damper & MERV13 filters
- Programmable touchscreen tstat (CS7500) with remote temperature and humidity sensor
- Controls and compressors out of airstream
- Prodigy controller with full text scrolling display and runtime data recording
- Crankcase heater, TXVs and high/low pressure switches, low ambient controls, phase monitor
- 24" bypass mixing box roof curb, disconnect, drain pan overflow switch, GCFI (factory installed & field wired)
- Factory start-up, 1-year parts and labor warranty by manufacture

FURNISH ALL FANS WITH INTEGRAL DISCONNECT, THERMALLY PROTECTED MOTOR, BACKDRAFT DAMPER AND ROOF CURB

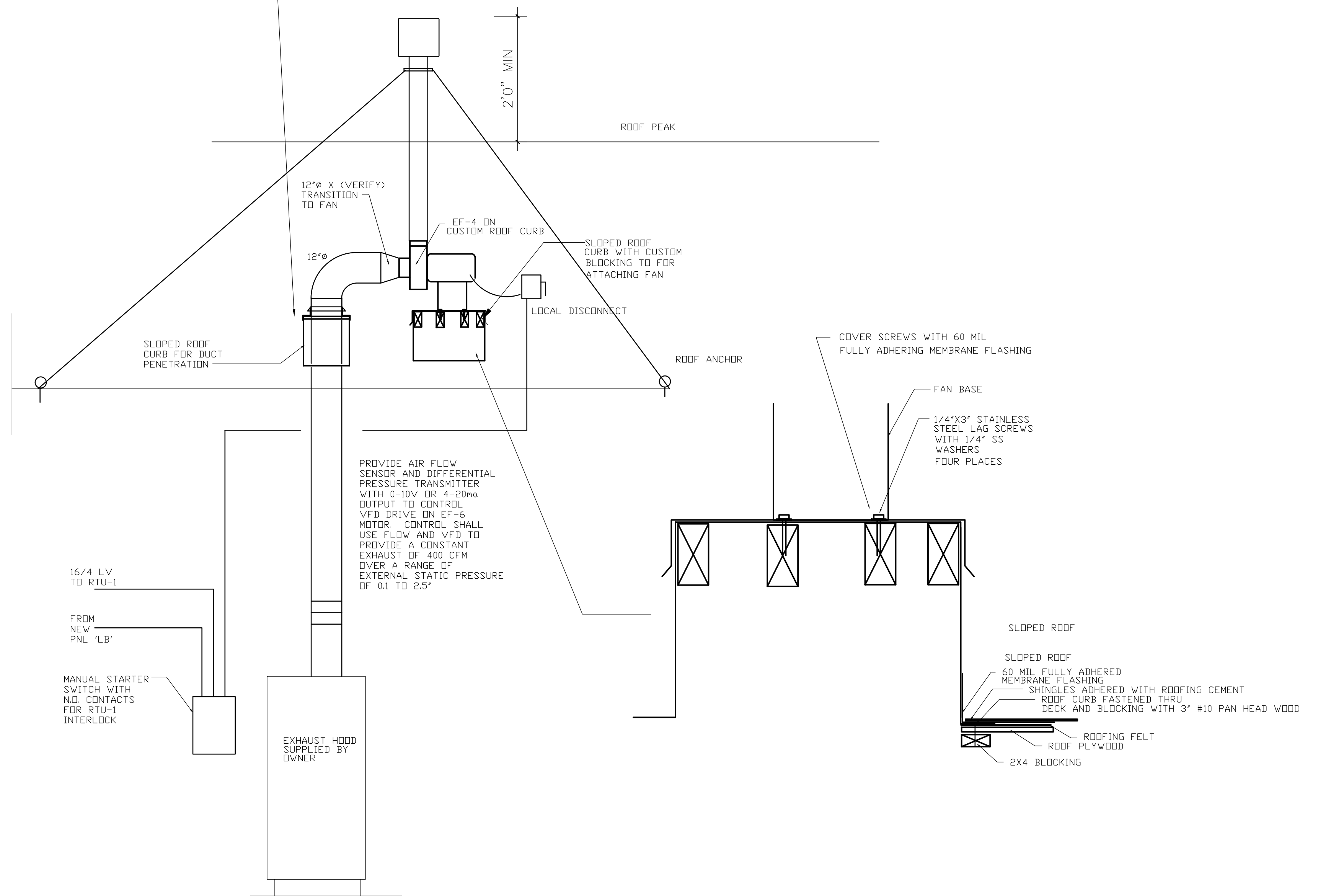
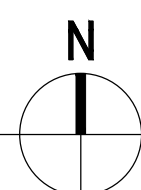
EXHAUST FAN SCHEDULE

MARK	MFG.	MODEL	TYPE	WATTS	HP	RPM	CFM	EXT. SP.	VOLT/Ø	COMMENTS
EF1	GREENHECK	SFB-9	ROOF		1	1400	1260	0.63	120	

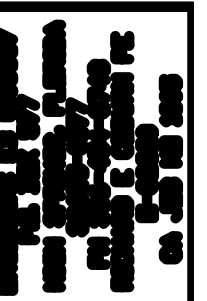
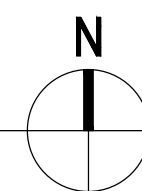
- ROOF MOUNTED UTILITY SET
- HI-PRO POLYESTER COATING
- WEATHER HOOD
- ACCESS PANELS
- GRAVITY BACKDRAFT DAMPERS
- EQUIPMENT SUPPORTS FOR PITCHED ROOF WITH MOUNTING RAILS
- OPEN SPRING MOUNTS
- THERMALLY PROTECTED MOTOR



SECTION A/M1
SCALE NTS



SECTION B/M1
SCALE NTS



DATE 10/1/18
DRAWN CAS
APPROVED REC

M2

HVAC SPECIFICATIONS

- A. It is the intent of these specifications to define the work and materials typically installed by a Mechanical Contractor. However, it is not intended to define a subcontract between the Mechanical Contractor and the General Contractor. The General Contractor is responsible for the entire project and any questions regarding scope of work shall be directed to the General Contractor.
- B. Work shall include all labor, materials, fixtures, equipment, tools and service necessary for installation, testing and adjusting of all mechanical systems shall be furnished and installed in compliance with the Drawings, Specifications, and any Addenda thereto.
- C. Drawings and Specifications shall be understood to cover, according to their intent and meaning, complete mechanical systems. Work shown and not specified, or work specified and not shown shall be performed as though mentioned in both.
- D. Minor items and accessories reasonably inferred as necessary for the complete and proper operation of any system shall be provided by contractor or subcontractor for such system whether or not they are specifically called for.
- E. Before submitting a bid, the Mechanical Contractor is to coordinate with the General Contractor to ascertain, in detail, the division of work, and the extent of performance other subs and the General Contractor.
- F. All work shall be performed or installed in strict accordance with Florida Building Code 2017-Mechanical, NFPA 101, NFPA 90A and local ordinances.
- G. Fees for permits, inspections, patent use, royalties, etc. shall be paid by the contractor.
- H. All systems shall be tested for proper operation, rotation air supply, water supply, pressures, flows, balance, vibration, and appropriate interlocks as required by these specifications or manufacturers' recommendations.
- I. All work shall be installed in accordance with the appropriate codes and satisfy the local inspector having jurisdiction.
- J. Upon completion of each part of the mechanical system, the contractor shall demonstrate to the Engineer that each item on that system is installed with proper covers, safeties, controls, etc., and that all are in proper working order.
- K. A set of "red-lined" mechanical drawings shall be carefully maintained at the job site. Actual conditions are to be put on the drawings in red on a daily basis so the drawings will continuously show locations and routings of piping, ducts, grilles, equipment, valves, and any equipment specified on the drawings or in these specifications.
- L. Equipment and materials shall be new and meet or exceed specification requirements.
1. All products shall be current model for which replacement parts are available.
- M. Acceptable manufacturers are listed, additional manufacturers may request approval for their products up to 10 days in advance of bid. Engineer may require supplemental information prior to accepting or rejecting the alternate.
- N. All work shall be performed in compliance with OSHA regulations.
- O. Shop drawings and product data shall be submitted on all equipment, fixtures, etc.
1. Submittals shall include all equipment to be installed by the subcontractor and all submittals must be made at same time.
2. Each package must have the General Contractors review stamp prior to submittal.
3. The Engineer will review one submittal and one resubmittal; subsequent resubmittals may require a review charge to be paid by subcontractor.
4. Shop drawings shall be labeled in the same designation as the drawings.
- P. Job conditions shall be determined prior to bidding in the following manner:
- Site visit to determine:
 - Existing conditions.
 - How and where materials will be delivered and stored.
 - Special problems encountered during construction.
 - Examine all Contract Drawings and Specifications to determine:
 - Type of construction to be used.
 - How construction or work will affect the work of this Section.
 - Nature and extent of work of other trades.
- Q. Failure to determine existing conditions or nature of construction will not be considered a basis for granting additional compensation.
- R. Installation:
- Contract Drawings show the arrangements and sizes of principal apparatus and devices to be provided under this Contract and connection thereto. These shall be shown as closely as actual building construction will permit.
 - Dimensions of work as indicated on Plans are not guaranteed to be as-built dimensions.
 - No measurements shall be scaled from Drawings and used as definite dimensions for layout or fitting work in place.
 - Layout of equipment, as shown on the plans, shall be checked and exact location determined by dimension if equipment approved by the Architect.
 - Consult the Drawings for all dimensions, locations of partitions, sizes of structural member, foundations, etc.
 - Do not make final layouts until shop or equipment drawings are approved and job conditions verified.
 - Mechanical reference symbols are given on the mechanical legend on the drawings.
- S. Rough-in:
- Work included:
 - Contractor shall rough-in for all equipment, fixtures, etc., in building whether or not such equipment is furnished by this Contractor or by Owner.
 - Method:
 - Determine in advance the location and size of all openings and chases necessary for proper installation of all work and have openings and chases provided during construction.
 - Install all inserts for hangers and supports of mechanical work and equipment work as general construction progresses.
 - Rough-in openings in masonry or stud walls shall be cut, not broken or chiseled.
 - Sleeves shall be required at all points where piping passes through concrete walls, slabs or masonry walls; sleeves installed below grade or where subject to high water conditions shall be installed watertight.
 - Coordination:
 - Work shall be coordinated between all Contractors, Subcontractors, Installers, Suppliers, Trades, etc., to:
 - Insure a neatly fitted installation.
 - Determine the nature and extent of the work of others.
 - Eliminate interferences.
 - Maintain maximum headroom and clearances.
 - Any interference which develops or is foreseen and cannot be resolved by the affected trades, etc. shall be handled as follows:
 - Cease installation of that portion of the work which is in conflict as no additional compensation will be allowed for any relocation, etc.
 - Continue work only on other portions of the work which are not in conflict.
 - Notify the Architect immediately.
 - Architect's decision shall be final as to any relocation, rerouting, removal, etc.
 - No additional compensation will be allowed for removal, relocation, repairs or changes required by interferences.
 - Clear away all debris, surplus materials, etc., resulting from work on operations, leaving job and equipment in clean first-class condition.
 - Clean all rotating equipment, ducts, piping, etc., and leave them in a ready-to-use condition.
 - Where factory finish is provided on equipment, all marred or damaged surfaces shall be touched-up or refinished hereunder as approved.
 - Thoroughly clean all items of equipment, leaving them in first-class condition.
 - Wipe clean or wash if necessary air surfaces of all coils, fan housings, fan wheels, fan motors, air unit plenums, and all air filters.
 - All pumps, motors, fans and other rotating equipment shall be stored at Site with openings, bearing, etc., covered to exclude dust and moisture; all stockpiled conduit shall be placed on dunnage, and protected from weather, from entry of foreign materials.
- BALANCING OF AIR SYSTEMS
- Balance and adjust each air distribution system shown on the Drawings.
 - Perform work in accordance with procedures and standards described in SMACNA Balancing and Adjustment Manual.*
 - Balancing shall be done by a certified balancing firm independent of the Mechanical Contractor.
 - Reports shall be made on SMACNA forms.
 - Submit five (5) copies for approval and record.
 - Examine HVAC units to see that they are free from obstructions.
 - Open all dampers and grilles.
 - Check lubrication of all moving equipment.
 - Check for proper installation of filters.
 - Perform other inspection and maintenance activities necessary for proper operation of systems.

- K. Fuse sizes and thermal overload heaters shall be checked against each motor nameplate.
- L. The amperage shall be read at each electrical motor to determine the load imposed on it.
- M. Adjustment and Balance:
- Adjust variable type pulleys, volume dampers, control dampers, etc. to provide correct volumes to main trunk lines.
 - Check and adjust outside air quantities as required.
 - Adjust air extractors and manual balancing dampers to supply correct air volume to each main branch duct from main trunk lines.
 - Adjust manual balancing dampers to supply correct volume to each individual branch duct.
 - Use terminal registers only for minimal adjustment of air flows, i.e., less than 9% of air volume.
 - Adjust grilles and diffusers for proper air flow patterns.
 - Air conditioning units shall be placed in operation and both wet and dry bulb temperature taken at one-hour intervals to determine the amount of cooling being accomplished and to indicate adjustments needed.
 - After spaces have been brought down to design temperatures and equipment is functioning properly, air shall be rebalanced if necessary by means of calibrated thermometers placed in each room and in open spaces not over 20' apart. There shall be no deviation in temperature of more than 3 F. throughout the space cooled.
 - A thorough check shall be made, with an anemometer, of air motion in the occupied space. Any air motion exceeding 50 fpm shall be remedied.

RTU-1

- A. Split System heating and cooling units with reverse cycle and heat strip where specified.
- B. Acceptable Manufacturers
- Trane
 - Carrier
 - Lennox
- C. BLOWER COIL SECTION
- Airflow as indicated on drawings.
 - Fan shall be direct - drive, forward-curved, double inlet, statically and dynamically balanced.
 - Fan motor shall be resiliently mounted and shall be easily removable for service.
 - Fan motor shall be permanent -split-capacitor type with integral overload protection, high - efficiency, Florida Energy Code Minimum.
 - Cooling coil shall have aluminum fins mechanically bonded to copper tubing. Coil shall have factory installed refrigerant metering devices.
- D. CONDENSING SECTION
- Outdoor unit shall be designed for use with Refrigerant 134a and contain sufficient charges (R134a) for complete system. Brass service valves with refrigerant line fittings and service ports shall be located on exterior of unit.
 - Outdoor coil shall be constructed with aluminum fins mechanically bonded to non-ferrous tubing. Factory installed coil refrigerant metering device shall be mounted on unit liquid service valve. Metering device internal components shall be removable for cleaning or replacement.
 - Outdoor unit fan shall be propeller type, direct driven, and arranged for vertical air discharge. Fan motor shall be factory lubricated, inherently protected and resiliently mounted.
 - Compressor shall be of the welded-hermetic type with internal vibration isolation and shall be covered with a shield to muffle operating sound. Compressor motor shall have both thermal and current -sensitive overload device. Compressor shall be equipped with a crank-case heater and have internal high-pressure protection.
 - Controls shall be factory wired and located in a readily accessible location. Controls and protective devices shall include a liquid line low pressure switch, suction line accumulator and pressure relief device. Control wiring terminal board shall be designed to match indoor unit terminal board and accessory thermostat terminals for standardized point-to-point connection.
- E. Resistance Heaters
- Heaters shall be wired for the number of stages of operation indicated on the Drawings.
 - Heaters shall be equipped with thermal and current overload devices as required by equipment listings and applicable codes.
 - Refer to Mechanical Equipment Schedule for Model Numbers.
- G. MOTORIZED OUTSIDE AIR DAMPER
- Provide a motorized low leakage outside air damper interlocked with the thermostat and CO2 sensor, see sequence of operation for control details.

EXHAUST FANS ON ROOF

- A. Utility set mounted on roof and ducted to outside.
- B. Meet the specification for air delivery at static pressure as specified on the Equipment Schedule.
- C. Meet the noise criteria (if specified on Schedule).
- D. Be of the manufacture and model number specified in the Equipment Schedule or equal.
- E. Shall be UL listed.
- F. Acceptable Manufacturers
- Breidert
 - Carnes
 - Greenheck
- G. General
- Acoustically insulated steel housing
 - Baked enamel finish on housing
 - Adjustable mounting brackets
 - Automatic backdraft damper at the discharge duct
 - Lifetime lubricated motor
 - Terminal box on housing with cord, plug and receptacle inside the housing.
 - Fan motor and wheel shall be removable without removing entire fan housing.

