TOWN OF MONTVILLE

Bid Interest Response

FINANCE@MONTVILLE-CT.ORG

Project Name: Fair Oaks Community Center Improvements

Date: August 30, 2022

Bid No.: 2023-4

Company: _____

Address: _____

_____

Contact: _____

Phone: _____ Fax: _____ E-mail: _____

Project Manual and Specifications

BID #2023-4
Flooring & Air Handling Improvements
Fair Oaks Community Center

Town of Montville
Connecticut

Funded with a STEAP Grant
In Cooperation with: State of Connecticut
Edward M. Lamont, Jr., Governor

August 2022

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TOWN OF MONTVILLE
INVITATION FOR PROPOSALS
BID #2023-4

The Town of Montville is interested in receiving proposals for the construction of Fair Oaks Community Center Improvements. A copy of the plans and specifications is available at www.montville-ct.org.

All proposals are due no later than September 27, 2022 at 10:00 AM and must be received at the Finance Office prior to the due date and time. A proposal must be delivered by regular or overnight mail to the Town of Montville, Finance Office, 310 Norwich/New London Turnpike, Uncasville, Connecticut 06382, with the proposal contained in a sealed envelope marked **"Fair Oaks Community Center Improvements"**. The proposal must be signed by a Company official. Proposals will be opened and read aloud in the Finance Office, and interested persons may attend the opening remotely under procedures that will be posted on the Town of Montville's website.

In addition to other reservations and conditions contained in the proposal documents, the Town of Montville reserves the right to waive any technical defects in the proposals received; waive any formalities or irregularities; to reject any and all proposals for any reason, including that it or they do not conform to the terms and conditions described herein, as determined by the Town in its sole discretion; to accept or reject any part of any proposal received; to present and negotiate terms of a contract together or separately with any party submitting a proposal; to determine qualifications exclusively and finally; to request additional qualifications; and to select any proposal or part thereof based on any combination of factors, including the amount proposal, the time of completion, and the Town's best interests. The Town further reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether or not that proposal is selected.

Director of Finance

INFORMATION TO BIDDERS

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ARTICLE 1 RECEIPT AND OPENING OF BIDS

Sealed bids are requested to be delivered to the Town of Montville, Connecticut at the Office of the Director of Finance, third floor, Montville Town Hall, 310 Norwich-New London Turnpike, Uncasville, CT until 10:00 A.M. local time on September 27, 2022, at which time they will be publicly opened and read aloud. All bids must be submitted in a sealed envelope bearing the bidder's name and bid name.

The envelopes containing the bids must be sealed and designated as **Fair Oaks Community Center Improvements.**

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in or reject any and all bids. Conditional or qualified bids will not be accepted. Any bid received after the time and date specified shall not be considered. Should there be reasons why the contract cannot be awarded within the specified period the time may be extended by mutual agreement between the Owner and the bidder.

The Town of Montville reserves the right to reject any or all bids and waive any informalities or irregularities in the bid procedure or bids.

The Town may hold the bids for a period not to exceed sixty (60) days from the date of the bid opening to review the bids and investigate the bidders' qualifications prior to awarding the contract.

All bidders are advised that State funded projects are subject to the requirements of CGS Sec. 4a-60g "Set-Aside program for small contractors, minority building enterprises, individuals with disabilities and nonprofit corporations" unless exempted from these requirements by the Department of Administrative Services Supplier Diversity Program. For contracts using non-exempted funding sources and subcontracting any portion of work, contractors are required to subcontract 25% of the total contract value to small business certified by the Department of Administrative Services and are further required to subcontract 25% of that 25% to minority and women small contractors certified as minority business enterprises by the Department of Administrative Services.

All bidders are advised the Town of Montville has enacted through resolutions the following special conditions concerning Town bids and purchases.

1. Any Town bidder that has submitted a bid not more than 15% (fifteen percent) higher than the low bid may be awarded the project provided such Town based bidder agrees to accept the award of the bid at the amount of the low bid. If more than one Town based bidder has submitted bids not more than 15% (fifteen percent) higher than the low bid, and have agreed to accept the award of the low bid, the lowest responsible bidder shall be the one of such Town based bidders that submitted the lowest bid. That within the bidding process that all businesses claiming to be Montville businesses, provide the Finance Department (Assessor's

Section) with sufficient documentation to prove that they are in compliance with property tax assessments, including motor vehicle tax assessments.

2. Seller agrees that as a condition of his sale of goods and/or services to the Town of Montville, the Town of Montville will be authorized to deduct from the proceeds due Seller an amount not to exceed 25% of the total amount due Seller. Said amount is to be applied against any unpaid and overdue taxes, assessments, fees, or other charges levied by the town of Montville or any agency thereof against the Seller. The Seller further agrees that Seller shall insure that Seller has the right to withhold an amount not to exceed 25% from each subcontractor working for the Seller, and providing goods and/or services to the Town of Montville, and to remit such withheld money to the Town in full or partial satisfaction of any unpaid and overdue taxes, assessments, fees, or other charges levied by the Town of Montville or any agency thereof against such subcontractor.

ARTICLE 2 PREPARATION OF BID

Each Bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, both in words and figures. All bids must be prepared in conformity with and shall be based on and submitted subject to all requirements of the Specifications and Drawings together with all Addenda thereto.

ARTICLE 3 TELEGRAPHIC MODIFICATION

Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed and postmarked prior to the closing time. The telegraphic communication should not reveal the bid price but should provide the addition or subtraction or other modifications so that the final prices or items will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic modifications.

ARTICLE 4 CORRECTIONS

Erasures or other changes in the bid must be explained or noted over the signature of the bidder.

ARTICLE 5 WITHDRAWAL OF BIDS

Bids may be withdrawn personally or on written or telegraphic request dispatched by the bidder in time for delivery in the normal course of business prior to the time fixed for the opening, provided that written confirmation of any telegraphic withdrawal over the signature of the bidder is placed in the mail and postmarked prior to the time set for the opening of the bids. Negligence on the part of the bidder in preparing his bid confers no right of withdrawal or modification of his bid after such bid has been opened.

ARTICLE 6 QUALIFICATIONS OF THE BIDDER

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted.

ARTICLE 7 OBLIGATIONS OF THE BIDDER

Bidders must satisfy themselves by personal examination at the site of the proposed work, by review of the Drawings and Specifications including Addenda, and by additional means as they may prefer, as to the actual conditions, requirements, and limits of the proposed work, and as to the accuracy of the information and statements herein contained, and the submission of any bid will be accepted by the Owner as satisfactory proof that the bidder has satisfied himself in these respects. The bidder shall not at any time after the submission of a bid dispute or complain of such statements or information, nor, assert that there was any misunderstanding in regard to the nature, or amount of work to be done. The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve the bidder of his obligation to furnish all materials except those materials furnished by the Owner and labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated work for the considerations set forth in his bid, if his bid is accepted.