DUCTWORK

- A. RECTANGULAR SUPPLY DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH 2" R-6 RUBBER INSULATION; GLUE PER MFR AND PAINTED WITH ACRYLIC PAINT.
- EXCEPTION - SUPPLY AND RETURN FROM EXISTING UNIT SHALL BE REPLACED WITH NEW DUCTBOARD TO MATCH EXISTING.
- B. GENERAL EXHAUST DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH NO INSULATION.
- C. RETURN DUCTWORK SHALL BE DUCTBOARD TO MATCH EXISTING..
- D. FLEXIBLE DUCTWORK IS ALLOWED ONLY WHERE SHOWN AND SHALL NOT EXCEED 12' FEET IN LENGTH. FLEXIBLE DUCT SHALL MEET UL 181 CLASS 1.
- FLEXIBLE DUCTWORK WHERE INSTALLED SHALL BE ATTACHED USING SPIN-IN TAKE-OFFS WITH LOCKING QUADRANT DAMPERS.
- E. LOW - PRESSURE SHEETMETAL DUCTWORK
- Except as otherwise specified or detailed on the Drawings, all ductwork shall be constructed in accordance with the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)
 - Duct systems shall be complete, including all duct fittings, turning vanes, transverse reinforcing hangers, supports, etc., as detailed on the Drawings or in the standards.
 - Provide and install balancing dampers or adjustable splitters at all branch ducts, and where required for balancing the system.
 - Each damper shall be adjustable with an approved quadrant or regulator. Dampers to be applied grade type for ducts over 12" in any dimension, for ducts 12" single blade is acceptable except for outdoor air intakes which shall be low-leakage opposed blade.
 - Dimensions shown are net inside dimensions (including insulation).
 - Galvanized sheetmetal duct shall conform to the following thicknesses
- | | |
|----------------------|-------|
| a. Largest dimension | Gauge |
| 0-30 inches | 24 |
| 30-54 inches | 22 |
| 55-84 inches | 20 |
| over 84 inches | 18 |
7. All joints shall be sealed with tape and coated with mastic.

- G.. Plenums shall be constructed and tested in accordance with SMACNA STANDARDS.

H.. FLEXIBLE CONNECIONES

- Provide between duct system and air moving equipment
 - Connection shall be made with not less than 4" wide flexible collar using "Ventglas" 30-ounce neoprene coated glass fabric.
- I. Where construction methods for various items are not indicated on the Drawings or specified herein, all such work shall be fabricated and installed in strict accordance with the recommended methods, metal gauges, hanging procedures, access door and accessory installation, etc., as outlined, the latest edition of SMACNA'S Duct Manual and Sheet Metal Construction for Ventilating and Air Conditioning System.

pocket slip or Bar's slip not more than 8 ft apart up to 24 in. largest dimension and not more than 4 ft. apart above 24 in. largest dimension

J. Leakage:

- Contractor shall make necessary repair and shall make duct system ready for a leakage test.
- Test shall be performed by Test and Balance Contractor.
- Leakage shall not exceed 1 % leakage for high pressure duct and 5 % for low pressure duct construction.

DUCT INSULATION

A. Acceptable Manufacturers

- Johns-Manville
- Certainteed
- Knau

B. Duct Wrap:

- 2" inch thick RUBBER INSULATION - R6 INSTALLED
- Flameproof 25 per ASTM E-84
- Smoke developed 50 per ASTM E-84
- Factory applied vapor barrier - heavy duty

C. Accessories:

- Insulation tape, mastic, adhesives, etc. shall have the same flamespread and smoke rating as the insulation to which they are applied and meet manufacturer's recommendations.

DUCT HANGERS AND SUPPORTS

- A. All ductwork for air supply, return, fresh air or exhaust shall be supported by duct hangers, clamps, clips or supports.
- B. Acceptable Manufacturers
- Duct hangers may be a manufactured item or field fabricated as required.
- C. Galvanized steel straps
- Minimum 16 gauge and one inch wide
- D. Trapeze hangers
- Ducts 20 inches to 40 inches largest dimension.
 - Minimum 1 inch x 1 inch x 1/4 inch steel angles.
 - Minimum 1/4 inch threaded rod.
 - Ducts above 40 inches largest dimension and plenums
 - Minimum 1-1/2 inch x 1-1/2 inch x 1/4 inch steel angles.
 - Minimum 3/8 inch threaded rod.
- E. Supports
- All ductwork shall be supported from structural building members, i.e. block, beams, columns, purlins, joists, etc.
 - Ductwork shall not be supported from ceiling tile or grids, conduit, mechanical equipment, piping or non-structural steel.
 - Ductwork hangers shall be attached to building steel by bolts, screws, clamps or welding.

F. Hanger Bands

- Horizontal concealed ductwork up to 20 inches largest dimension shall be supported by one (1) inch x 16 gauge galvanized steel straps at a maximum spacing of 10 ft. and at each elbow or branch takeoff.
 - Bands and spacing shall be at a maximum spacing of 10 feet on horizontal runs and at each elbow or branch takeoff.
 - No nails shall be driven through any ductwork and into floor joists, trusses, etc.
 - Vertical ductwork, all sizes, shall be supported by bands bolted or screwed to walls, studs, etc.
 - Hanger bands shall be bent over one (1) inch from end and turned under corners of rectangular duct.
 - Duct hanger bands shall be fastened with sheet metal screws at six (6) inch intervals up sides and into bottom.
 - Sheet metal screws shall be 3/4 inch so as not to penetrate duct liner completely.
- G. Trapeze Hangers
- Horizontal ductwork larger than 20 inches largest dimension and all exposed ductwork shall be supported by trapeze type hangers.
 - Trapeze hangers shall be at a maximum spacing of 10 feet and at each elbow or branch takeoff.
 - Hanger rods shall be secured to bottom bracing angles with nuts and locknuts.

DUCT ACCESSORIES

- A. Air distribution system shall be furnished complete with duct accessories necessary to allow complete air balancing and adjusting of flow and volume.
- B. All square duct corners and T" connectors shall be fitted with turning vanes.
- C. All branch duct takeoffs shall be fitted with nonadjustable air turning vanes AND manual volume control dampers, OR adjustable volume extractors which are adjustable from outside the duct.
- D. Each grille and diffuser shall be fitted with a manual volume control register at the face of the grille and adjustable from the face of the grille without requiring removal of the grille.
- E. Acceptable Manufacturers
- Barber Colman
 - Titus
 - Properly submitted approved equal
- F. Air turning vanes:
- Multiple radius vanes
 - Steel construction
 - Electrocoated white finish
 - Maximum pressure loss = 20 % of velocity head
 - Model number - equal to Barber Colman Models AOOA and AOOF
- G. Volume Extractors:
- Gang operated parallel blade
 - Fully adjustable from wide open to full closed
 - Supply with supporting foot as required for branch takeoffs not in the same plane as trunk lines.

VOLUME DAMPERS

- A. All return air and fresh air dampers shall be parallel blade pivot dampers with motorized control where noted.
- B. All balancing dampers shall have manual control dampers with positive position locking.
- C. Acceptable Manufacturers
- Prefco Manufacturing Co.
 - Titus
 - Ruskin
- D. Parallel Blade Pivot Dampers:
- Low leakage non-degradable
 - Friction free metal to metal seals incorporated into the blade and frame shapes
 - Galvanized steel frame, 16 gauge
 - Galvanized steel blades, 22 gauge with double-wrapped center and edge forming
 - Maximum leakage - 11 CFM per sq. ft. @ 1 inch S.P.
 - The static pressure loss shall not exceed 0.7" W.G. @ 2000 FPM and 50 % modulation
7. Model Number
- Equal to Prefco Model 5150
 - Classified 1-1/2 hour rating, UL Listed.
 - Fire dampers shall have thermal link.
 - Model:
 - Dampers shall be equal to a Prefco "Low Profile B" or approved equal.
- D. Dampers - mounted horizontally in ceiling:
- UL Listed ceiling damper
 - Round or square as required
 - 2 hour rated
 - Single or dual blade depending on duct size
5. Model Number
- Prefco Model 5650, 5600, or 5660
- E. Link:
- Fusible link rated at 165 Degrees F. release temperature.

DUCT ACCESS PANELS AND TEST HOLES

- A. Provide an access panel at each return air and/or fresh air damper which will allow for inspection and cleaning of dampers.
- Where return and fresh air dampers are located adjacent, one access door is sufficient, providing each damper is accessible.
- B. Provide an access panel at each fire damper for resetting and maintenance of each fire and smoke damper.
- C. Provide test holes for measurement of air flow, on each branch duct and main trunk line or plenum.
- D. Acceptable Manufacturers
- Penn Ventilator Co.
 - Ruskin
- E. Access Doors:
- Insulated hinged duct access door
 - Standard gauge galvanized steel
 - Continuous piano hinge
 - Gasketed at door frame surface and at frame to duct surface
 - Positive acting cam latch handle
 - Doors shall be of sufficient size to allow access to both sides of dampers
 - If duct width is greater than 36 inches, provide access doors on each side of duct for access to entire dampers.
8. Exception:
- Where access door must be installed in such a position that hinged opening is not possible, provide door that is completely removable.
 - Removable door shall have cam-locks on both sides
 - Where noted on drawings fire damper may be accessed through return air grille.
9. Model Numbers:
- Hinged doors shall be equal to Penn Ventilator Model DAD
 - Non-hinged removable door shall be equal to Penn Ventilator Model DAD-RP.
- F. Test Holes
- Provide a capped access hole in each trunk line or branch duct for insertion of air-flow pitot for flow measurement.

GRILLES & DIFFUSERS

- A. ALL DIFFUSERS AND GRILLES ARE EXISTING TO REMAIN.

DISPOSABLE FILTERS

- Provide 1" pleated with perforated metal back for AH-1 thru 4
- MERV-7

CONTROL SYSTEM

PART 1 - GENERAL

DESCRIPTION

A. GENERAL

- Furnish and install all electrical controls and components for all mechanical systems as listed below.

B. SPLIT SYSTEMS -

- Provide Heat - Cool - Off Fan-On-Auto, thermostat, electronic, fully programmable with 4 functions per day, seven day/week programmable, t'stat shall have auxiliary contacts for O.A damper control.

PART 3 - SEQUENCE OF OPERATION

A. SYSTEMS EXISTING AIR HANDLER

- Occupied Mode:
 - Air Handler shall run continuously
 - Compressor shall cycle to maintain space temperature (heating or cooling)
- Unoccupied Mode:
 - Air Handler shall cycle with compressor
 - Compressor shall cycle to maintain space temperature (heating or cooling)

B. RTU-1

- Interlocked with lab hood to start unit fan and energize internal controls.
- Open the discharge air damper to balance position.
- Internal controls shall maintain discharge air temperature to 70°F (adjustable).
- Stop unit when hood is shutdown.
- Return discharge damper to minimum O.A position.

C. RETURN AIR DAMPER

- Open when lab hood is off.
- Closed when lab hood is on.

FIRE STATS

- A. Provide fire stats on each unit as required by code.
- Firestat shall shut down all unit components including fans, compressors, .

DUCT SMOKE DETECTOR

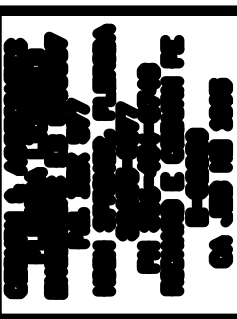
- A. Contractor shall install duct smoke detectors in each unit to shut down if smoke detector is in alarm.

FLORIDA GATEWAY BLDG 31

INTERIOR REMODEL

268 NW Lake Jeffrey Rd.

Lake City, FL 32055



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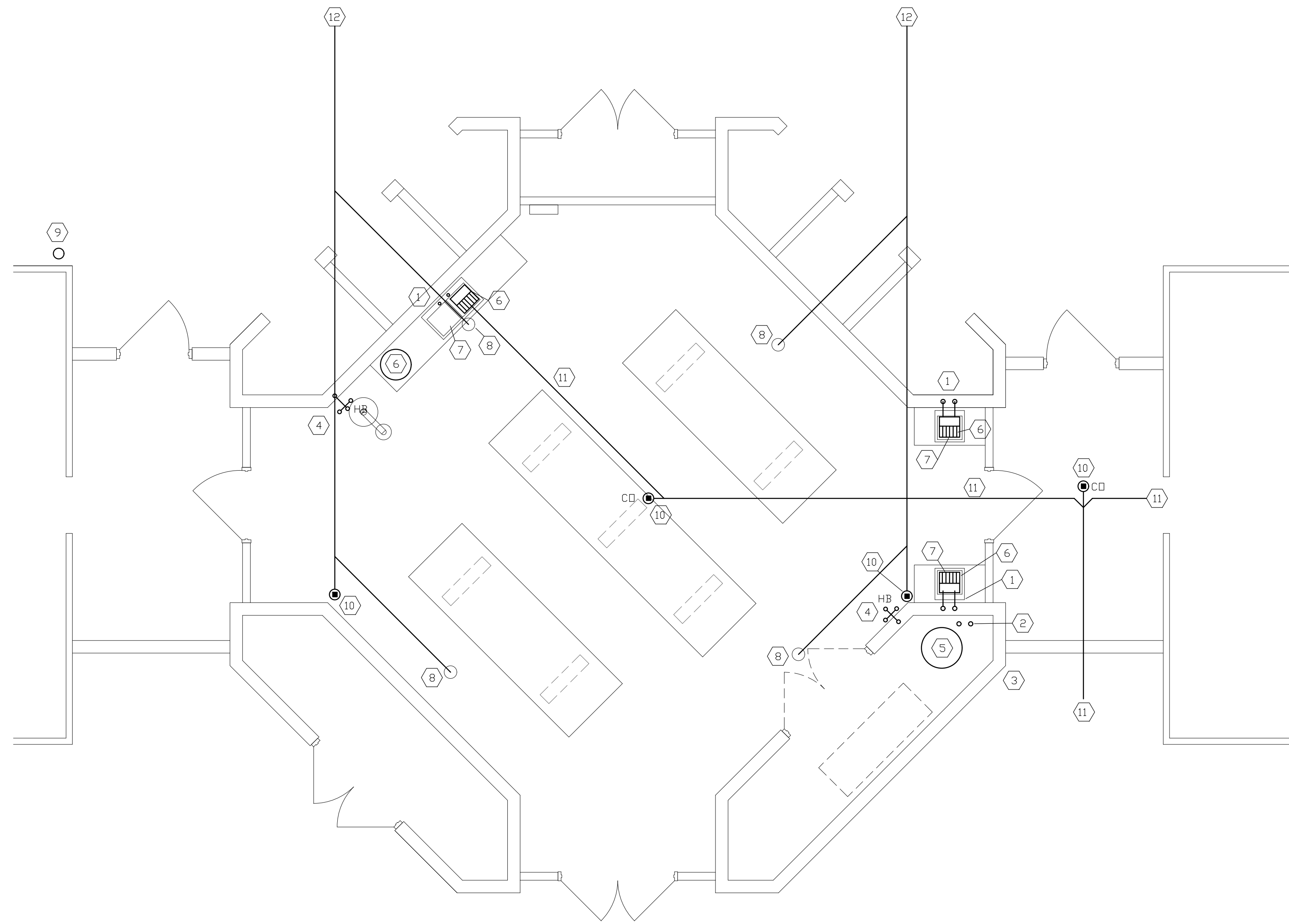
M3

OF
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COBURN AND ASSOCIATES, INC
MECHANICAL • ELECTRICAL • CONSULTING ENGINEERS
P.O. BOX 577 • HIGH SPRINGS, FLORIDA • PH 386-454-3748 • FAX 386-454-2652
CERTIFICATE OF AUTHORIZATION 3667