ARTICLE 8 CONDITIONS OF WORK

Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with traffic, with the use of existing facilities and utilities, with the use of municipally or State or privately owned lands, or with the work being performed by others. The Contractor must satisfy himself by his own investigation and research as to the nature and location of the work, the general and local conditions, including but not restricted to those bearing upon the transportation, disposal, handling and storage of materials, water, electric power, roads, means of access, the construction and making of connections of the work to existing facilities and utilities, or other similar conditions at the site, the character of equipment and facilities needed preliminary to and during the prosecution of the work, requirements of owners and controlling authorities having jurisdiction over the various lands, existing structures, facilities and utilities, and all other conditions affecting the work to be done and labor and materials needed.

ARTICLE 9 INFORMATION SUPPLIED TO BIDDERS

The Owner shall provide to bidders prior to bidding, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The Contract Documents contain the provisions required for the construction of the project. Information obtained from any officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

ARTICLE 10 BID SECURITY

Each bid must be accompanied by a certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner and from securities listed on the most recent IRS Circular 570, in the amount of 5 percent of the bid. Such checks or bid bonds will be returned to all but the three lowest bidders within five days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract; or if no award has been made within 60 days after the date of the opening of the bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid. The bid bond of the successful bidder will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned.

ARTICLE 11 METHOD OF AWARD-LOWEST QUALIFIED BIDDER

If, at the time this Contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the Contract; the Contract will be awarded on the lowest base bid by a responsible bidder. If such bid exceeds such amount, the Owner expressly reserves the right to increase or decrease any class, item, or part of the work, and this reservation includes the omission of any such item, items, class, or part of the work as may be decided by the Owner at unit prices submitted by the bidder to bring the Contract within available funds; or the Owner may reject all bids. In determining the lowest qualified bidder the total price bid for the Basic Contract will be used.

The term "lowest responsible bidder" shall mean the bidder whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work.

The low bidder shall supply the names and addresses of major material suppliers and subcontractors prior to any work on the project.

ARTICLE 12 EXECUTION OF THE AGREEMENT

A Contract in the form set forth hereinafter will be required to be executed by the successful bidder and the Owner. The attention of all bidders, therefore, is called to the form of the Agreement and the provisions thereof. The party to whom the Contract is awarded will be required to obtain the performance bond and payment bond and insurance certificates within ten (10) calendar days from the date when the Notice of Award is delivered to the bidder. The Notice of Award shall be accompanied by the necessary Agreement and bond forms. The Contractor shall furnish a performance bond and a payment bond, each in the amount of 100 percent of the Contract Price, with a corporate surety approved by the Owner, as security for faithful performance of the Contract.

The Bidder, ten (10) days after notification of award shall have three (3) copies of the Performance Bond, Payment bond, Insurance Certificates, Save harmless endorsement and Agreement ready for a contract signing with the Owner at the Owner's place of business, at which time a pre-construction conference shall be held.

ARTICLE 13 LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within 5 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal the surety deposited with his bid.

ARTICLE 14 NOTICE TO PROCEED

The Notice to Proceed shall be issued within ten (10) days of the execution of the Agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period; the time may be extended by mutual agreement between the Owner and Contractor.

ARTICLE 15 TIME OF COMPLETION AND LIQUIDATED DAMAGES

Time Completion
The bidder must agree to commence work on or before the date specified in the written Notice to Proceed of the Owner and to fully complete the total project within **45** consecutive calendar days thereafter.

Liquidated Damages
In addition to the above liquidated damages, the bidder must agree also to pay as liquidated damages, the sum of $750.00 for each consecutive calendar day thereafter, as hereinafter provided in the Contract and General Conditions.

ARTICLE 16 POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

ARTICLE 17 ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Drawings, Specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be in writing, addressed to: CLA Engineers, Inc., 317 Main Street, Norwich, CT 06360. In order to be given consideration, such request must be made at least 5 days prior to the date fixed for the opening of bids. Any and all interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications, which, if issued, will be distributed to all prospective bidders, not later than three (3) days prior to the date fixed for the opening of bids in any one of the following methods:

1. Mailed by certified mail with return receipt requested; or
2. Faxed
3. Emailed
4. Posted on the Town of Montville website: http://www.townofmontville.org/

All Addenda so issued shall become a part of the Contract Documents.

ARTICLE 18 UNCERTAINTY OF QUANTITIES

The quantities listed in the bid (proposal) are approximate and are given only for use in comparing bids and to indicate approximately the total amount of the Contract; and the Owner does not expressly or by implication represent that the actual amounts of work will even approximately correspond therewith, but does call particular attention to the uncertainty of the quantities of the work involved which cannot be predicted in advance The work under certain items may be materially greater or less than that given in the bid, as may be necessary in the judgment of the Owner to complete the work contemplated in the Contract.

Under the Contract, the Owner reserves the right to increase or decrease the approximate quantities for, or to omit entirely, any of the items as listed in the bid.

Only such quantities of the respective items of work actually performed and accepted will be paid for. An increase or decrease in the quantity for any item shall not be regarded as grounds for an increase or decrease in the bid prices.

ARTICLE 19 ITEMS NOT LISTED IN THE BID

Appurtenant items of work shown on the Drawings or specified or required to complete the work but not listed separately under the list of items in the bid shall be included in the cost of payment under the various applicable bid items of work and no separate payment will be made for such items. It shall be the responsibility of the Contractor to verify any missing or incomplete items.

ARTICLE 20 BALANCED BIDDING

Minus bidding on any item or items of the Specifications is prohibited. Bids should be made on each separate item of work shown in the bid (Proposal) with reasonable relation to the probable cost of doing the work included in such item and the right is reserved to reject wholly any bid in case any item or items thereof are obviously unbalanced or appear to the Owner to be so unbalanced as to affect or to be liable to affect adversely any interests of the Owner. The attention of the bidder is called to the fact that unbalancing of bids may adversely affect the Contractor if certain portions of the work are increased or decreased as provided in the Contract Documents.

ARTICLE 21 PRICES

Bidders shall state the proposed price for the work by which the bids will be compared. This price is to cover all the expenses incidental to the completion of the work in full conformity with the Contract, the Specifications, and the Drawings. The price or prices proposed shall be stated both in words and in figures, and any bid not so stated shall be rejected.

In the event there is a discrepancy between the unit prices and the extended totals, the unit prices shall govern. In the event that there is a discrepancy between the unit prices written in words and the unit prices written in figures, the unit prices written in words shall govern. No bid will be accepted which does not contain a unit or lump sum price for every item contained in the bid form.

ARTICLE 22 NONDISCRIMINATION

The Contractor agrees and warrants that in the performance of this contract he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, sex, mental retardation or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or of the State of Connecticut, and further agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission concerning the employment practices and procedures of the Contractor as relate to the provisions of this section.

ARTICLE 23 EMPLOYMENT OF LABOR

The wages paid to mechanics, laborers or workmen employed upon the work herein contracted to be done shall be at a rate equal to the rate of wages prevailing for the same work in the same trade or occupation in the Montville area as determined by the labor Commissioner of the State of Connecticut. See Section 31.53 of the General Statutes of the State of Connecticut, Revision of 195S, as amended.