MECHANICAL SPECIFICATIONS

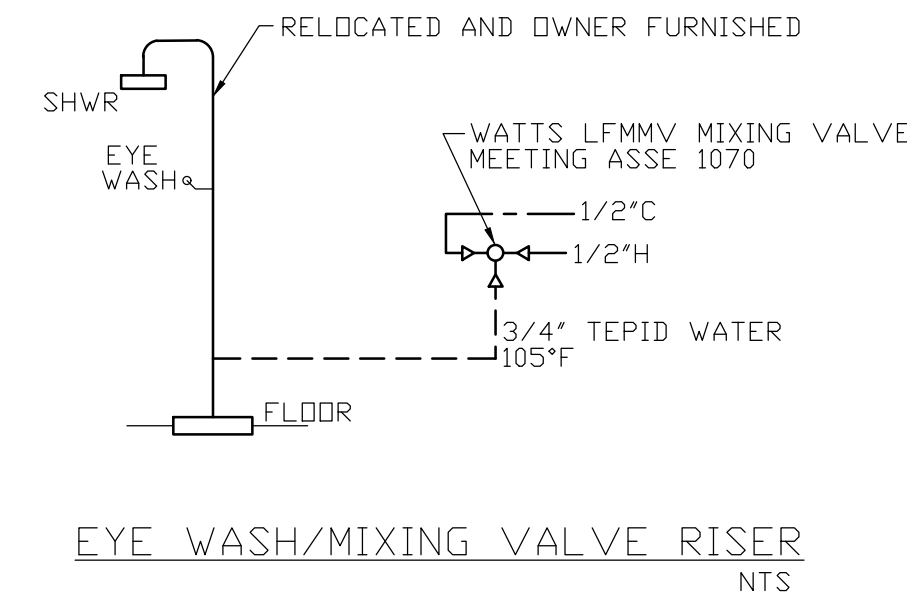
CONTRACT DOCUMENTS



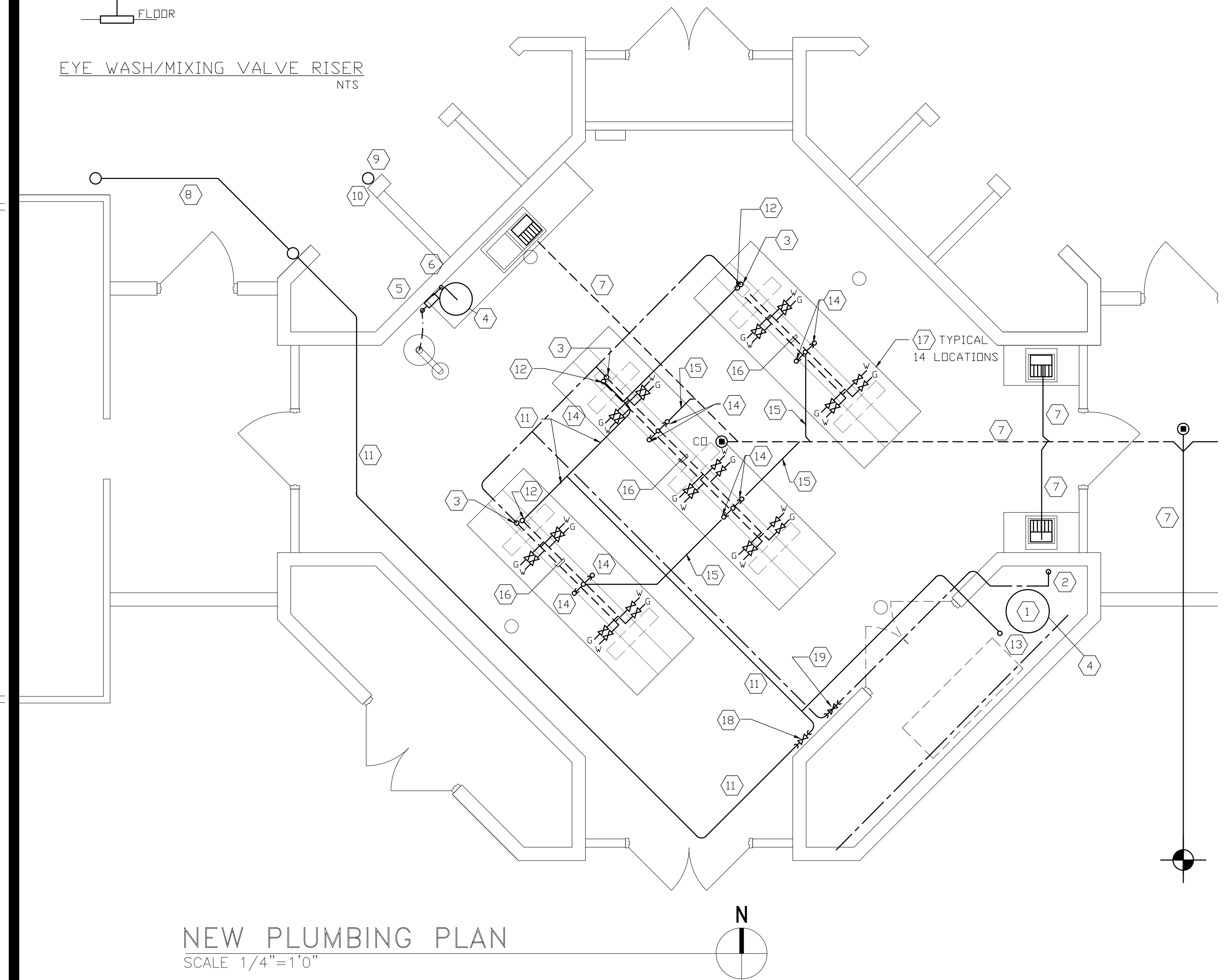
PLUMBING EXISTING/DEMO PLAN
SCALE 1/4"=1'0"

KEYED NOTES " PLUMBING EXISTING/DEMO PLAN

- 1 EXISTING HOT & COLD WATER SINK TO REMAIN.
- 2 EXISTING COLD WATER SUPPLY AND SHUTOFF TO REMAIN.
- 3 EXISTING HOT WATER SUPPLY TO REMAIN.
- 4 EXISTING HOSE BIBB TO REMAIN.
- 5 EXISTING WATER HEATER TO REMAIN.
- 6 EXISTING FLOOR SINK TO REMAIN.
- 7 EXISTING SINK TO REMAIN, INDIRECT WASTE TO FLOOR SINK
- 8 EXISTING SINK TO REMAIN, REMOVE GRATED TOP AND REPLACE WITH A FABRICATED COVER OF 1/4" STEEL CHECKERPLATE. SEAL WITH SILICON CAULK BOLTED COVER USING ORIGINAL BOLT CIRCLE
- 9 EXISTING NATURAL GAS VALVE & REGULATOR TO REMAIN.
- 10 EXISTING SANITARY CLEANOUT TO REMAIN.
- 11 EXISTING SANITARY LINE TO REMAIN.
- 12 TO EXISTING DRYWELL, NOTE DRAIN WILL NOT LONGER BE ACTIVE.



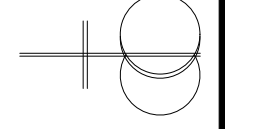
EYE WASH/MIXING VALVE RISER
NTS

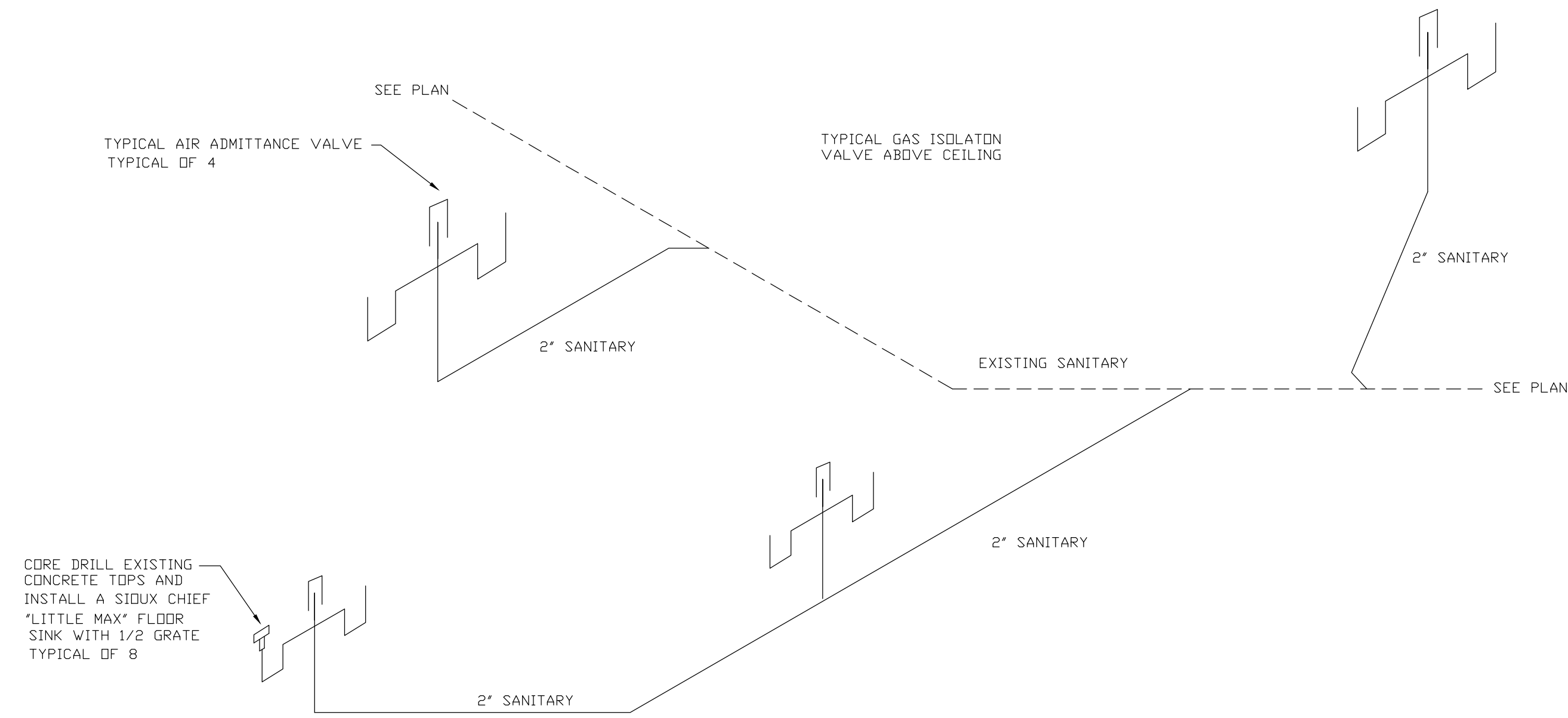


NEW PLUMBING PLAN
SCALE 1/4"=1'0"

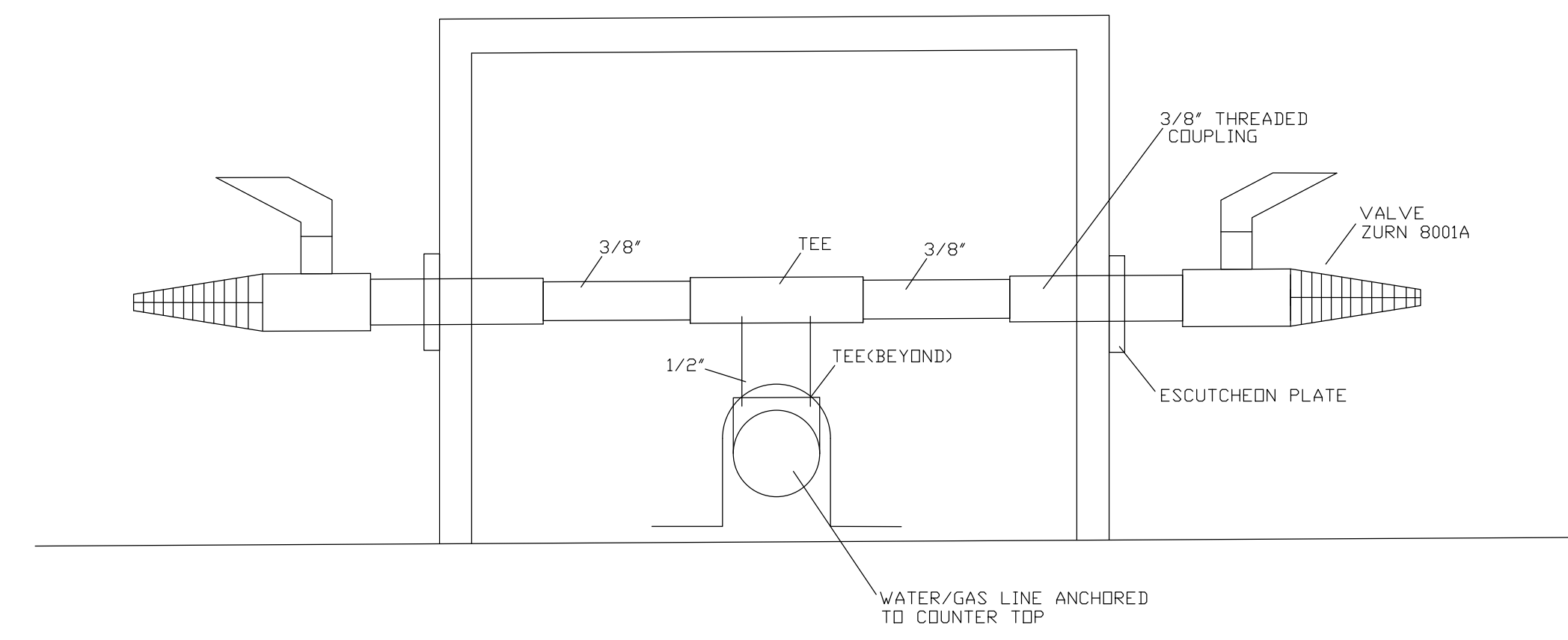
KEYED NOTES " NEW PLUMBING PLAN

- 1 CONNECT NEW 3/4" HOT WATER TO EXISTING HOT WATER.
- 2 CONNECT NEW 3/4" COLD WATER TO EXISTING COLD WATER SUPPLY.
- 3 NEW 1/2" COLD WATER DOWN TO SERVE TABLES, SEE DETAIL XX/XX.
- 4 EXISTING WATER HEATER TO REMAIN.
- 5 NEW THERMOSTATIC MIXING VALVE.
- 6 EXISTING H/C SUPPLIES, CONNECT NEW 1/2" H/C TO SERVE NEW MIXING VALVE.
- 7 EXISTING SAN, SEE DEMO PLAN.
- 8 NEW 3/4" GAS LINE BELOW GRADE.
- 9 TURN UP NEW GAS LINE AND INSTALL SHUT OFF VALVE.
- 10 ENTER BLDG AT +/- 10'-0"AFG (ABOVE ACCOUSTICAL CLG)
- 11 GAS LINE ABOVE ACCOUSTICAL CLG.
- 12 1/2" GAS LINE W/SHUTOFF DOWN TO LAB TABLES.
- 13 1/2" GAS LINE DOWN TO HOOD.
- 14 NEW FLOOR SINK IN TOP OF EXISTING LAB DESK EQUAL TO SIDUX CHIEF "LITTLE MAX" WITH 1/2 GRID TOP
- 15 NEW 2" BELOW SLAB, CONNECT TO EXISTING DRAIN
- 16 1/2" WATER AND 1/2" GAS LINES INSIDE CASEWORK UTILITY CHASE
- 17 GAS AND WATER LAB VALVES ZURN Z8001A WITH APPROPRIATE INDEX
- 18 1/2" QUARTER TURN BALL VALVE MOUNTED AT 48" AFF. PROVIDE A RED LAMINATED PLACARD WITH 1" WHITE LETTERS LABELLED " EMERGENCY GAS SHUTOFF VALVE"
- 19 1/2" QUARTER TURN BALL VALVE MOUNTED AT 48" AFF. PROVIDE A RED LAMINATED PLACARD WITH 1" WHITE LETTERS LABELLED " EMERGENCY WATER SHUTOFF VALVE"