Public Act 79-325 passes by the 1979 Legislature covers exemptions from Section 31.53 of the General Statutes. Under the new exemptions, effective October 1985, the regulations that the prevailing wage must be paid for work performed by contractors and subcontractors in connection with work on public facilities will not apply:

> To public work alterations, repair, refinishing projects with total cost of less than $100,000.
>
> To public works new construction with a total cost of less than $1,000,000.

All Bidders are informed that the project is considered an alteration/refinishing construction.

All Bidders are advised to inform themselves and to comply with the requirements of Federal, State and local laws governing the employment of labor.

The Contractor shall provide certified payroll sheets to the Owner which includes all employees involved with the project for each payroll period during the course of the project.

The contractor will also be required to provide certified payrolls on a weekly basis to the Owner.

ARTICLE 24 LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable federal and state laws and municipal ordinances for the construction, reconstruction, alteration, remodeling, repair or demolition of public works and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be seemed to be included in the Contract the same as though herein written out in full.

ARTICLE 25 PAYMENT FOR DRAWINGS AND SPECIFICATIONS

See Advertisement for Bids

ARTICLE 26 CONSTRUCTION SCHEDULE

Prior to start of work the Contractor will be required to submit a construction schedule showing the order in which he proposes to carry on the work, including dates at which he will start and finish various parts of the work conforming to major divisions of the specifications.

ARTICLE 27 TAXES

The Town of Montville is considered exempt from the payment of Federal excise taxes, Connecticut Sales Taxes, etc. and such taxes shall be identified separately or excluded from the bid prices.

ARTICLE 28 NON-RESIDENT CONTRACTORS

Connecticut General Statute §12-430(7) requires that:

When a non-resident contractor enters into a contract they must post a 5% cash or guarantee bond for the total amount with the Commissioner of Revenue Services;
or
Any person dealing with a non-resident contractor without first obtaining a certificate of compliance must deduct 5% from the amount payable to the non-resident contractor and submit it to the state.

If the requirements are not met, the general contractor will be liable for all Connecticut taxes imposed.

All questions shall be directed to the State of Connecticut Department of Revenue Services Discovery Unit at 860-541-3280.

ARTICLE 29 OCCUPATIONAL SAFETY & HEALTH REGULATORY COMPLIANCE

Successful bidders must demonstrate compliance with the applicable safety and health acts as outlined in the Supplemental Information for Bidders.

ARTICLE 30 PROVISIONAL ITEMS

Provisional items are delineated in the bid form. Quantities for provisional items may or may not be used in whole or in part at the discretion of the Owner. This shall in no way affect the established contract unit prices. All bid unit prices for provisional items shall be added to establish the total bid amount.

PROPOSAL FORMS

BID FORM

TOWN OF MONTVILLE
FAIR OAKS COMMUNITY CENTER IMPROVEMENTS

TO: Dept. of Finance
Town of Montville
310 Norwich-New London Tpk.
Montville, Connecticut 06382

FROM: _____
_____
_____
_____

The undersigned, having familiarized (himself, itself, themselves) with the existing conditions on the Project Site affecting the cost of the work, and with the Contract Documents for the FAIR OAKS COMMUNITY CENTER IMPROVEMENTS hereby proposes to furnish all supervision, technical personnel, labor, materials, equipment, tools, appurtenances, services, materials not supplied by the Owner, and anything else necessary, including utility and transportation services required to perform and complete this Contract, all in accordance with the Contract Documents, at and for the unit prices for work in place for the following work items.

The quantity of the units shown below is given for the purpose of determining the Award. The Owner reserves the right to increase or decrease these quantities. Payment to the Contractor will be based on completed measured quantities of these work items.

Prices are to be written in both words and figures. In case of discrepancy, the price shown in words will govern.

BASE BID

ITEM	DESCRIPTION	QUANTITY	UNIT	AMOUNT
1.	Flooring	1	L.S.	_____

AMOUNT IN WORDS: _____

_____

2.	Air Handling System	1	L.S.	_____

AMOUNT IN WORDS: _____

_____

TOTAL BASE BID PRICE: _____

TOTAL BASE BID PRICE IN WORDS: _____

_____

The low bid will be determined by either of the following:

This contract is to be awarded to that responsible Bidder whose total bid is the lowest number of dollars for the above items.

If the Contractor should choose to employ manufacturers or suppliers other than those listed on the drawings and specifications, he shall submit a list of said suppliers as part of this proposal. If no list is included in the proposal, it shall be concluded by the Town that the Contractor will use only those suppliers listed on the drawings. An "or equal" supplier shall be included on the submitted list.

Wherever in the plans and specifications, an item of equipment or material is designated by reference to a particular brand, manufacturer or trade name, it is understood that an equal product may be substituted by the bidder or Contractor, under the conditions as stated above.

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Municipality and to fully complete the project within **45** consecutive calendar days thereafter. The bidder must agree also to pay as liquidated damages, the sum of $750.00 for each consecutive calendar day thereafter.

The undersigned has checked carefully all the above figures and understands that the OWNER will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

The Bidder acknowledges the receipt of the following Addenda;

Addendum No. _____, dated _____

Addendum No. _____, dated _____

Addendum No. _____, dated _____

Enclosed is the Bidder's Bond, Certified Check or Cashier's Check No. _____ in the amount of five (5%) of the Bid.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Respectfully submitted:

By _____
(Title)

_____
(Business Address)

_____
(Telephone Number)

(SEAL - if bid is by a corporation)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned, _____

_____, as PRINCIPAL, and _____
as SURETY are held and firmly bound unto the Town of Montville hereinafter called the "OWNER", in the penal sum of Five Percent of Total Bid Dollars, ($5% of Total Bid) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these Presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted

the Accompanying Bid, dated _____, 20___, for

FAIR OAKS COMMUNITY CENTER IMPROVEMENTS

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the period specified therein after the opening of the same, or, if no period be specified, within ninety (90) days after the said opening, and shall within the period specified therefor, or if no period be specified, within ten (10) days after the prescribed forms are presented to him for signature, enter into a written Contract with the Owner in accordance with the Bid, as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract; or in the event of the withdrawal of said Bid within the period specified, or the failure to enter into such Contract and give such bond within the time specified, the Principal shall pay the Owner the difference between the amount specified in said Bid and the Amount for which the Owner may procure the required work or supplies or both, if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this _____ day of _____, 20___, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body. In presence of:

(Individual Principal) (SEAL)

(Business Address)

(Partnership) (SEAL)

(Business Address)

Attest: By: _____

_____

(Corporate Principal)

(Business Address)

By: _____ Affix Corporate Seal

_____

Attest:

_____

(Corporate Surety)

_____

By: _____ Affix Corporate Seal

Countersigned

by _____

Attorney-in-Fact, State of _____

(Power-of-Attorney for person signing for surety company must be attached to bond.)

PROPOSED SUBCONTRACTORS

THE BIDDER SHALL STATE THE NAMES OF ALL THE SUBCONTRACTORS THAT HE PROPOSES TO USE. ATTACH ADDITIONAL SHEETS IF NEEDED.

If none, write "None" _____

*Description of Work _____

Proposed Subcontractor, Name _____

Address _____

*Description of Work _____

Proposed Subcontractor, Name _____

Address _____

*Description of Work _____

Proposed Subcontractor, Name _____

Address _____

*Insert description of work and subcontractors' names as may be required.

This is to certify that all names of the above-mentioned subcontractors are submitted with full knowledge and consent of the respective parties.

The Bidder warrants that none of the proposed subcontractors have any conflict of interest as respects this contract.

Bidder _____
(Fill in Name)

By _____
(Signature and Title)

PROPOSED SUPPLIERS

THE BIDDER SHALL STATE THE NAMES OF PROPOSED MATERIAL SUPPLIERS FOR THE PROJECT. ATTACH ADDITIONAL SHEETS IF NEEDED.

If none, write "None" _____

*Description of Material _____

Proposed Supplier, Name _____

Address _____

*Description of Material _____

Proposed Supplier, Name _____

Address _____

*Description of Material _____

Proposed Supplier, Name _____

Address _____

*Insert description of work and suppliers names as may be required.

This is to certify that all names of the above-mentioned suppliers are submitted with full knowledge and consent of the respective parties.

The Bidder warrants that none of the proposed suppliers have any conflict of interest as respects this contract.

Bidder _____
(Fill in Name)

By _____
(Signature and Title)

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1. Name of Bidder.

2. Permanent main office address.

3. When organized.

4. If a corporation, where incorporated.

5. How many years have you been engaged in the contracting business under Your present firm or trade name?

6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate dates of completion.

7. General character of work performed by your company.

8. Have you ever failed to complete any work awarded to you? If so, where and why?

9. Have you ever defaulted on a contract? If so, where and why?

10. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed.

11. List your major equipment available for this contract.

12. Experience in construction work similar in importance to this project.

13. Background and experience of the principal members of your organization including the officers.

14. Will you, upon request, fill out a confidential detailed financial statement and furnish any other information that may be required by the OWNER?

15. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner or representative in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated at _____ this _____ day of _____, 20___.

_____
(Name of Bidder)

By _____

Title _____

State of _____)
) ss.
County of _____)

_____ being duly sworn deposes and says that he is _____
_____ of _____
(name of organization)
and that the answers to the foregoing questions and all statements therein contained are true and correct.

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Notary Public

My Commission expires _____ 20 ___.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the corporation named as Principal in the within bond; that _____ _____, who signed the said bond on behalf of the Principal was then _____ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was his duly signed, sealed, and attested to for and in behalf of said corporation by authority of this governing body.

(Corporate Seal)

_____

Title: _____

NONDISCRIMINATION IN EMPLOYMENT

State of _____)
) ss
County of _____)

_____, being first duly sworn, deposes and says that:

(1) He is (owner, partner, officer, representative, or agent), of _____ _____, the bidder that has submitted the attached bid;

(2) Said bidder (has _____) (has not _____) previously performed work subject to the President's Executive Order No. 11246, or any preceding similar Executive Order.

Signed _____

_____
Title

Subscribed and Sworn to before me

this _____day of _____20 ____.

_____

_____
Title

My Commission expires _____, 20 ___.

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)
) ss.
County of _____)

_____, being first duly sworn, deposes and says that:

(1) He is (owner, partner, officer, representative or agent) of _____ _____, the Bidder that has submitted the attached bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from Bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

_____
(Title)

Subscribed and sworn to before me
this _____ day of _____ 20 ___.
_____
_____
(Title)
My Commission expires _____ , 20 ___.

AGREEMENT AND BOND FORMS

AGREEMENT

THIS AGREEMENT, made this ___ th day of _____, by and between the Town of Montville, hereinafter called "OWNER" and _____

_____

_____

doing business as (an individual) or (a corporation) hereinafter called the "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned;

1. The CONTRACTOR will commence and complete the **Fair Oaks Community Center Improvements.**

2. The CONTRACTOR will furnish all of the material not supplied by Owner, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS WITHIN 10 calendar days after the date of the NOTICE TO PROCEED and will complete the same within **45** consecutive calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all the work described in the CONTRACT DOCUMENTS and comply with the terms therein for the amount of $ _____ as shown in the Bid schedule.

5. The CONTRACTOR agrees the sum of 5% of progress pay estimates will be retained until final acceptance of the PROJECT further the sum of 2% of the total PROJECT will be retained for a period of ninety days from final acceptance of the work.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

    - Invitation to Bid
    - Information to Bidders
    - Bid Proposal
    - Bid Bond
    - Proposed Subcontractors
    - Statement of Experience
    - Qualification Statement
    - Contract Agreement
    - Form of Payment Bond
    - Form of Performance Bond
    - General Conditions
    - Special Conditions

- Technical Specifications
- Drawings prepared by CLA Engineers, Inc.
- Specifications prepared by CLA Engineers, Inc.
- Addenda:
  No. _____, dated _____
  No. _____, dated _____
  No. _____, dated _____
  No. _____, dated _____

7. The OWNER will pay the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

8. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns. IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in (3 copies) each which shall be deemed an original on the date first above written.

OWNER:_____ CORPORATE SEAL:

BY _____
(Title)
ATTEST _____

CONTRACTOR:_____ CORPORATE SEAL:

BY _____
(Title)
ATTEST _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)
_____ a _____
(Corporation, Partnership, or Individual)
hereinafter called "Principal" and _____
(Surety)
of , _____ State of _____ hereinafter called the

"Surety", are held and firmly bound unto The Town Of Montville, hereinafter
(Owner)
called "Owner", in the penal sum of _____Dollars ($_____) in lawful money of the United States, for the payment made, we bind ourselves, and successors, jointly presents of which sum well and truly to be our heirs, executors, administrators and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____ , 20_, a copy of which is hereto attached and made a part hereof for the construction of:

Fair Oaks Community Center Improvements

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work of to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary thereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20___.