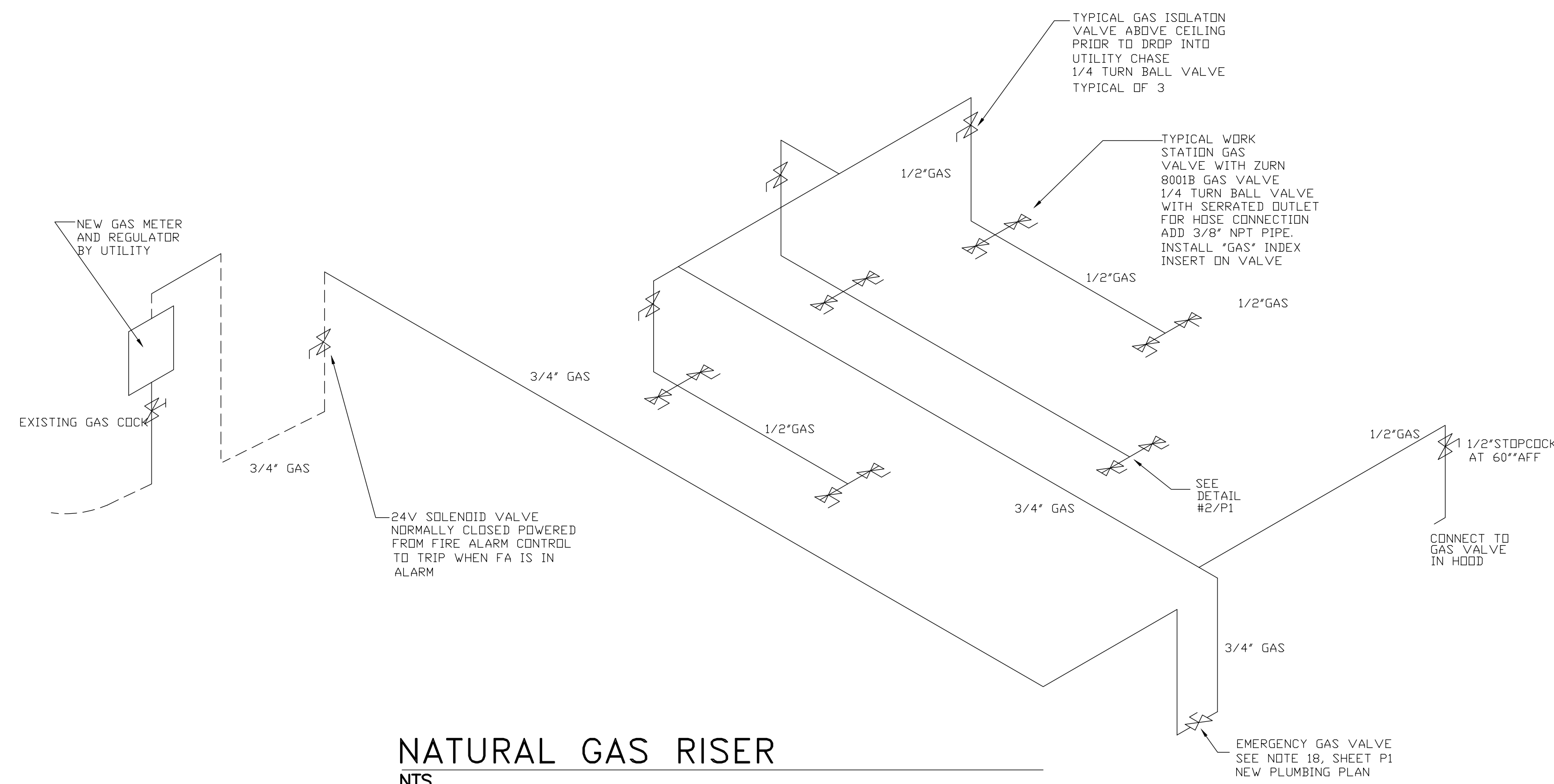




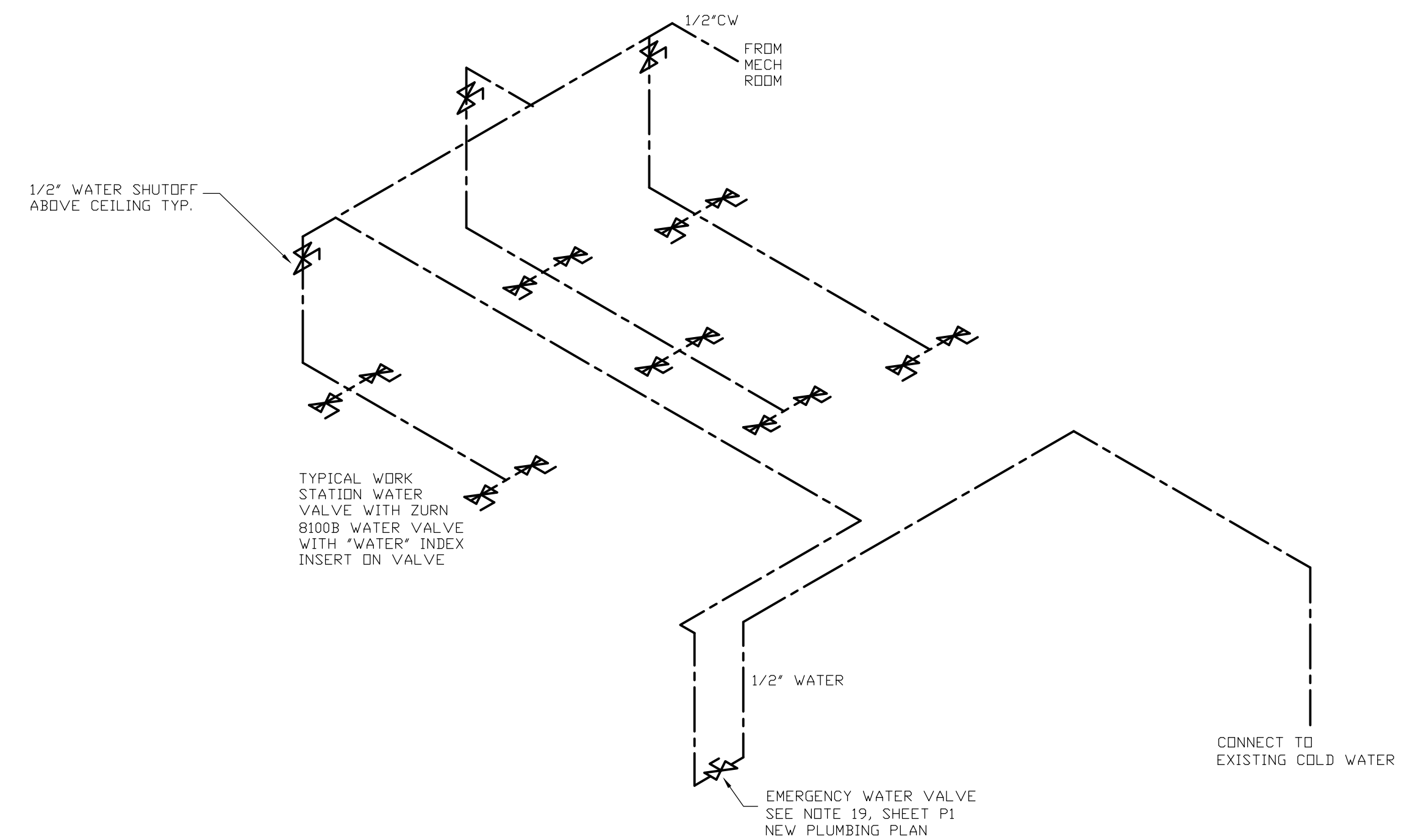
PARTIAL SANITARY RISER
NTS



TYPICAL WORKSTATION WATER/GAS VALVE DETAIL #1/P2
NTS

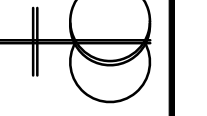


NATURAL GAS RISER
NTS



WATER SUPPLY RISER
NTS

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CERTIFICATE OF AUTHORIZATION 9687



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PLUMBING SPECIFICATIONS

A. It is the intent of these specifications to define the work and materials typically installed by a Plumbing Contractor. However, it is not intended to define a subcontract between the Plumbing Contractor and General. The General Contractor is responsible for the entire project and any questions regarding scope of work shall be directed to the General Contractor.

B. Work shall include all labor, materials, fixtures, equipment, tools and service necessary for installation, testing and adjusting of all mechanical systems shall be furnished and installed in compliance with the Drawings, Specifications, and any Addenda thereto.

C. Drawings and Specifications shall be understood to cover, according to their intent and meaning, complete mechanical systems. Work shown and not specified, or work specified and not shown shall be performed as though mentioned in both.

D. Minor items and accessories inferred as necessary for the complete and proper operation of any system shall be provided by contractor or subcontractor for such system whether or not they are specifically called for.

E. Before submitting a bid, the Plumbing Contractor is to coordinate with the utility company to ascertain, in detail, the division of work, and the extent of performance by the Utility Company shall be furnished and performed by the Plumbing Contractor.

F. All work shall be performed or installed in strict accordance with Florida Building Code 2018-Plumbing all applicable rules, regulations and codes of local state and Federal Governments having lawful jurisdiction, and each contractor and subcontractor shall be responsible for such compliance.

G. Fees for permits, inspections, patent use, royalties, etc. shall be paid by the contractor.

H. Furnish all equipment and personnel and conduct all tests required to secure approval of the installation.

I. Any repairs or changes required to secure the approval of the installation shall be done at no additional expense to the Owner.

J. All work shall be installed in accordance with the appropriate codes and satisfy the local inspector having jurisdiction.

K. Furnish all equipment and personnel and conduct all tests required to secure approval of the installation.

L. Any repairs or changes required to secure the approval of the installation shall be done at no additional expense to the Owner.

M. Upon completion of each part of the mechanical system, the contractor shall demonstrate to the Engineer that each item on that system is installed with proper covers, safeties, controls, etc., and that all are in proper working order.

N. A set of "red-lined" mechanical drawings shall be carefully maintained at the job site. Actual conditions or to be put on the drawings in red on a daily basis so the drawings will continuously show locations and routings of piping, ducts, grilles, equipment, valves, and any equipment specified on the drawings or in these specifications.

O. Equipment and materials shall be new and meet or exceed specification requirements.

P. All current model for which replacement parts are available shall be used.

Q. Acceptable manufacturers are listed, additional manufacturers may request approval for their products up to 10 days in advance of bid. Engineer may require supplemental information prior to accepting or requesting an alternate.

R. All work shall be in compliance with DSH regulations.

S. Shop drawings and product data shall be submitted on all equipment, fixtures, etc.

T. Submittals shall include all equipment to be installed by the subcontractor and all submittals must be made at same time.

U. Each piece of equipment shall have the Contractors review stamp prior to submittal.

V. The Engineer will review one submittal and one resubmittal; subsequent resubmittals may require a review charge to be paid by subcontractor.

W. Shop drawings shall be labeled in the same designation as the drawings.

X. Job conditions shall be inspected to determine prior to bidding in the following manner:

1. Site visit to determine:
 - a. Existing conditions.
 - b. How and where materials will be delivered and stored.
2. Special problems encountered during construction.
3. Examine all Contract Drawings and Specifications to determine:
 - a. Type of construction to be used.
 - b. How construction or work will affect the work of this Section.
 - c. Nature and extent of work of other trades.
4. Failure to determine existing conditions or nature of construction will not be considered as a basis for granting additional compensation.

Y. Installation

1. Contract Drawings show the arrangements and sizes of principal apparatus and devices to be provided under this Contract and connection thereto. These shall be followed as closely as actual building construction will permit.
2. Dimensions of work as indicated on Plans are not guaranteed to be as-built dimensions.
3. No measurements shall be scaled from Drawings and used as definite dimensions for layout or fitting work in place.
4. Layout of equipment, as shown on the plans, shall be checked and exact location determined by dimension if equipment approved by the Architect.
5. Consult the Drawings for all dimensions, locations of partitions, sizes of structural member, Foundations, etc.
6. Do not make final layouts until shop or equipment drawings are approved and job conditions verified.

Z. Excavation and Backfill:

1. Plumbing Contractor shall coordinate with General Contractor to determine the extent or has work regarding excavation and backfill.
2. Rough-in:
 1. Contractor shall rough-in for all equipment, fixtures, etc., in building whether or not such equipment is furnished by this Contractor or by Owner.
 2. Determine in advance the location and size of all openings and chases necessary for proper installation of all work and have openings and chases provided during construction.
 3. Install all inserts for hangers and supports of mechanical work and equipment work as general construction progresses.
 4. Rough-in openings in masonry or stud walls shall be cut, not broken or chiseled.
 5. Sleeves shall be required at all points where piping passes through concrete walls, slabs or masonry walls; sleeves installed below grade or where subject to high water conditions shall be installed watertight.
3. Coordination:
 1. Work shall be coordinated between all Contractors, Subcontractors, Installers, Suppliers, Trades, etc., to insure a neatly fitted installation.
 2. Determine the nature and extent of the work of others.
 3. Eliminate interferences.
 4. Maintain maximum headroom and clearances.
 5. Any interference which develops or is foreseen and cannot be resolved by the affected trades, etc. shall be handled as follows:
 - a. Cease installation of that portion of the work which is in conflict as no additional compensation will be allowed for any relocation, etc.
 - b. Continue work only on other portions of the work which are not in conflict.
 - c. Notify the Architect immediately.
 - d. Architect's decision shall be final as to any relocation, rerouting, removal, etc.
 - e. No additional compensation will be allowed for removal, relocation, repairs or changes required by interferences.
4. Clear away all debris, surplus materials, etc., resulting from work on operations, leaving job and equipment in clean first-class condition.
5. Where factory finish is provided on equipment, all marred or damaged surfaces shall be touched-up or refinished hereunder as approved.
6. All plumbing fixtures shall be thoroughly cleaned of all plaster, stickers, rust stains, and other foreign matter, and be left ready for use.
7. Surfaces of all floor drains, cleanouts and other equipment shall be cleaned and left in first-class condition.

AA. CHLORINATION OF DOMESTIC WATER LINES

- A. Disinfection of all water piping which shall carry potable water or any other piping connected thereto which is not separated by a back-flow preventer.
- B. Disinfection shall be chlorine, either in the form of hypochlorite solution or in the form of compressed gas applied through an approved chlorinator.
- C. After completion of all tests, repairs, and repairs, all water supply systems shall be thoroughly flushed with water to remove sediment and/or debris.
- D. Begin disinfection only after flushing system.
- E. The system shall be filled with a solution containing 50 parts per million available chlorine and allowed to stand for twenty-four hours, or as required by local authorities, whichever is greater.
- F. During Chlorination all valves and equipment shall be operated to insure that chlorine reaches all parts of the system.
- G. Following disinfection all treated water shall be flushed from the system through its extremities until the quality of water delivered is comparable with the quality of the public water supply and satisfactory to the public health authority having jurisdiction.
- H. Disinfection and flushing shall be repeated if samples taken daily over a period of three days show that water quality is not being maintained.
- I. Samples shall be taken only from taps located and installed in such a manner that they will not contribute any contamination.
- J. Samples shall not be drawn from hydrants or through unsterilized hose.
- K. If disinfection and flushing has been repeated three times and water quality cannot be maintained, the Architect shall have the authority to require disassembly of piping as he shall deem necessary to determine the cause of contamination.
- L. Any disassembly, cleaning or repair shall be at no additional expense to the Owner.
- M. Disinfection, flushing and testing shall be repeated upon reassembly of the piping.

PIPE AND FITTINGS

A. Refer to "PIPING SCHEDULE" on drawings.

B. Any manufacturer engaged in the production of pipe, fittings and associated materials and who test, inspect and certify that said materials meet or exceed the ASTM designation for that material shall be acceptable.

C. Inspection for Underground Piping:

1. Examine areas to receive underground piping for:
 - a. Complete excavation to elevations and slopes indicated.
 - b. Obstructions which would interfere with drainage system installation.
2. Begin work only when conditions are satisfactory.

D. Inspection for above-Ground Piping:

1. Examine areas to receive piping for:
 - a. Obstructions.
 - b. Work to be done prior to other construction.
 - c. Work of other trades in other areas.
2. Begin work only when conditions are corrected satisfactorily.