ATTEST:

_____
Principal

_____
(Principal) Secretary
(SEAL)

By _____(s)

_____
(Address-Zip Code)

_____
Witness as to Principal

_____
(Address-Zip Code)

_____
Surety

ATTEST:

_____
(Surety) Secretary
(SEAL)

By _____
Attorney-in-Fact

_____
Witness as to Surety

_____
(Address-Zip Code)

_____
(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)
_____ a _____
(Corporation, Partnership, or Individual)
hereinafter called "Principal" and _____
(Surety)
of , _____ State of _____ hereinafter called

the "Surety", are held and firmly bound unto The Town of Montville
(Owner)

hereinafter called "Owner", in the penal sum of_____Dollars ($_____) in lawful money of the United States, for the payment made, we bind ourselves, and successors, jointly presents of which sum well and truly to be our heirs, executors, administrators and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____ , 20_ , a copy of which is hereto attached and made a part hereof for the construction of:

Fair Oaks Community Center Improvements

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work of to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST:

_____
Principal

_____
(Principal) Secretary
(SEAL)

By _____(s)

_____
(Address-Zip Code)

_____
Witness as to Principal

_____
(Address-Zip Code)

_____
Surety

ATTEST:

_____
(Surety) Secretary
(SEAL)

By _____
Attorney-in-Fact

_____
Witness as to Surety

_____
(Address-Zip Code)

_____
(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

TECHNICAL SPECIFICATIONS

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

PROJECT/WORK IDENTIFICATION

General: This Project **"Scheduled Renovations to Community Center at Fair Oaks School, 836 Old Colchester Road, Oakdale, CT."** and is so described in Drawings and Project Manual known as **Contract Documents**, dated as, March 20, 2022
CONTRACTORS, SUPPLIERS, VENDORS & TRADESMEN:
To all involved in this Project:

This work covers the scheduled Demolition, and New Work for:

- Removal of existing VCT /VAT floor tiles and adhesive, existing vinyl wall base and adhesive, preparation and leveling of existing concrete floor substrate surface for the installation of **New Scheduled Floor Finish**, indicate wall base, and painting of disturbed walls and trims damaged during the course of scheduled work. Project Manual or on the drawings, the complete and finished construction of indicated building and site work as indicated in the Contract Documents.

- Including indicated repairs, modification and work to:
  Removal of existing metal steam heating elements, wall mounted at indicated rooms and spaces, Fabrication and installation meeting manufacturer's requirements and HVAC improvements indicated to specific equipment, devices, units specified in the Project Manual or on the drawings, the complete and finished construction of indicated building and site work as indicated in the Contract Documents.

The scheduled construction covers the complete construction of the work indicated in the drawings and specifications. This contractor shall commence and continue un-interrupted until fully completed and ready for Owners intended use.

This Contractor shall provide, and be fully responsible for and install and maintain flagged, fenced, and protected paths of travel to and from the building, and interior Exits and Passages out of the building.

Scheduled interior repairs, renovations indicated and described.

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

This project entails the completed construction of the building and its components indicated in the Contract Documents, and further described in outline form, but not necessarily limited to;

General: The project is the **"Scheduled Renovation to Community Center at Fair Oaks School, location at 836 Old Colchester Road, Oakdale, CT."** The intent of these Contract Documents and of the work specified under the contract is to properly construct the new indicated work, in accordance to the Contract Documents prepared by the office of Fred Marzec – Architects, LLC and the indicated consultants, and dated as indicated on the drawings and project manual.

Work shall be scheduled on a priority basis from the scheduled interior changes and modifications, scheduled and indicated by plans, elevations, details and notes for work, always keeping the existing construction weather tight and secure.
Preparations of shop drawings for the fabrication and erection of scheduled components of the building.

Installation of all, Plumbing, HVAC and Electrical design components indicated in the Contract Documents
Completion of site modifications, improvements and paving materials indicated.

The work described does not address the full and complete scope of the project but provides a general list of the type work indicated for this project.

The Contractor is to prepare a work schedule, approved by the Owner and Design Team, carefully identifying areas of work, time frames, dates, etc. necessary and coordinated with Owner's ability to operate and the Contractor's ability to do scheduled construction.

The work shall continue until the project is completed and finished in every way, ready for the Owner's use occupation and as intended.

In addition, all work must be prepared, administered and installed in a completely safe manner, securing the building and grounds at the end of each day's work.

CONTRACTOR USE OF PREMISES:
General: The Contractor shall limit his use of the premises to the work indicated, so as to allow continued use of the building and the Owner's needed to schedule work by other contractors. This Contractor shall;

1. Use of the Site: Confine operations at the building site to the areas permitted under the Contract. Portions of the building site beyond areas on which work is indicated are not to be disturbed. Conform to rules and regulations affecting the work while engaged in project construction. Contact the Owner to coordinate the

requirements for parking of trailers, equipment and work force vehicles.

2. Keep existing driveways and entrances serving the premises clear and available to the throughout the entire scheduled construction period. Do not use these areas for parking or storage of materials.

3. The site has a limited area to meet the Owners needs and services, and is shared by the American Ambulance Company for Emergency Services, do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage to the areas indicated. If additional storage is necessary obtain and pay for such storage off site.

4. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place. NO PARKING IS ALLOWED WITHIN THE LIMITS OF WORK.

5. Precaution: The General Contractor shall maintain the site and building in a safe condition, free of debris, and the outside grounds adjacent to the building area for the protection of personnel at the project site during construction. Debris shall be cleaned up on a daily basis, leaving the site reasonably clean and in a safe manner the end of each day's work.

6. Work under this contract covers and is integrated to work being performed under separate contract by others. This Contractor is required to perform coordination of contracts being administered by the Owner.

Contractor Use of the Existing Building: Maintain the existing building in a safe and weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1. Keep public areas such as hallways corridors, stairs and offices free from accumulation of waste material, rubbish, or construction debris.

2. Smoking or open fires will not be permitted within the building enclosure or on the premises.

ALTERATIONS AND COORDINATION

General: The work of this Contract includes coordination of the entire work of the project, including preparation of general coordination drawings, diagrams, and schedules,

and control of site utilization, from beginning of construction activity through project close-out and warranty periods.

MISCELLANEOUS PROVISIONS:

This Contractor to prepare a work specific schedule (graphic and written) showing dates and locations of various portions of work (i.e., demolition, new installation, painting Punch listing, inspection, etc.) This schedule to be reviewed by Owner, Engineers / Architect, local Fire Marshal and Building Official with signed approval by Owner & Contractor prior to commencement of any construction work.

The approved work schedule to have place for each subcontractor to sign and acknowledging their scheduled dates, time and work.

PROJECT REVIEW

This Contractor to review each area of work to the building and site to fully comprehend the type, volume of work, and any complexities which might be encountered in performing the scheduled work.

PROJECT CONDITIONS

This Contractor is informed that work carried out under this scope of the Contract Documents is to acknowledge the above facts and procedures and construction means is to be coordinated and completed, acknowledging the occupancy of the building by the occupants and visitors. All necessary safety requirements ensuring the proper standards for the occupation of their respective uses are to be carried out.

This Contractor to provide all means of producing proper ventilation in work areas through the use of mechanical means, reducing the accumulation of odors, fumes, or toxic gases from the construction procedures. No noticeable amount of accumulated odor, gas, or other substance as deemed by the local fire marshal and health official will be allowed.

At the close of each day's work, the building is to be clean of all accumulated construction debris, properly disposed off site, the building shall be secured from un-authorized entrance. There shall be no storage of trash or construction debris allowed inside overnight or when no construction work activity is planned.

The Contractor will be allowed the option of "Pre-Fabricating" work if in the Contractor's opinion he can complete the installation and required safety of the work within the scope of a typical day.

END OF SECTION 01010

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplemental Conditions and other Division 1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

Minimum administrative and supervisory requirements necessary for coordination of work on the project include but are not necessarily limited to the following:

1. Coordination and meetings.
2. Administrative and supervisory personnel.
3. Limitations for use of site.
4. Special reports.
5. General installation provisions.
6. Cleaning and protection.

COORDINATION AND MEETINGS:

A. General: Prepare a written memorandum on required coordination activities. Include such items as required notices, reports and attendance at meetings. Distribute this memorandum to each entity performing work at the project site. Prepare similar memorandum for separate contractors where interfacing of their work is required.

B. Coordination Drawings: Prepare coordination drawings where work by separate entities required fabrication of off-site products and materials which must accurately interface. Coordination drawings shall indicate how work shown by separate shop drawings will interface, and shall indicate sequence for installation. Comply with all requirements of the "Submittals" section.

C. Monthly Coordination Meetings: Hold, on a minimum basis, monthly general project coordination meetings at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as regular project meetings and special pre-installation meeting.

Request representation at each meeting by every party currently involved in

coordination or planning for the work of the entire project. Conduct planning for the work of the entire project. Conduct meetings in a manner which will resolve coordination problems. Record results of the meeting and distribute copies to every one in attendance and to others affected by decisions or actions resulting from each meeting.

ADMINISTRATIVE/SUPERVISORY PERSONNEL:

A. General: In addition to a General Superintendent and other administrative and supervisory personnel required for performance of the work, provide specific coordinating personnel as specified herein.

B. Project Coordinator: Provide a full-time Project Coordinator experienced in administration and supervision of building construction, including mechanical and electrical work. This Project Coordinator is hereby authorized to act as general coordinator of interfaces between units of work. For the purpose of this provision, "interface" is defined to include scheduling and sequencing of work, sharing of access to work spaces, installation, protection of each other's work, cutting and patching tolerances, cleaning, selections for compatibility, preparation of coordination drawings, inspections, test, and temporary facilities and services.

C. Submittal of Staff Names, Duties: Within 15 days of Notice to Proceed, submit a listing of Contractor's principal staff assignments and consultants, naming persons and listing their addresses and telephone numbers.

SURVEYS AND RECORDS/REPORTS:

A. General: Working from lines and levels established by the property survey, establish and maintain benchmarks and other dependable markers. Establish bench marks and markers to set lines and levels for work at each portion of construction and elsewhere as needed to properly locate each element of the project. Calculate and measure required dimensions as shown within recognized tolerance. Drawings shall not be scaled to determine dimensions. Notify entities performing work, of marked lines and levels provided for their use.

LIMITATIONS ON USE OF THE SITE:

General: Limitations on site usage as well as specific requirements that impact site utilization are indicated on the drawings and by other contract documents. In addition to these limitations and requirements administer allocation of available space equitable among entities needing both access and space so as to produce the best overall efficiency in performance of the total work of the project. Schedule deliveries so as to minimize

space and time requirements for storage of materials and equipment on site.

REPORTING UNUSUAL EVENTS: When an event of an unusual and significant nature occurs at the site, prepare and submit a special report. List chain of events, persons participating, and response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. Advise the Owner in advance when such events are known or predictable.

REPORTING ACCIDENTS: Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION:

Pre-Installation Conferences: Hold a pre-installation meeting at the project site well before installation of each section of work which requires coordination with other work. Installer and representatives of the manufacturers and fabricators who are involved in or affected by that section of work, and with its coordination or integration with other work that has preceded or will follow shall attend this meeting. Advise the Architect of scheduled meeting dates.

A. At each meeting review progress of other work and preparation for the particular work under consideration including specific requirements for the following:
   1. Contract documents
   2. Deliveries
   3. Shop drawings, product data and quality control samples.
   4. Possible conflicts and compatibility problems
   5. Time schedules
   6. Weather limitations.
   7. Manufacturer's recommendations
   8. Compatibility of materials.
   9. Acceptability of substrates.
   10. Temporary facilities
   11. Inspection and testing requirements.
   12. Required performance results.
   13. Recording requirements
   14. Protection.

B. Record significant discussions of each conference, and record agreements and disagreements, along with the final plan of action. Distribute the record of meeting promptly to everyone concerned, including the Owner and Architect/Engineer.

C. Do not proceed with the work if the pre-installation conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the work and reconvene pre-installation conference at the earliest feasible date.

D. Installer's Inspection of Conditions: Require the Installer of each major section of work to inspect the substrate to receive work and conditions under which the work is to be performed. The installer shall report all unsatisfactory condition in writing to the Contractor and Architect. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

E. Manufacturer's Instructions: Where installations include manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation, to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the contract documents.

F. Inspect each item of materials or equipment immediately prior to installation. Reject damaged and defective items.

G. Provide attachment and connection devices and methods for securing work. Secure work true to line and level, and within recognized industry tolerances. Allow expansion and building movement. Provide uniform joint width in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable visual-effect choices to the Architect for final decision.

H. Recheck measurements and dimensions of the work, as an integral step of starting each installation.

I. Install each section-of-work during weather conditions and project status which will ensure the best possible results in coordination with the entire work. Isolate each section of work from incompatible work as necessary to prevent deterioration.

J. Coordinate enclosure of the work with required inspections and tests, so as to minimize the necessity of uncovering work for that purpose.

K. Mounting Heights: Where mounting heights are not indicated mount individual units of work at industry recognized standard mounting heights for the particular application indicated. Refer questionable mounting height choices to the Architect for final decision.

CLEANING AND PROTECTION:

A. General: During handling and installation of work at the project site, clean and protect work in progress and adjoining work on the basis of continuous maintenance. Apply protective covering on installed work where it is required to ensure freedom from damage or deterioration at time of substantial completion.

Clean and perform maintenance on installed work as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

B. Limiting Exposure of Work: To the extent possible through reasonable control and protection methods, supervise performance of the work in such a manner and by such means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous or otherwise deleterious exposure during the construction period.

END OF SECTION 01040

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division- 1 Specification sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS

General: This section specifies procedural requirements for non-administrative submittals including shop drawings, product data, samples, and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.

1. Refer to other Division - 1 section and other contract documents for specifications on administrative, non-work-related submittals. Such submittals include but are not limited to the following items:

Permits
Payment applications
Performance and payment bonds
Insurance certificates
Inspection and test reports
Schedule of values
Progress reports
Listing of subcontractors

Shop Drawings are technical drawings and data that have been specially prepared for this project, including but not limited to the following items:

Fabrication and installation drawings
Setting diagrams
Shop-work manufacturing instructions
Templates
Patterns
Coordination drawings (for use on-site)
Schedules
Design mix formulas
Standard information prepared without specific reference to a project is not considered to be shop drawings.

Product data includes standard printed information on manufactured products that has not been specially-prepared for this project, including but not limited to the following items:

Manufacturer's product specifications and installation instructions
Standard color charts
Catalog cuts
Roughing-in diagram and templates
Standard wiring diagrams
Printed performance curves
Operational range diagrams
Standard product operating and maintenance manuals

Samples are physical examples of work, including but not limited to the following items:
Partial sections of manufactured or fabricated work
Small cuts or containers of materials
Complete units of repetitively-used materials
Swatches showing color, texture and pattern
Color range sets
Units of work to be used for independent inspection and testing

Miscellaneous submittals: are work-related, non-administrative submittals that do not fit in the three previous categories, including, but not limited to the following:

Specially-prepared and standard printed warranties
Maintenance agreements
Testing and certification reports
Record drawings
Field measurement data
Operating and maintenance manual
Keys and other security protection devices
Maintenance tools and spare parts
Overrun stock

SUBMITTAL PROCEDURES:

General: Refer to the General Conditions for basic procedures for submittal handling:

Coordination: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.