E. Installation of Underground Piping

- A. Excavation
 - a. Excavate trenches of sufficient width for proper installation of pipe.
 - b. Sheet and brace trenches as necessary to protect workmen and adjacent structures.
 - c. Comply with current OSHA standards.
2. Final grading of trench
 - a. Perform final grading of trench bottoms by hand tools; carry machine excavation only to such depth that soil bearing for pipes will not be disturbed.
 - b. Grade bottom of trenches evenly to insure uniform bearing for all piping.
 - c. Cut holes as necessary for joint making.
 - d. Keep trenches free from water while construction is in progress.
 - e. Use surveyor's level to establish elevations and grades.
 - f. Machine excavation shall be held a sufficient distance from foundations and footings.
 - g. Provide and maintain barricades and temporary bridges around excavations as required for safety.
 - h. Water lines may be benched above sanitary lines in same trench if they are 18 inches or more above the sanitary line.
 - i. Minimum bury depth for water piping shall be 24 inches.
 - j. Grade horizontal drainage 1/4 inch per foot minimum.
 - k. Install same type material specified for the inside building to 8 feet outside building.
3. Backfill:
 - a. Backfill for all sewer lines shall be placed in accordance with manufacturer's printed instructions.
 - b. Backfill trenches only after piping has been inspected.
 - c. The backfill below paved areas and walks shall be brought to within 6 inches of finished grade; the remaining six inches shall be backfilled with clean topsoil.
 - d. The backfill below sodded or seeded areas shall be brought to within 6 inches of finished grade; the remaining six inches shall be backfilled with clean topsoil.
 - e. Provide and place any additional fill material from off the site as may be required for backfill.

F. Installation of above-Ground Piping:

1. Pipe supports.
 - a. Support piping as specified in Section 15094 for permanent installation.
 - b. Pipe shall be adequately supported during construction with blocking or slings to prevent injury to personnel or damage to equipment or materials.
2. Exposed piping
 - a. Run exposed piping true and level.
 - b. Run vertical exposed piping plumb.
 - c. Run exposed piping with as few elbows and bends as possible.
 - d. Group piping wherever practical at common elevations.
 - e. Install concealed pipes close to building's structure to keep furring to a minimum.
 - f. Slope water piping 1 inch in 40 feet and arrange to drain at low points.
 - g. In closed systems, equip low points with 3/4 inch drain valves and hose nipples.

PLASTIC PIPE AND FITTINGS

A. Domestic Water Supply - All

1. CPVC PER ASTM D2684
2. Joints
 - a. GLUED PER MANUFACTURERS RECOMMENDATIONS
3. Fittings
 - a. CPVC

B. Vent piping (Above grade).

1. Piping shall be PVC.
 - a. Polyvinyl Chloride (PVC) - ASTM D-1784-60T
 - i. Schedule 40
 - ii. Type 1, Grade 1
 - b. Pipe shall bear NSF seal and ASTM designation
2. Joints
 - a. Bonded Joints using adhesive per manufacturer's recommendations
3. Fittings
 - a. PVC - ASTM D-2665-69.
 - b. ABS - ASTM D-2661-69.

C. Sanitary piping

1. PVC
 - a. Schedule 40
 - b. Type 1, Grade 1.
 - c. Pipe shall bear ASTM designation and NSF seal
2. Joints
 - a. Bonded joints using adhesive per manufacturer's recommendations
3. Fittings
 - a. PVC - ASTM D-2665-69

TRAPS

A. General

1. All fixtures shall be trapped according to the Florida Building Code - Plumbing
2. All traps shall be the same size as the pipe in which they are installed or as sized on the Drawings.
3. All traps above grade shall have a clean-out plug in the bottom of the trap.
4. All traps above grade shall be PVC
5. All traps below grade shall be PVC
6. No trap below grade shall be less than 2 inches.
7. No Fixture shall be double trapped.

SHOCK ABSORBERS

A. Furnish and install shock absorbers on all domestic water piping as shown on the drawings, and/or specified in this section.

B. Acceptable Manufacturers

1. Wade
2. Josan

C. Description

1. Heavy duty casing
2. Minimum burst pressure - 4500 psig.
3. Nested bellows with built in stop.
4. Operating temperature 100 to 300 degrees F.
5. Permanently sealed charge of non-combustible gas.
6. All stainless steel.
7. Designed and built in accordance with plumbing and drawing standard PBI-WH20.

D. Model Numbers (Zurn numbers used for reference only)

1. SS-1, MODEL 1250 - A - 1/2"
2. SS-2, MODEL 1250 - B - 3/4"
3. SS-3, MODEL 1250 - C - 1"
4. SS-4, MODEL 1250 - D - 1 1/2"
5. SS-5, MODEL 1250 - E - 1"
6. SS-6, MODEL 1250 - F - 1"

PIPE HANGERS AND SUPPORTS

A. All piping shall be supported by pipe hangers, clamps, clips or supports as specified in this Section.

B. All clevis type hangers shall have a minimum of 1 1/2 inches of vertical adjustment by using turnbuckles and/or threaded rods.

C. All adjustments shall be positively secured by a locknut or setscrew.

D. Hangers shall support the pipe size for which they are manufactured.

E. Acceptable Manufacturers

1. Grinell
2. Fee and Mason

F. All clamps, hangers, clevis, etc. shall be steel.

G. Pipe hangers in direct contact with copper shall be copper or lead plated, or of an approved dielectric material.

H. Installation:

1. All piping shall be supported from structural building members, i.e. block, beams, columns, girders, floor joists, etc.
2. Piping shall not be supported from ceiling tile or grids, conduit, mechanical equipment, ductwork or non-structural steel.
3. Perforated strapping may be used only for piping 3/4 in. or smaller and only when concealed in walls or ceilings.
4. Hangers for piping run flush along the walls shall be stamped steel straps similar to conduit straps for pipe sizes two (2) inches and smaller.
5. Hangers for piping run flush along the walls shall be steel wall brackets with steel clevis type hangers and threaded rod supports for pipe over two (2) inches.
6. Hangers for piping not run along walls shall be clevis type hangers with threaded rod supports for all piping over 3/4 inches.

I. Spacing:

1. Vertical runs of piping not over 15 feet long shall be supported by hangers placed not over one foot from elbows or connecting horizontal run.
2. Hangers shall be placed so as to prevent sag and permit proper drainage.
3. Hangers shall not be placed at more than the maximum distances shown on the Table below

Pipe Size	Max. Span - Ft.
1/2 and 3/4	6
1 and 1-1/4	8
1-1/2, 2, 2-1/2	10
3 and 4	12
5 and 6	14
8 and larger	16

4. Concentrations of valves and fittings will require closer spacing.

J. Hanger Attachments:

1. Pipe hangers shall be attached to structural steel by heavy steel clamps.
 - a. Clamps shall be bolted to steel or welded.
2. Pipe hangers or clamps shall be attached to walls by means of expansion bolts (shields).

UNIONS

A. Size

1. All unions shall be the same size as the line in which they are installed unless noted otherwise.

B. Location

1. Unions shall be located between the shut-off valve and each of the following:
 - a. Inlet and outlet of all water heaters
 - b. Lavatories and sinks
 - c. Water coolers
 - d. Water closets and toilets
 - e. Inlet and outlet of cooling coil
 - f. Inlet and outlet of pumps
2. Where final fixture connection is made by compression-type fitting, unions shall not be required.
3. This exception does not apply to water heater.

C. Acceptable Manufacturers

1. Crane
2. Jenkins
3. Vogt
4. Stockman

D. Unions for 2-1/2 inches and smaller copper

1. Brass ground joints, brass body
2. ISOH rated
3. Sweat to threaded to match the system in which they are installed

E. Install in locations where wrenches can be used on each half of the union with enough clearance for at least 180 degrees of rotation on a 6' pipe wrench.

VALVES, COCKS AND FAUCETS

A. Hot, cold, and/or tempered water

1. Shutoff valves above grade
 - a. Ball Valves
2. Shutoff valves below grade
 - a. Ball Valves
 - i. Install in fiberglass box with cover
 - b. Drain valves
 - c. Ball Valves

B. Acceptable Manufacturers

1. Crane
2. Vogt
3. Sterling
4. Nilaco

C. Bronze Ball Valves:

1. 3/4" and smaller
 - a. Stainless Steel, Full Port Ball, 1/4 turn.
 - b. 200 psi, water, oil, gas
 - c. Threaded ends
2. 1/2" and smaller
 - a. Stainless Steel, Full Port Ball, 1/4 turn.
 - b. 200 psi, water, oil, gas
 - c. Threaded ends

D. Hose Bibbs

1. 3/4" Female thread inlet
2. 3/4" Male thread hose outlet
3. Rough chrome plated
4. Loose-key type
5. Provide with vacuum breaker
6. Model Number:
 - a. Equal to Chicago No. 3877-ER2, Nilco 763-LS or equal
7. Provide with vacuum breaker.

E. Check Valve

1. Swing check valve
2. Screwed ends and cap
3. Bronze ground disc
4. 200 lb WDG
5. NIBCO T413 or equal

F. Wall Hydrant WH

1. Fully recessed with 'key' operated cover.
2. 3/4" female inlet
3. 3/4" male threaded hose outlet
4. Rough chrome plated
5. Vacuum breaker.

PRESSURE - TEMPERATURE RELIEF VALVE

A. Supply a pressure relief valve on each hot water heater and hot water booster heater tank.

B. Valve size, pressure, and temperature rating shall be as specified by the tank manufacturer, except that in no case shall the valve be smaller than 3/4 inches inlet and outlet.

C. Valve shall have a handle for manual operation and testing.

D. Valve shall be cast brass or bronze.

E. Pipe the outlet of the pressure-temperature relief valve to outside of building and terminate 2' above grade or per local code.

INSULATION

A. Provide piping insulation on all piping designated on the "Piping Schedule" shown on drawings and per Florida Energy Code. Min R4 per inch.

1. Provide insulation on the first 8 feet of cold water piping or from the heat trap to the inlet, whichever is less.

B. Acceptable Manufacturers

1. Johns-Manville
2. Certainteed

C. Fiberglass insulation

1. Rigid lightweight heavy density fiberglass with jacket.
2. Temperature applications to 650 F.
3. Insulation jacket and adhesive shall be tested under procedure ASTM E-84, NFPA 255, and UL 723, not exceeding
 - a. Flame spread - 25
 - b. Smoke developed - 50
4. Equal to Johns-Manville Micro-Lok 650 AP-T.

D. Closed Cell Rubber Insulation

1. Closed cell, elastomeric tubular pipe insulation.
2. Tested under procedure ASTM E-84, NFPA 255, and UL 723 not exceeding
 - a. Flame spread - 30
 - b. Smoke density - 100.
3. Adhesive
 - a. Air drying contact cement
 - b. Equal to Johns-Manville "Aerotube Elastomeric Pipe Insulation."

E. Install insulation only after pipe has been thoroughly inspected and tested and accepted by the Architect, Engineer and State or local inspectors.

F. All surfaces to receive insulation shall be cleaned of all dirt, grease, and moisture prior to installing any insulation.

G. Installation of Fiberglass Insulation:

1. All insulation shall be continuous through wall and ceiling openings.
2. Vapor barrier jackets shall be used on piping except domestic hot water.
3. Hangers, supports, anchors, etc., that are secured directly to cold surfaces must be adequately insulated and vapor sealed to prevent condensation.
4. Metal shields shall be applied between hangers or supports and the pipe insulation.
5. Shields shall be formed to fit the insulation and shall extend up to the centerline of the pipe and a minimum of 9 inches long.
6. Shields shall be 16 gauge aluminum.
7. Fittings shall be covered equivalent density insulation and covered with preformed PVC insulation fitting covers.
 - a. Wrap fittings with insulation.
8. Hangers for piping run flush along walls shall be preformed cover in place, tape or tack.

H. Installation of Closed-Cell Rubber:

1. Make all cuts neatly with a razor blade or sharp knife.
2. All longitudinal cuts shall be sealed with adhesive.
3. All butt joints shall be made neatly and sealed with adhesive.
4. Tape shall not be allowed on joints or seams.
5. Insulation shall be applied in a relaxed state, not stretched or crushed.
6. Fittings shall be insulated by fabricating tees, elbows or crosses as required from the tube insulation as described in manufacturer's literature.
7. Valves shall be insulated up to the packing nut.
8. All insulation on exposed piping shall receive two (2) coats of paint, the same color as the wall against which it is mounted.
9. Joints shall be sealed with adhesive as recommended by the manufacturer.

FLDDR DRAINS

A. Acceptable Manufactureres

1. Josan
2. Josan
3. Zurn

B. Floor Drains:

1. Cast Iron floor drain with integral clamping collar.
2. Seepage openings.
3. Heavy duty grate, with vandalproof screws.
4. Square top, polished brass.
5. Adjustable top.
6. 4-inch outlet unless otherwise noted on Drawings.
7. Model - equal to Wade, Series W - 1390.

C. Installation

1. Floor drains shall be installed in the locations show on Plans.
2. Care shall be taken that rim of floor drain is not higher than finished floor in order to prevent "puddling" of water around the drain.
3. Floor drain top shall be flush with finished floor.
4. Hub drains shall extend 1 inch above finished floor per details.

CLEANOUTS AND ACCESS COVERS

A. Provide cleanouts as shown on the Drawings and/or as required by FBC-2018 Plumbing.

B. Acceptable Manufacturers

1. Wade
2. Josan
3. Zurn

C. Floor Cleanouts:

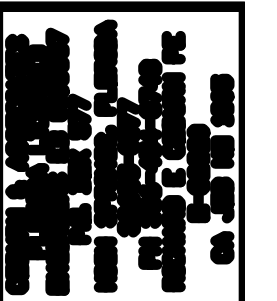
1. Same size as drain pipe through 4 inches.
2. Adjustable housing to match finished floor.
3. Heavy duty top.
4. Nickel brass secured cover.
5. Ferrule as required to match soil pipe.
6. Cast iron.
7. Cover shall be marked "C.O."
8. Model Number:
 - a. Synthetic floor covering:
 - i. Wade W-7030-D Series or equal
 - ii. Finished slab no covering:
 - i. Equal to Wade W-7030 Series
 - ii. Terrazzo Finish:
 - i. Wade W-7010-U Series, or equal.
 9. Concealed Cleanouts:
 - i. Cleanouts in crawl space or in unfinished mechanical rooms.
 - ii. Cast iron cleanout tee on T-wall with ferrule fitting and neoprene seal raised plug head.
 - iii. Same size as drain pipe through 4 inches.
 - iv. Position cleanout plug for easy access by electric eel.
 10. Model Number:
 - a. Cleanout ferrule.
 - i. Wade W-8530-B Series or equal.
9. Exposed Wall Cleanouts
 - i. Same size as pipe.
 - ii. Polished chrome cleanout cover over wall opening.

F. Install all cleanouts and coverplates flush with the finished floor in which they are installed.

G. Any cleanout which presents a tripping hazard due to improper installation shall be removed and reinstalled.

DOMESTIC WATER HEATERS - ELECTRIC

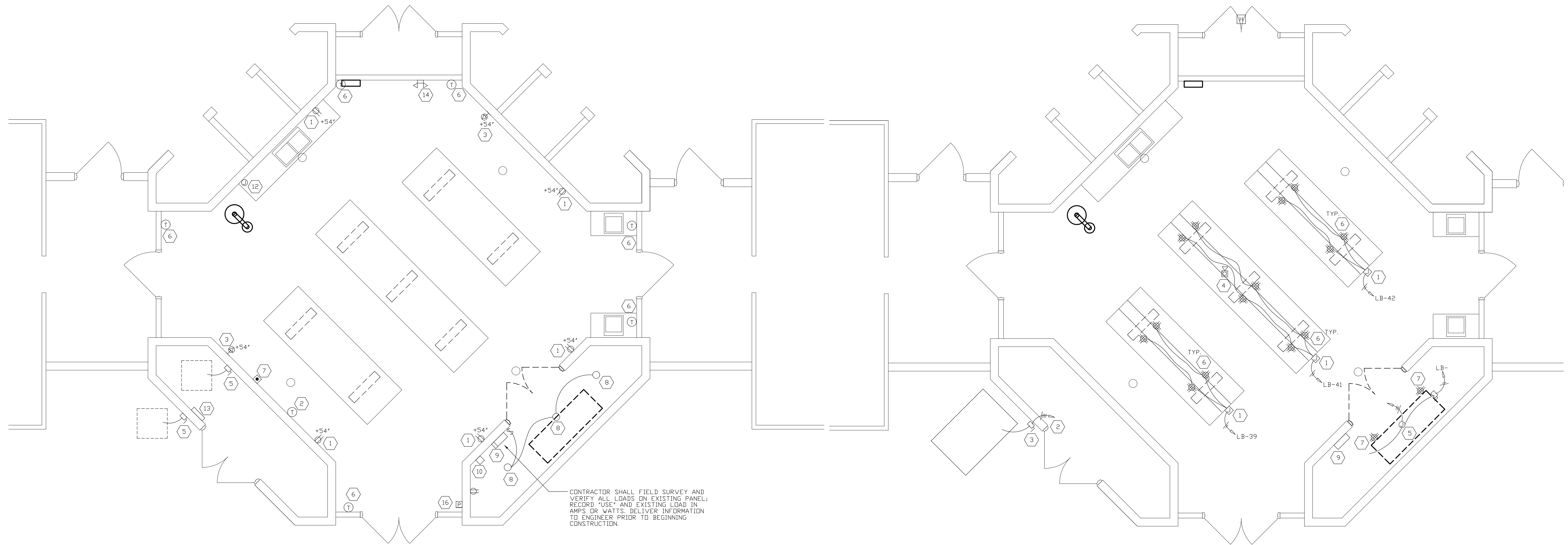
A. Water heaters are existing.