Coordinate the submittal of different units of interrelated work so that one submittal will

not be delayed by the Architect's/ Engineer's need to review a related submittal. The Architect/ Engineer reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.

COORDINATION OF SUBMITTAL TIMES: Prepare and transmit each submittal to the Architect sufficiently in advance of the scheduled performance of related work and other applicable activities. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the Architect's need to review submittals concurrently for coordination.

REVIEW TIME: Allow sufficient time (minimum of 14 days) so that the installation will not be delayed as a result of the time required to properly process submittals, including time for re-submittal, if necessary. Advise the Architect on each submittal, as to whether processing time is critical to the progress of the work, and if the work would be expedited if processing time could be shortened.

SUBMITTAL PREPARATION: Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.

Project name
Date
Name and address of Architect
Name and address of Contractor
Name and address of subcontractor
Name and address of supplier
Name of manufacturer

Provide a space on the label for the Contractor's review and approval markings, and a space for the Architect's "Action" marking.

SUBMITTAL TRANSMITTAL: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect, and to other destinations is indicated, by use of a transmittal form. Sub-transmittals received from sources other than the Contractor will be returned to the sender "without action".

1. Transmittal Form: Prepare a draft of a transmittal form and submit it to the Architect for acceptance. Provide on the form places for the following information:

Project name
Date
To:
From:

Names of subcontractor, manufacturer and supplier
Reference
Category and type of submittal
Submittal purpose and description
Submittal and transmittal distribution record
Signature of transmitter

Contractor's certification stating that the information submitted complies with the requirements of the Contract Documents, with a place for the Contractor's signature.

Record relevant information and requests for data on the transmittal form. On the transmittal form, or on a separate sheet attached to the form, record deviations from the requirements of the Contract Documents, if any, including minor variations and limitations.

SPECIFIC SUBMITTAL REQUIREMENTS:

General: Specific submittal requirements for individual units of work are specified in the applicable specification section. Except as otherwise indicated in the individual specification sections, comply with the requirements herein for each type of submittal.

1. Where it is necessary to provide intermediate submittals between the initial and final submittals provide and process intermediate submittals in the same manner as for initial submittals.

Shop Drawings: Information required on shop drawings includes, dimensions and identification of specific products and materials which are included in the work. Compliance with specified standards and notations of coordination requirements with other work. Provide special notation of dimensions that have been established by field measurements. Highlight, encircle or otherwise indicate deviations from the contract documents on the shop drawings.

1. Coordination Drawings: Provide coordination drawings where required for the integration of the work, including work first shown in detail on shop drawings or product data. Show sequencing and relationship of separate units of work which must interface in a restricted manner to fit in the space provided, or function as indicated. Coordination drawings are considered shop drawings and must be definitive in nature.

2. Do not permit shop drawing copies without an appropriate final "Action" marking by the Architect/Engineer to be used in connection with the work.

3. Preparation: Submit newly prepared information, drawn to accurate scale on

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01500 - TEMPORARY UTILITIES AND FACILITIES

Part 1 - GENERAL:

General:

The existing building has electrical power, and potable water available. This Contractor shall be responsible to contact the Owner / Representative for use of both power and water, and how to make connections for both interior and exterior water and power sources, and establish all necessary permanent and temporary power requirements, to establish the necessary means and methods to both create and operate a construction this project.

The Contractor to provide distribution systems as required for the prosecution of the scheduled work in accordance with all applicable codes, regulations and standards of sufficient capacity to cause no delay in the work.

The Contractor shall maintain existing electrical wiring, and lighting in operating order during this construction, until such time, when or if new electrical work will be in operation to both the contractor and the Owner, fully inspected and approved by the Authority Having Jurisdictions (AHJ)

This Contractor shall provide temporary heat for use by the Contractors and subcontractors personnel, for the protection and drying out of the work and comfort of workmen.

There are existing restrooms on the main floor, and this Contractor and its sub-contractors shall be allowed used of, and also be responsible for the cleaning of this space, its fixtures and all necessary accessories for use in an acceptable Public Health compliance. The owner shall have final acceptance of the existing restroom and its use. Should abuse, lack of care or its sanitary conditions become a problem, the contractor and its sub-contractors shall stop use of the restroom and will become responsible for all necessary temporary portable chemical toilet and accessories needed for the duration of the project.

END OF SECTION 1500

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01020 - ALLOWANCES

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division -1 Specification sections, apply to work of this section.

Allowances shall not include Contractor's costs for unloading and handling at site, overhead, profit and other expenses contemplated for stated allowance amounts. These shall be included in the Contract Sum and not in the allowances. Labor, installation cost and material cost shall be in the unit price method as addressed in the Form of Proposal.

Coordinate allowance work with related work to ensure that each selection is completely integrated and interfaced with related work.

DESCRIPTION OF REQUIREMENTS:

Definitions and Explanations: Certain requirements of the work related to each allowance are shown and specified in contract documents. The allowance has been established in lieu of additional requirements for that work and further requirement thereof (if any) will be issued by change order.

Types of allowances scheduled herein for the work include the following:

Lump sum allowances
Unit-cost allowances

Selection and Purchase Utilized: At earliest feasible date after award of Contract, advise Architect/Engineer of scheduled dates when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid delays in performance of the work.

As requested by the Architect, obtain and submit proposals for the work of each allowance for use in making final selections, include recommendations for selection which are relevant to the proper performance of the work.

The Allowances indicated shall be held by the Contractor and administered by the Owner, who shall designate their use by the issue of appropriate change orders for minor changes in the work.

Money not expended at the date of substantial completion shall be returned to the

Owner and the Allowance terminated by change order.

SCHEDULE OF ALLOWANCE:

Allowance #1:

For unforeseen conditions & issues	$ 5,000.00

END OF SECTION 01020

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01045 - CUTTING & PATCHING

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

Definition: "Cutting and patching" includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required restoring surfaces to their original condition.

1. "Cutting and patching" is performed for coordination of the work, to uncover work for access or inspection, to obtain samples for testing, to permit alterations to be performed or for other similar purposes.

2. Cutting and patching performed during the manufacture of products, or during the initial fabrication, erection or installation processes is not considered to be "cutting and patching" under this definition. Drilling of holes to install fasteners and similar operations are also not considered to be "cutting and patching."

Refer to other sections: of these specifications for specific cutting and patching requirements and limitations applicable to individual units of work.

QUALITY ASSURANCE:

Requirements for Structural Work: Do not cut, and patch structural work in a manner that would result in a reduction of load-carrying capacity or of load-deflection ratio.