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P2

OF SHEETS



ELECTRICAL EXISTING/DEMO PLAN
SCALE 1/4"=1'0" 

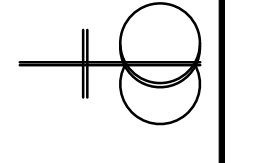
NEW ELECTRICAL POWER PLAN
SCALE 1/4"=1'0" 

ELECTRICAL DEMO PLAN

- 1 EXISTING RECEPTACLE TO REMAIN.
- 2 EXISTING TEMPERATURE SENSOR TO BE REMOVED.
- 3 EXISTING SPECIAL PURPOSE OUTLET TO REMAIN.
- 4 EXISTING RECEPTACLE, REPLACE WITH FLUSH MOUNTED.
- 5 EXISTING DISCONNECTS TO BE REPLACED.
- 6 EXISTING THERMOSTAT TO BE REPLACED BY MECHANICAL.
- 7 VOICE/AUDIO JACK TO REMAIN.
- 8 BARE BULB LAMP HOLDER TO BE REMOVED.
- 9 400A, 3Ø PANEL TO BE REPLACED WITH NEW 400A PANEL.
- 10 TIME CLOCK TO REMAIN.
- 11 EXISTING FA PULL STATION TO REMAIN.
- 12 EXISTING WATER HEATER TO REMAIN.
- 13 SIEMENS CONTROL TO REMAIN.
- 14 EXISTING EM LIGHT TO BE REMOVED.
- 15 EXISTING FA HDN TO REMAIN.
- 16 EXISTING PULL STATION TO REMAIN.

ELECTRICAL POWER NOTES - NEW CONSTRUCTION

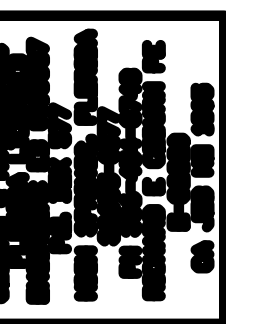
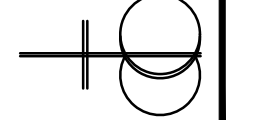
- 1 J-BOX AT CLG FOR NEW POWER DRDP TO NEW LAB TABLE RECEPTACLES.
- 2 NEW CIRCUIT TO NEW PANEL LB, CKT 24,26,28.
- 3 CONNECT PACKAGED UNIT TO NEW CIRCUIT, INSTALL NEW NEMA 3R, 100A, FUSED DISCONNECT, FUSED PER A/C NAMEPLATE.
- 4 CEILING MOUNTED 110cd HDN/STROBE BY OWNERS VENDDR.
- 5 TWO (2) 120V CIRCUIT TO NEW HOOD, ONE CKT FOR RECEPT (7) ONE CKT TO LIGHTS & ALARM.
- 6 TYPICAL OF 14, QUADPLEX RECEPTACLES WITH USB CHARGING PORTS MOUNTED IN FACE OF UTILITY TUNNEL, COORDINATE EXACT LOCATION WITH GAS & WATER VALVES.
- 7 QUADPLEX RECEPTACLES FURNISHED WITH LAB HOOD; CONNECT TO J-BOX (5), CIRCUIT TOGETHER TO ONE CKT.
- 8 HOOD FURNISHED W/ START STOP SWITCH WIRE TO FAN MOTOR ON ROOF.
- 9 NEW 400A, 208V, 3Ø PANEL WITH 400A SHUNT TRIP BREAKER, SHUNT TRIP FROM EMERGENCY SHUTDOWN PUSH BUTTON, SEE SCHEDULE AND RISER.



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E1

OF SHEETS

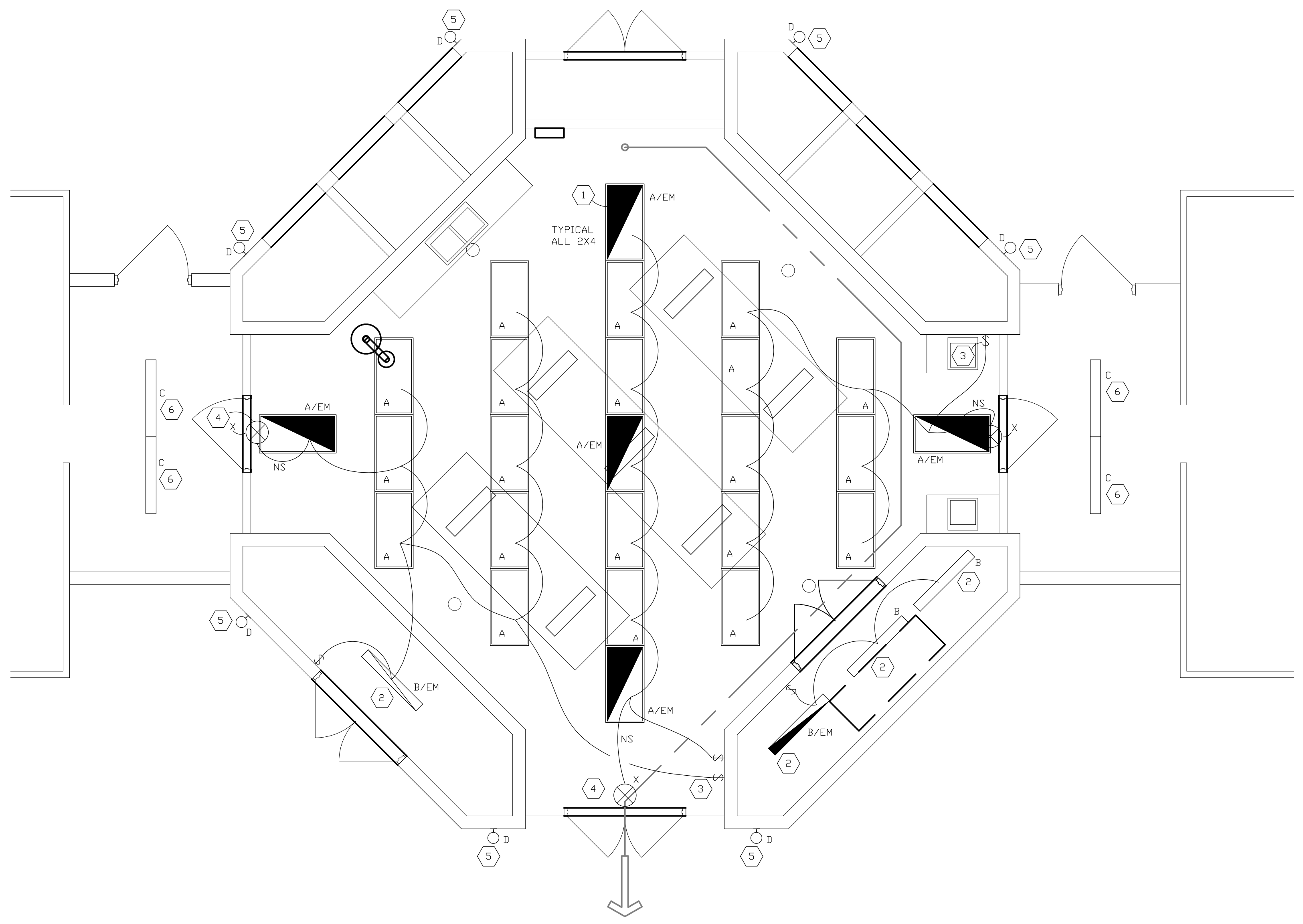


ELECTRICAL LEGEND

- FLUORESCENT FIXTURE MULTITUBE-RECESSED OR SURFACE MTD. 24X48
"a" = FIXTURE TYPE DESIGNATION, SEE SCHEDULE - TYPICAL ALL LIGHT SYMBOLS
- FLUORESCENT FIXTURE MULTITUBE-RECESSED OR SURFACE MTD. 24X24
- FLUORESCENT FIXTURE MULTITUBE-WALL OR CEILING MTD.
- FLUORESCENT FIXTURE MULTITUBE-WALL MTD.
- FLUORESCENT FIXTURE SINGLE TUBE-SURFACE MTD.
- FLUORESCENT FIXTURE SINGLE TUBE-WALL MTD.
- SURFACE MOUNTED FIXTURE PER SCHEDULE, "a" = FIXTURE TYPE
- RECESSED FIXTURE PER SCHEDULE, "a" = FIXTURE TYPE
- WALL MOUNTED FIXTURE PER SCHEDULE, "a" = FIXTURE TYPE
- EXIT LIGHT-DIRECTION ARROW(S) AS INDICATED-SURFACE OR WALL MTD.
- EXIT LIGHT W/EM HEADS- ARROW(S) AS INDICATED-SURFACE OR WALL MTD.
- EMERGENCY BATTERY OPERATED LIGHT, SEE SCHEDULE = FIXTURE TYPE
- REMOTE POWERED TWIN HEAD EMERGENCY LIGHTS WEATHERPROOF
- TOGGLE SWITCH UP 42" UNLESS NOTED OTHERWISE
- TOGGLE SWITCH UP 42" UNLESS NOTED, 3 WAY, 4 WAY
- TOGGLE SWITCH UP 42", P= PILOT/ K= KEY OPERATED
- TOGGLE SWITCH, MOTOR RATED WITH THERMAL PROTECTION
- FAN-LIGHT SWITCH LIGHT FAN-ON-TIME DELAY OFF
- ON-OFF SWITCH WITH WITH LOW VOLTAGE DIMMER
- MOTION SENSOR ON/OFF W/ ON OVERRIDE
- LINE VOLTAGE DIMMER
- FIXTURE WITH BATTERY PACK AND INVERTER
- NIGHT LIGHT
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE GFI
- QUADRUPLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE AS NOTED
- FLOOR OUTLET
- JUNCTION BOX
- THERMOSTAT OUTLET HUMIDISTAT OUTLET
- DATA OUTLET UP 12" UNLESS NOTED- EACH SYMBOL = 2 CAT5 CABLES AND TWO RJ45 JACKS IN SINGLE GANG BOX = (4) CABLES AND 4 JACKS DOUBLE GANG BOX, (6) EACH ETC.
- TELEPHONE OUTLET (VOICE ONLY) UP 12" UNLESS NOTED/ FLOOR OUTLET
- DISCONNECT, 3=NO. OF POLES, 30=FRAME SIZE, 15=FUSE, X=NO FUSE
- MAGNETIC MOTOR STARTER DR CONTACTOR, 2= NEMA SIZE
- COMBINATION STARTER AND DISCONNECT
- ELECTRIC MOTOR-VOLTAGE, PHASE & SIZE AS SHOWN
- ELECTRICAL LIGHTING OR APPLIANCE PANEL BOARD
- ELECTRICAL DISTRIBUTION OR POWER PANEL BOARD
- CURRENT TRANSFORMER CABINET PER UTILITY SPECS
- UTILITY METER (PER UTILITY CO SPECS)
- TELEPHONE TERMINAL CABINET DR BOARD-SIZE AS NOTED
- SIGNAL DR SOUND CABINET DR BOARD-SIZE AS NOTED
- 4'X8"/3/4" TELEPHONE TERMINAL BOARD W/ GROUND AND RECEPTACLE
- CONDUIT RUN CONCEALED IN WALL DR CEILING
- CONDUIT RUN UNDERFLOOR DR UNDERGROUND
- HOME RUN TO PANEL, LONG LINE=NEUTRAL OR GND, SHORT LINE(S)=CIRCUIT(S)
- ELECTRIC HEATER
- PHOTOCCELL
- DUCT MOUNTED SMOKE DETECTOR
- REMOTE TEST STATION WITH TEST SWITCH, LED AND LOCAL HORN
- WEATHERPROOF
- GROUND FAULT INTERRUPTER
- MTD. UP 48" DR ABOVE COUNTERTOP BACKSPASH
- INDICATED A NON-SWITCHED CIRCUIT
- T.V. OUTLET

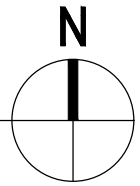
SPECIFIC NOTES, SHEET E2

- 1 EXISTING LIGHT FIXTURE TO BE REPLACED WITH NEW TYPE A, LED FIXTURE, REUSE EXISTING CIRCUITS AND SWITCHING. WORK MAY REQUIRE ADDING ADDITIONAL NON-SWITCHED HOT LEG FOR EM BALLASTS.
- 2 REMOVE EXISTING LAMP HOLDERS AND INSTALL NEW TYPE 'B' LED FIXTURE.
- 3 EXISTING SWITCH LOCATION; REPLACE DEVICE.
- 4 EXISTING EXIT FIXTURE TO BE REPLACED.
- 5 NEW TYPE 'D' WALL PACK ON EXISTING BDX, USE EXISTING CIRCUIT.
- 6 REPLACE 4' FIXTURES WITH NEW TYPE 'C' FIXTURE, USE EXISTING CKT.



ELECTRICAL LIGHTING PLAN

SCALE: 1/4"=1'0"



SYMBOL	TYPE			MANUFACTURER		MOUNTING			LAMPS	VOLTS	REMARKS
	FLOOR.	INCAN.	OTHER	TITLE	CATALOG NO.	REC.	SUR.	OTHER			
A			LED	HE WILLIAMS	50GS24-L60/840-S-AF12125-120	X			56W LED		2X2X LAY-IN TROFFER 6000 LUMEN
B/EM			LED	HE WILLIAMS	75-4 L30-840-120 101VLP-120		X		23W LED	120	WG-7511-LED 3000 LUMEN EM-ADD EM/10WLP
C				HE WILLIAMS	91-4-138-EBI-UNV		X		(1) 32T8	120	4' SURFACE VANDAL RESISTANT
D			LED	HE WILLIAMS	WPSP-L26-850-120			WALL	24W LED	120	2600 LUMEN
E			LED	INTENSE	RPH-1100-408/1C43CSF	X			14.2W LED	120	
X			LED	BEGHELLI	PPXRSAAT		X		LED	120/12	SURFACE EXIT W/ DIRECTION KNOCKOUTS

NOTE: WHERE FIXTURE HAS AN 'EM' DESIGNATION ON PLAN, FURNISH W/BATTERY AND INVERTER FOR EMERGENCY OPERATION.

WATTS			CIRCUIT	WIRE	POLE	AMP	NO.	SHUNT TRIP			CIRCUIT	WATTS				
AØ	BØ	CØ						NO.	AMP	POLE		WIRE	AØ	BØ	CØ	
			LIGHTS, HEADHOUSE		1	20	1	2	20	1	12	LIGHTS, STORAGE				
			LIGHTS, HEADHOUSE		1	20	3	4	20	1	12	RECEPTACLES, GREEN HOUSE				
			LIGHTS, HEADHOUSE		1	20	5	6	20	1	12	MASTER SUMP PUMP SHUT DWN				
			LIGHTS, GREEN HOUSE		1	20	7	8	20	1	12	WIND CONTROL PANEL				
			RECEPTACLES, GREEN HOUSE		1	20	9	10	20	1	12	RECEPTACLES, HEAD HOUSE				
			RECEPTS, GREEN HOUSE		1	20	11	12	20	1	12	RECEPTS, HEAD HOUSE TORQ CLOCK				
			RECEPTS, HEAD HOUSE RAINBIRD		1	20	13	14	30	1	12	RECEPTACLES, HEAD HOUSE				
			RECEPTACLES, GREEN HOUSE		1	20	15	16	20	1	12	MAIN PLASTIC GREEN HOUSE				
			WATER HEATER		1	20	17	18	30	1	12	RECEPTACLES, HEAD HOUSE				
			HEATER			30	19	20	20	1		WATER HEATER				
			HEATER			30	21	22	20	1		HEATER				
			HEATER			20	23	24	60	3	6	NEW RTU-1			5880	
			PUMP			20	25	26	20						5880	
			HEATER			20	27	28								
			SPARE			20	29	30	20			HOOD CONTROL NEW				
			HEATER			20	31	32				HOOD RECEPTACLES NEW				
			A/C		4	3	80?	33	34	60		HEATER NORTH GREEN HOUSE				
							35	36								
							37	38								
			NEW RECEPTACLE		12	1	20	39	40	60		HEATER				
			NEW RECEPTACLE		12	1	20	41	42	20	1	12	NEW RECEPTACLES			1260

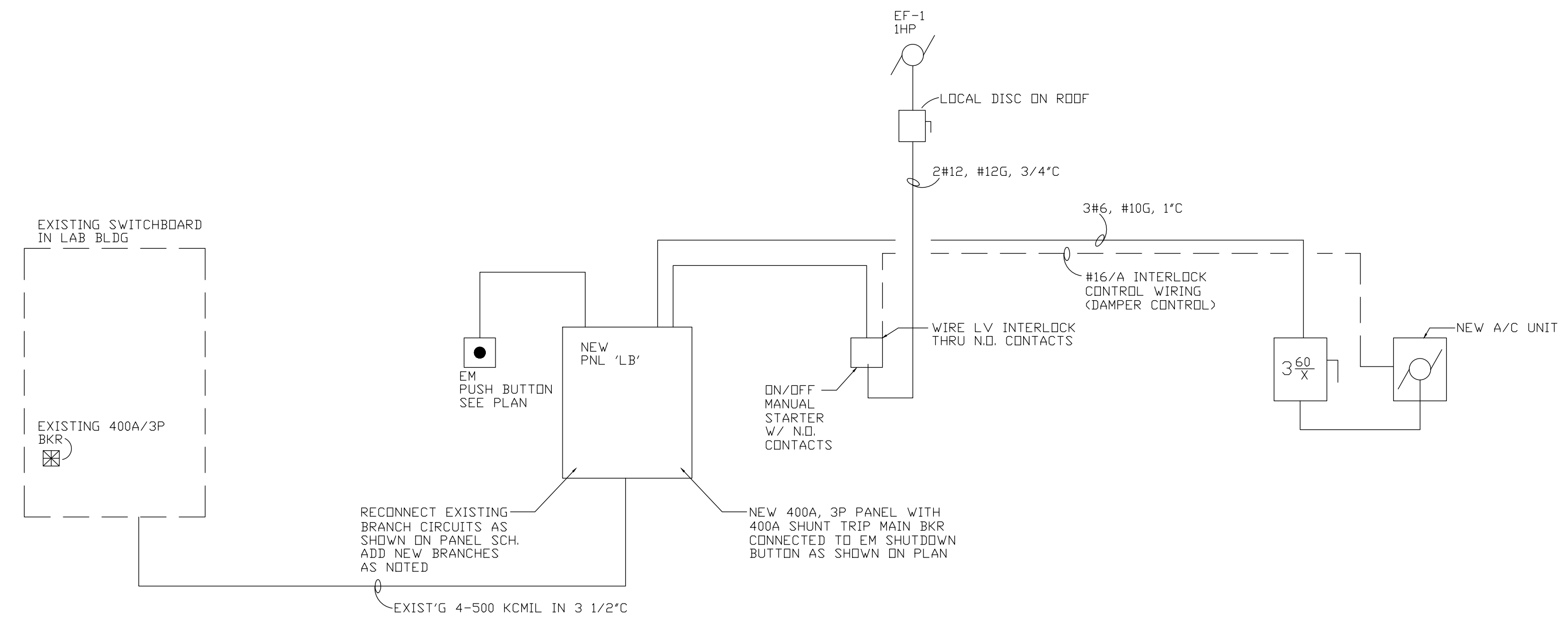
TOTAL CONN. WATTS=----- TOTAL CALC. LOAD=----- W. @ 208X1.73VOLTS=----- AMPS
 FEEDER SIZE----- CONDUIT SIZE----- FEEDS FROM-----
 CONNECTED WATTS ADJUSTED WITH APPROPRIATE MULTIPLIERS AND DIVERSITIES

*EXISTING FEEDERS
 CONTRACTOR SHALL PROVIDE A NEW TYPE WRITTEN PANEL DIRECTORY AFTER SURVEYING THE EXISTING PANEL AND CIRCUITS

ELECTRICAL PANEL SCHEDULE

SURVEY AND LOAD VERIFICATION

AFTER CONTRACTOR SURVEYS THE EXISTING PANEL FOR LOAD INFORMATION, CONTRACTOR SHALL SUBMIT LOAD INFORMATION TO ENGINEER IN THE AS A SUBMITTAL.
 ENGINEER WILL CALCULATE THE LOAD ON PANEL LB TO VERIFY SIZE FOR BLDG OFFICIAL. PANEL LB IS BEING REPLACED WITH A NEW PANEL WITH A SHUNT TRIP CIRCUIT BREAKER SO THE EXISTING LOAD VERIFICATION IS STRICTLY FOR VERIFYING PANEL SIZE.

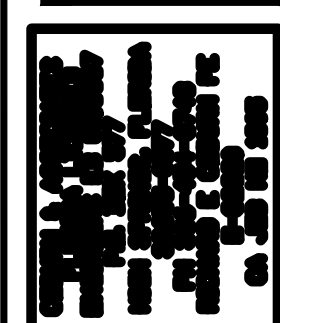


ELECTRICAL RISER

ELECTRICAL RISER AND PANEL SCHEDULE

COBURN AND ASSOCIATES, INC
 MECHANICAL • ELECTRICAL • CONSULTING ENGINEERS
 P.O. BOX 677 • HIGH SPRINGS, FLORIDA • PH 386-454-3748 • FAX 386-654-2652
 CERTIFICATE OF AUTHORIZATION 3687

FLORIDA GATEWAY BLDG 31
 INTERIOR REMODEL
 268 NW Lake Jeffrey Rd.
 Lake City, FL 32055



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E3

OF SHEETS

ELECTRICAL SPECIFICATIONS
GENERAL

A. Furnish all labor, materials, fixtures, equipment, tools and service necessary for installation, testing and adjusting of all electrical systems shall be furnished and installed in compliance with the Drawings, Specifications, and any Addenda thereto.

B. Drawings and Specification shall be understood to cover, according to their intent and meaning, complete electrical systems. Work shown and not specified, or work specified and not shown shall be performed as though mentioned in both.

C. Minor items and accessories reasonably inferred as necessary for the complete and proper operation of a system shall be provided by contractor or subcontractor for such system whether or not they are specifically called for.

D. The Electrical Contractor shall include in his bid the cost of furnishing installing, maintaining and removing all material and equipment required to provide temporary lights and power to perform the work of all trades during construction and until work is completed. Adequate lighting and receptacle outlets for operation of hand tools shall be provided throughout the project, including shanties, trailers, field offices, temporary toilet enclosures, and shall be extended as construction progresses.

E. Before submitting a bid, the Electrical Contractor is to coordinate with the electric power company to ascertain, in detail, the division of work, and the extent of performance by the Power Company shall be furnished and performed by the Electrical Contractor.

F. All electrical work required by the telephone company shall be furnished and performed by the Electrical Contractor. The Electrical Contractor shall coordinate with the telephone company before bidding.

G. All work shall be performed or installed in strict accordance with the National Electrical Code and all applicable rules, regulations and codes of local, state, and Federal Governments having lawful jurisdiction, and each contractor and subcontractor shall be responsible for such compliance.

H. All panelboards, disconnects, relays, magnetic contractors and time clocks shall be labeled with the same designation shown on the Drawings.

I. Labels shall be laminated plastic engraved, with minimum 3/4 inch width, minimum letter size 3/8 inch.

J. Mount a typewritten directory behind glass or plastic on the inside of each panel door, showing circuit number and complete description of all outlets on each circuit.

K. Furnish all equipment and personnel and conduct all tests required to secure approval of the installation.

L. Safety Tests

- All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects and shall show and insulation resistance between phase conductors and ground of 10 or less than that required by the National Electrical Code.
- All systems shall show proper neutral connections. M. Upon completion of each party of the electrical system, the contractor shall demonstrate to the Engineer that each item on that system is installed with proper covers, safeties, controls, etc., and that all are in proper working order.
- A set of "red-lined" electrical drawings shall be carefully maintained at the job site. Actual conditions are to be put on the drawings in red on a daily basis so the drawings will continuously show locations and routings of cable trays, conduits, pull boxes, circuit numbers, and other information required by the Engineer.
- Equipment and materials shall meet or exceed specification requirements.
- and be New, unused, of best quality and grade. Furnish current model for which replacement parts are available.
- All work shall be performed in compliance with OSHA regulations.
- Shop drawings and product data shall be submitted on all equipment, fixtures, etc.

1. Shop drawings shall be labeled in the same designation as individual piece of equipment for which they are being submitted; the proper designation shall be the designation used on the various equipment schedules and or in other Sections of this Specification, i.e. Fixture A, Panel B, MDP, etc.

R. Job condition shall be determined prior to bidding in the following manner:

- Site visit to determine:
 - Existing conditions
 - How and where materials will be delivered and stored
 - Special problems encountered during construction.
- Examine all Contract Drawings and Specifications to determine:
 - Type of construction to be used.
 - How construction of work will affect the work of this Section.
 - Nature and extent of work of other trades
- Failure to determine existing conditions or nature of construction will not be considered as a basis for granting additional compensation.

S. General

- Contract Drawings show the arrangements and sizes of principal apparatus and devices to be provided under this Contract and connection thereto these shall be followed as closely as actual building construction will permit.
- Dimensions of work as indicated on Plans are not guarantee to be as-built dimensions.
- No measurements shall be scaled from Drawings and used as definite dimensions for layout or fitting work in place.
- Layout of equipment, as shown on the plan, shall be checked and exact location determined by dimension of equipment approved by the Architect.
- Consult the Drawings for all dimensions, locations of partitions, sizes of structural member, foundations etc.
- Do not make final layouts until shop or equipment drawings are approved and job conditions verified.
- Electrical reference symbols are given on the electrical legend on the drawings.

T. Coordination:

- Work shall be coordinated between all Contractors, Subcontractors, Installers, Suppliers, Trades, etc. to:
 - Insure a neatly fitted installation.
 - Determine the nature and extent of the work of others.
 - Eliminate interferences.
 - Maintain maximum headroom and clearances.
- Any interference which develops or is foreseen and cannot be resolved by the affected trades, etc., shall be handled as follows:
 - As cease installation of that portion of the work which is in conflict as no additional compensation will be allowed for any relocation, etc.
 - Continue work only on other portions of the work which are not in conflict.
 - Notify the Architect immediately.
 - Architect's decision shall be final as to any relocation, rerouting, removal, etc.
 - No additional compensation will be allowed for removal, relocation, repairs or changes required by interferences.
- Clear away all debris, surplus materials, etc. resulting from work on operations, leaving job and equipment in clean first-class condition.
- Clean all panel board, switches, boxes, etc., and leave them in a ready-to-use condition.
- Install with proper screws or bolts, all panelboard and junction box covers.
- Where factory finish is provided on equipment, all matted or damaged surfaces shall be touched-up or refinished hereunder as approved.

Y. In addition to provisions and stipulation set forth in other Sections of these Specifications, provide various types of protection as follows:

- Protect finished floors from chips and cutting oil by use of metal chip receiving pan and oil-proof floor cover.
- All pumps, motors, fans and other rotating equipment shall be stored at Site with openings, bearing, etc. covered to exclude dust and moisture; and protected from weather from entry of foreign materials.

SCOPE

A. Conduit for power, telephone, fire alarm, communication, control, and miscellaneous functions which are shown on the drawings or described in these specifications.

- All boxes for wiring and devices and special systems.
- Wiring for all power, communication, fire alarm and auxiliary equipment, controls and other devices.
- All panels for power, lighting, and distribution of electricity as shown on the Drawings and panel schedules.
- All circuit breakers shown on lighting, power, distribution and main distribution panels.
- All disconnects and starters as described herein.
- All fuses as shown and specified.

EXCAVATION AND BACKFILL

A. Contractor shall be coordinate with the General Contractor to determine the extent of his responsibility to perform the excavation and backfilling related to the electrical scope of work.

ROUGH-IN

A. Contractor shall rough-in for all equipment, fixtures, etc., in building whether or not such equipment is furnished by this Contractor or under other divisions of Specifications or by Owner.

B. Determine in advance the location and size of all openings and chases necessary for proper installation of all work and have openings and chases provided during construction.

C. Install all inserts for hangers and supports of electrical work as general construction progresses.

D. Rough-in openings in masonry, brick, or cast studs shall be cut, not broken or chiseled.

E. Openings shall be smaller than the coverplate or box which fits over it.

F. Openings for recessed boxes shall not be larger than the coverplate which will cover the final opening.

G. Sleeves shall be required at all points where exposed conduits pass through concrete walls, slabs or masonry walls. Sleeves installed below grade or where subject to high water conditions shall be installed water tight.

BASIC MATERIALS & METHODS

CONDUIT

A. Rigid metal conduit shall be steel, hot dip galvanized. Minimum size shall be 3/4".

B. Electrical Metallic Tubing (EMT) shall be steel, electro or hot dip galvanized.

C. Flexible Metallic Tubing shall be galvanized steel. Sealrite type UA or EF shall be used for all motor connections.

D. Rigid Non-metallic conduit shall be listed for use as electrical raceways. All PVC shall be high density Type I Schedule 40.

E. All conduit shall be installed in a first-class workmanship manner.

F. All conductors shall be installed in conduit.

G. Filings or symmetrical bends shall be required wherever right angle turns are made in exposed work.

H. Bends and offsets shall be avoided wherever possible, but where necessary, they shall be made with an approved conduit bending machine.

I. All conduit joints shall be cut square, reamed smooth and drawn up tight.

J. Conduit shall be installed in horizontal and vertical runs in such a manner as to insure against trouble from the collection of trapped condensation and shall be arranged so as to be devoid of traps.

K. Special care shall be used in insuring that exposed conduit runs are parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceiling.

L. During construction, all conduit work shall be protected to prevent lodgement of dirt, plaster or trash in conduits, fittings or boxes.

M. Conduits which have been plugged shall be entirely freed of accumulations or be replaced.

N. All conduits in floors or below grade shall be swabbed free of debris and moisture before wires are pulled.

O. Conduit shall be properly supported as specified elsewhere in this Section.

P. Expansion fittings or other approved devices shall be used to provide for expansion and contraction where conduits cross building expansion joints.

Q. A flexible rounding strap shall bridge expansion joints and shall be bonded to conduit.

R. Conduit, boxes, devices, lights, etc., shall be located so that they will not interfere with intended use of eyebolts, monorails, or other lifting equipment.

S. Conduit above slab shall be run concealed in the walls or ceilings unless specifically noted to be exposed.

T. Conduit under ground and or slab shall be buried 24 inches minimum.

U. Exact routing of conduit shall be determined in the field for ease of installation provided that the following criteria is met:

- All conduit, home runs, and circuits are made to the panel specified on the drawings and schedule, or panel schedule. Any deviation in this regard shall be done only with written approval of the Architect.
- Conduits shall be run so as not to conflict with ductwork, diffusers, mechanical equipment and piping.
- Conduit is not noted or devised to be specifically run in a particular location.

4. Hangers and supports shall be attached to stud walls with wood screws.

V. Final connection to motors, etc., shall be made with either:

- The same type of conduit which leads up to the equipment or.
- Armored flexible conduit which shall be waterproof for any locations outside, in kitchens, or any inside area subject to water, heavy moisture, condensation, etc.

W. SPECIFIC CONDUIT TO BE USED

- All conduit and fittings shall be in new, unused condition free from rust, excessive dirt and moisture, kinks, flats, cuts, or other distortions of shape caused by impact, crushing or bending.
- Concealed conduit in building, above slab shall be EMT conduit with "set-screw" or compression fittings.
- Exposed conduit in building, above slab shall be EMT conduit with "set-screw" or compression fittings.
- Conduit embedded in or penetrating slab shall be PVC with waterproof joints.
- Exposed conduit outside building, above grade shall be rigid galvanized steel with threaded waterproof fittings.
- Underground conduit shall be PVC with waterproof joints.

SUPPORTS AND HANGERS

A. All conduit shall be supported on structural building members, i.e. columns, beams, girders, block, studs, etc.

B. Conduit shall be supported on galvanized or aluminum brackets, clamps, or straps.

C. Conduit hangers shall be attached to building steel by beam clamps or welding.

D. Hangers and supports shall be attached to stud walls with wood screws.

E. Hangers and supports shall be attached to masonry with expansion type anchors (shields).

F. Supports shall be channel type supports such as manufactured by Uni-Strut, Globe, Kindorf, or equal.

BOXES

A. Pullboxes inside buildings shall be code gauge and size, galvanized steel with screw type cover.

B. Pullboxes outside building above grade shall be code gauge and size, galvanized steel with enamel finish and screw type cover. Boxes shall be rainproof and waterproof.

C. Pullboxes outside building in slab gasketed cover and completely weatherproof.

D. Switch and outlet boxes in standard stud wall thickness shall be galvanized steel, 2 1/2 inch deep.

E. Switch and receptacle boxes in fired wall or wall less than standard stud depth shall be galvanized steel, 1 1/2 inch deep.

F. Wall boxes in four inch block shall be galvanized steel 2 1/2 inch deep.

G. In walls larger than four inch block-galvanized steel 3 1/2 inch deep.

H. Boxes may be ganged as required for multiple switches, etc.

I. Through-wall boxes are prohibited.

J. Lighting outlet boxes and specified junction boxes shall be galvanized steel, 4" octagon with cover.

K. Floor boxes shall be standard depth-cast steel, flush mounted cover with brass. Furnish with threaded brass receptacle covers.

L. Telephone boxes shall be standard gauge galvanized steel, 4 inch square.

M. All wiring devices shall be installed in metallic boxes. Provide outlet boxes, receptacle boxes, junction boxes, etc., where shown on the drawings and/or required by the National Electrical Code.

N. Provide pull boxes as shown on the Drawings, as required by code or as needed for ease of construction.

O. Outlet shall be installed in the location shown on the drawings.

P. Contractor shall study the general building plans in relation to the space surrounding each outlet, in order that his work may fit all other work required by these Specifications.

Q. All steel supports for outlet boxes shall be furnished and installed.

R. Outlet boxes for use with exposed steel conduit shall be cast steel. Cast metal fittings shall be Crouse-Hinds, Square D, Bryant, or equal.

S. All openings in electrical equipment, enclosures, cabinet, outlet and junction boxes shall be by means of welded bosses, standard knockouts, or shall be sawed, drilled, or punched with tools specially made for the purpose. The use of a cutting torch is prohibited.

T. All conduit connections to electrical boxes shall be made with locknuts and nonmetallic bushings.

U. Locknuts shall be drawn down tight to make ground connection between the conduit and box.

WIRE AND CABLES

A. All wire used throughout work shall be soft drawn copper of not less than 98 % conductivity.

B. Wire and cable shall be new, and manufacturer's name permanently marked on the outer covering at regular intervals.

C. Conductors AWG No. 8 or smaller may be solid or stranded; larger sizes shall be stranded.

D. All conductors for general wiring shall be insulated with THW or THHN insulation.

E. Conductor markings and color coding shall be in accordance with the latest edition of the N.E.C.

F. Green color coding is required by the N.E.C. for conductors used for grounding.

G. All wiring shall be installed in conduit.

H. Conductors shall be sized according to the National Electrical Code or as stud shown on the drawings whichever is greater.

I. Minimum size for 20A receptacle and lighting circuits shall be No. 12 AWG-where distance from panelboard to load exceeds 65 feet, use No. 10 AWG minimum; over 100 feet, use No. 8 AWG.

J. All wiring shall be fully polarized throughout using white wires for neutral and making all switching connections in colored hot wires.

K. No conductors shall be drawn into conduits until all work which may cause damage is completed; only approved cable lubricants shall be used.

L. As far as practical, all feeder cables shall be continuous from origin to panel termination without running splices in intermediate pull boxes.

M. All cable terminals, taps and splices shall be made with solderless, pressure type connectors; conductors shall be Type QA-B or Q2A as manufactured by Burndy, Okonite, McJunkin or equal.

N. The minimum free length of conductor at each box for the connection of a fixture, switch or receptacle shall be 8".

PANELBOARDS

A. The panelboards shall be of dead-front construction with code gauge galvanized steel box, and hinged front finished in grey laquer.

B. Doors shall be provided with a plate tumbler lock with flush handle and typed directory card and holders.

C. Panels rated 225 amp or less and 10,000 AIC shall be Square D, type NQO, or equal.

D. Panels rated 225 amp or less and greater than 10,000 A.I.C. shall be Square D, Type NQOB, or equal.

E. Panel rated 400 to 800 amp shall be Square D, "Line" or equal. Panels greater than 800 amps are considered to be Distribution Switchboards.

F. Furnish and install electrical system as described on Drawings, panel schedules and electrical riser diagram.

G. Panels shall be surface mounted or recessed as specified on the panel schedule.

H. All panelboards shall be circuit breaker type unless noted otherwise.

I. Voltage, phase, wires as specified on schedules.

J. Solid neutral.

K. Panels rated at 10,000 AIC shall have stab-in breakers.

L. Panels rated greater than 10,000 AIC shall have bolt-on breakers.

M. Breakers size and quantity as shown on Schedules.

N. Breakers listed as "spare" shall be furnished and installed.

O. Panel listed with "space" shall be provided with extra space for future breakers.

P. Each "space" shall be on one single pole.

Q. Panels rated 225 amp, or less shall be provided as full 42 space panels unless specifically noted otherwise.

R. Unless otherwise indicated on Drawings, install all panels with the top of the trim 6"-3" above finished floor.

S. Install panelboards in location shown on the Drawings.

T. Panels shall not be supported by conduit alone.

U. Where panels are installed on or near conductive surfaces as defined by the National Electrical Code, 3/4 inch ply boards shall be installed on walls behind and beside the panels to assure code compliance.

CIRCUIT BREAKERS

A. Breakers shall be of the size specified on the Panel Schedules.

B. Breakers rated at 10,000 AIC shall be plug-on.

C. Breakers rated greater than 10,000 AIC shall be bolt-on.

D. Breakers shall have visual trip indicators.

E. Breakers sizes shall be verified against equipment it serves.

F. Current limiting breakers shall be used where shown on panel schedules.

G. On three-phase panel, breakers shall alternate consecutively between buses to provide a balance load.

H. Breakers type Square D listed for reference only.

I. For Type NQO and NQOB Panels, the breakers shall be equal to the Square D numbers as listed below:

Main Breakers:

- 10,000 AIC - Q1B, Q2, KA, LA
- 22,000 AIC - Q1B-VH, Q2-H, KA, LA
- 42,000 AIC - KH, LA
- 65,000 AIC - KH, LH

Branch Breakers:

- 10,000 AIC - QO, QOH, Q1-H
- 22,000 AIC - QO-VH, Q1-VH
- 42,000 AIC - QH
- 65,000 AIC - QH

J. For I-Line panels, the main breaker shall be 65,000 AIC rated, and equal to Square D Models FA, FH, KH, LA, LH, MA, MH.

K. The branch breakers shall be rated at 65,000 AIC and equal to Square D Models FA, FH, FY, IF, Q2, Q2-H, Q2H, KA, KH, IK, Q4, LA, LH, MA, MH, ME.

L. Breakers listed as current limiting breakers shall be equal to Square D -1 -1-Limtrim, in IF or IK frame sizes.

M. Furnish and install all circuit breakers as described on the panel schedules and drawings.

FUSES

A. General duty fuses shall be equal to Bussman 250 volt, Tron, JRN Fuses.

B. Motor circuit fuses and compressor fuses shall be equal to Bussman 250V, "Fusaton FRN" dual element fuses.

C. Current limiting fuses shall be equal to Bussman KTN-R fast acting fuses.

DISCONNECTS

A. Ampere rated for general disconnects.

B. Horsepower rated for motor disconnects.

C. Meet Federal Spec. W-S-865c for Heavy Duty Switches.

D. UL Listed.

E. Grey baked enamel finish.

F. Quick-break operating mechanism.

G. Visible handle.

H. Meets NEMA KSI-1975 for Type HD.

I. Indoor disconnects shall be NEMA 1.

J. Outdoor disconnects shall be NEMA 3R.

K. Supply and install a disconnecting means for each motor where required by N.E.C. shown on drawings.

L. Locate disconnect as shown or as near as possible to motor.

M. Disconnects furnished as an integral part of any piece of equipment shall be acceptable in lieu of a safety switch.

N. Switches shall be used where shown on drawings.

O. Motor rated switches shall be acceptable as disconnects for motors of 1/3 HP or less.

STARTERS

A. Provide magnetic or manual starters and associated equipment as required for each motor.

B. Each starter shall have properly sized thermal overload protection for the motor it serves.

C. Overloads shall be manual reset type.

D. Supply and install magnetic motor starters with appropriate control buttons or switches for each piece of equipment unless other specifications call for starter to be furnished with equipment.

E. Contractor shall coordinate with both general contractor and mechanical contractor to assure that a starter has been provided for all equipment.

COMBINATION STARTERS

A. Where both a disconnect switch and motor starter are required, a combination starter shall be acceptable in lieu of individual components.

WIRING DEVICES

A. Model or part number listed below are for reference and establishing quality.

B. In so far as practical, all wiring devices shall be of the same manufacturer.

C. All catalog numbers listed are Hubbell unless noted.

D. Acceptable manufacturers shall be Hubbell, Pass and Seymour, Leviton, or Arrow-Hart.

E. General Purpose Receptacles

- General purpose receptacles shall be specification grade, 120 volt AC, 15 amp, NEMA 5-15R, 20 amp, grounding type, ivory.
- Catalog numbers shall be:
 - Single receptacle: 5261-1
 - Duplex receptacle: 5262-1

F. Single appliance type

- Single appliance type receptacles shall be specification grade, 120 volt AC, NEMA 5-20R, 20 amp, grounding type, ivory.
- Catalog numbers shall be:
 - Single receptacle: 5361-1
 - Duplex receptacle: 5362-1

G. Special purpose receptacle

- Special purpose receptacles shall be installed as required and as shown to match equipment and appliance cord.
- Catalog numbers for special purpose receptacles shall be as follows, based on voltage and amperage:
VOLT AMPS NEMA COLOR CAT. NO.
125 30 5-30R Black 9308
125 50 5-50R Black 9360
250 30 6-30R Black 9330
250 50 6-50R Black 9367

H. Switches

- General lights switches shall be specification grade,
125-277 volt, 15 amp, heavy duty, ivory.
- Catalog numbers shall be:
SPST 1101-I
DPST 1102-I
3-Way 1103-I
4-Way 1104-I

3. Motor rated switches shall be used for any switches controlling singles phase motors.

4. Motor rated switches shall be 120-277 volt and rated in accordance with the voltage and amperage of the motor.

I. Cover plates

- All cover plates shall be ivory plastic unless noted.
- Catalog numbers:
 - Switches: Single gang--P1
Two gang----P2
Three gang--P3
 - Single Receptacle 93091
 - Duplex Receptacle Single gang P8
Two gang P82
 - Telephone plate Single gang plate with rubber bushing
 - Television plate Single gang with coaxial connector for cable connection.
 - Special purpose outlets: Single gang P7882
Duplex 7423
 - Weatherproof covers: Switches 7420
Receptacles 5205V0

SERVICE ENTRANCE, METERING, GROUNDING AND GROUND FAULT PROTECTION

A. SERVICE ENTRANCE IS EXISTING

B. All equipment and circuits shall be grounded in accordance with the National Electrical Code, Article 250.

C. Provide ground fault protection for all circuits noted on the drawings as GFI or in all receptacles in bathroom, and exterior location

D. Provide ground fault protection on all temporary construction circuits as required by OSHA or the Nation Electrical Code.

SYSTEM DESCRIPTION

A. Service Entrance

- Electrical service is existing.
- System Ground

- All conduits shall contain a continuous "green" ground wire which shall be sized in accordance with Table 250-95 of the National Electrical Code.
- The ground conductor shall be bonded to the conduit as the ground conductor.
- Provide a driven ground rod as close as possible to the service entrance location, sized as shown on the drawings or in accordance with N.E.C.
- Bond ground to nearest cold water supply pipe and to footer or slab steel with same size conductor as required for driven ground.
- Provide ground wire #8 Minimum to the telephone board.

C. Mechanical Equipment

- All mechanical equipment motors shall have grounded cases.
- All equipment shall have a ground wire bonded theequipment cabinet frame, ect., to the system ground.
- Ground Fault Protection

 - Ground fault protection shall be provided for all receptacles labelled GFI or where required by letter A of this section
 - The designation GFI on the drawings denotes a ground fault protected receptacle.
 - Ground fault protection maybe provided by a ground fault receptacles or ground fault breaker.
 - Standard receptacles shall be considered ground fault protected if in series with an upstream GFI receptacle.

FLOURESCENT BALLASTS

A. Furnish all fluorescent lighting fixtures with electronic energy saving tube ballasts, for all F 32 T8 and F 24 T8 fixtures

B. Ballasts for fluorescent lamps shall be UL listed.

Class P, FCC Certified, High Frequency (25 KHZ)

Cathode Heat Cutback, and Transient Protected.

C. Maximum wattage input to each 48" fluorescent tube shall be 34 watts and 24 watts for a 30 inch tube.

D. Ballasts shall be manufactured by G.E., Advance, or equal.

DATA/TELEPHONE

A. Provide an empty conduit system for Telephone /Data including fish wires, boxes and blank plates.

B. Conduit and outlets shall be as shown on the drawings and the telephone riser.

C. Consult the local utility representative for any special requirements prior to starting the work.

D. Provide phone board as shown with 120 volt outlet and ground mounted on the board.

DIMMERS

A. Incandescent

- 120V, 2000W slide dimmer
- Equal to Lutron N-2000

B. LED 0-10V, where noted on dwgs.

- 120V input
- Remote power relay
- Output 0-10VDC to LED driver.
- Equal to Lutron NTFV
- Power relay Lutron PP20

TRANSIENT VOLTAGE SURGER SUPPRESSION (TVSS)

A. Provide TYPE 1 on service entrance ahead of main.

B. Provide TYPE 2 on panel as shown.

C. TYPE 1- MOV TYPE meeting UL-1449, 3rd edition, TYPE 1 listed with internal fusing.

- 200KA interrupting capacity
- Nominal discharge current- 20KA +10/350 microsecond wave.
- 80KA MOV rating


D. TYPE 2- MOV TYPE meeting UL-1449, 3rd edition, TYPE 2 listing.

- 65KA interrupting rating
- Nominal discharge current- 20KVA 10/350 microsecond wave.
- 50KA MOV rating

FLORIDA GATEWAY BLDG 31

INTERIOR REMODEL

268 NW Lake Jeffrey Rd.
Lake City, FL 32065



DATE
10/1/18

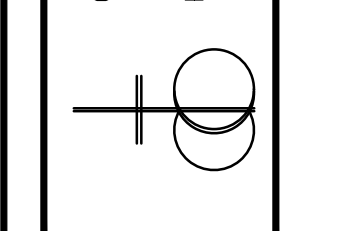
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INTERIOR REMODEL
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ELECTRICAL SPECIFICATIONS
CONTRACT DOCUMENTS