Operational and Safety Limitations: Do not cut, and patch operational elements or safety related components in a manner that would result in a reduction of their capacity to perform in the manner intended, including energy performance, or that would result in increased maintenance, or decreased operational life or decreased safety.

PART 2 - PRODUCTS:

MATERIALS:

General: Except as otherwise indicated, or as directed by the Architect, use materials for cutting and patching that are identical to existing materials. If identical materials are not

available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal-or -better performance characteristics.

PART 3 - EXECUTION

INSPECTION:

Before cutting, examine the surfaces to be cut and patched and the conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with the work.

Before the start of cutting work, meet at the work site with all parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict between the various trades. Coordinate layout of the work and resolve potential conflicts before proceeding with the work.

PREPARATION:

Temporary Support: To prevent failure provide temporary support of work to be cut.

Protection: Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of the project that may be exposed during cutting and parching operations.

1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

Take precautions not to cut existing pipe, conduit or duct serving the building but scheduled to be relocated until provisions have been made to bypass them.

PERFORMANCE:

General: Employ skilled workmen to perform cutting and patching work. Except as otherwise indicated or as approved by the Architect, proceed with cutting and patching at the earliest feasible time and complete work without delay.

Cutting: Cut the work using methods that are least likely to damage work to be retained or adjoining work. Where possible review proposed procedures with the original installer; comply with original installer's recommendations.

1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping, cut through concrete and masonry using a cutting machine such as a Carborundum saw or core drill to insure a neat hole. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. To

avoid marring existing finished side surfaces, cut or drill from the exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.

2. By-pass utility services such as pipe and conduit, before cutting, where such utility services are shown or required to be remove, relocated or abandoned. Cut-off conduit and pipe in walls or partitions to be removed. After by-pass and cutting, cap, valve or plug and seal tight remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter.

Patching: Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.

1. Where feasible, inspect and test patched areas to demonstrate integrity of work.

2. Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining work in a manner which will eliminate evidence of patching and refinishing.

3. Where removal of walls or partitions extends one finished area into another finished area, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance, remove existing floor and wall coverings and replace with new materials.

   Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coat.

CLEANING:

Thoroughly clean areas and spaces where work is performed or used as access to work. Remove completely, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 01341 - GUARANTEES/WARRANTIES

GENERAL:

A Submit Guarantees or Warranties in triplicate on firm's letterhead, properly executed and enacted. Submit in the following form, unless specified otherwise:

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

We, _____ (Firm Name) _____, hereby guarantee (or warrant) all _____ (DESCRIPTION OF WORK OR PRODUCT) _____ for a period of ____ years after the substantial completion of the Project indicated above, against _____(DESCRIPTION OF THE SPECIFIC TYPES OF FAILURES OF MATERIAL AND/OR WORKMANSHIP) _____, in accordance with the requirements of Section ___ (NUMBER)___, _____(SECTION TITLE)___, page ___(NUMBER), article __ (NUMBER)__, of the Contract Documents.

Signed _____ (SUBCONTRACTOR)___
by____ (AUTHORIZED AGENT)
Title _____
Business Address _____
_____

Signed ____(CONTRACTOR)_____
by _____ (AUTHORIZED AGENT) _____
Title_____
Business Address _____
_____

B. All Guarantees or Warranties supplied by suppliers or manufacturers shall be countersigned by the Sub Contractor and the General Contractor)

C. All signatures and seals (if required) shall be originals, no copies shall be accepted.

END OF SECTION 01341

Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road
Oakdale, CT.

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contact, including General and Supplementary Conditions and other Division - 1 Specification sections apply to work of this section.

DESCRIPTION OF REQUIREMENTS:

Definitions: Types of work in this section include rough carpentry for:

- Wood blocking, fillers, and sub-support
- Plywood panels
- Wood blocking for general use
- Pressure treated wood construction materials
- Wood Framing

Rough Carpentry includes carpentry work not specified as part of other sections and which is generally not exposed, except as otherwise indicated.

SUBMITTALS:

Material Certificates: Where dimensional lumber is provided to comply with minimum allowable unit stresses, submit listing of species and grade selected for each use, and submit evidence of compliance with specified requirements. Compliance may be in form of a signed copy of applicable portion of lumber producer's grading rules showing design values for selected species and grade. Design values shall be as approved by the Board of Review of American Lumber Standards Committee.

Wood Treatment Data: Submit for each type specified, include certification by treating plant, stating type of preservative solution and pressure process used, net amount of preservative retained and conformance with applicable standards.

Pressure and Fire-Retardant Treatment: Include certification by treating plant that treated material complies with specified standard and other requirements.

PRODUCT HANDLING:

Delivery and storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

PROJECT CONDITIONS:

Coordination: Fit carpentry work to new and existing conditions and other work, scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other work. Review all drawings and specification sections to coordinate the needs of all related trades.

PART 2 - PRODUCTS

LUMBER

General: Comply with the "American Softwood Lumber Standard" PS-20 and with applicable grading rules of inspection agencies certified by American Lumber Standard Committee (ALSC) Board of Review. Normal sizes are shown or specified.

1. Provide dressed lumber, S4S, with not-greater-than 19% maximum moisture content, standard grade, and any species.

2. Grade stamps: Factory-mark each piece of lumber with grade stamp of inspection agency evidencing compliance with grade rule requirements and identifying grading agency, grade, species, moisture content of time of surfacing and mill.

   Grade: Construction grade framing lumber, of Douglas / Fir species. Board size lumber as required. No.3 Common or Standard grade boards per WCLB or WWPA rules No.3 boards per SPIB rules.

   All Framing to meet the following: Douglas Fir No. 2 or better.

3. Nominal sizes: are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS-20 for moisture content specified for each use.

4 Dimension, Lumber: In compliance with National Forest Products Association

   Standard NDS (current edition) National Design Specifications for Wood Construction and in accordance with Design Values Joist and Rafters- Visually graded NLGA grading agency.

Construction Panels: Construction Panel Standards comply with PS-1 "U.S. Product Standards for construction and Industrial Plywood" for plywood panels and for products not manufacturers under PS-1 provisions, with American Plywood Association (APA) "Performance Standards and Policies for Structural Use Panels", Form No. E445.

Trademark: Factory mark each panel with APA trademark evidencing compliance with grade requirements.

WOOD TREATMENT BY PRESSURE PROCESS

Preservative Treatment:

A. Provide pressure treated lumber for all wood cants, nailers, curbs, blocking, stripping, and similar members in connections with roofing, exterior framing, flashing, vapor barriers, waterproofing, all wood sills, sleepers, and similar concealed members in contact with masonry or concrete surfaces.
B. All lumber exposed to the weather shall be pressure treated, ACQ. Level of treatment shall be in accordance with AWPA Standards for retention based on the end use application (above ground use, ground contact, decking).
C. All metal hangers used in conjunction with pressure treated wood shall be hot dipped galvanized with G-185 coating thickness to prevent corrosion of the embedded metal with copper-based preservatives.

FASTENERS

Fasteners for all exterior work to be hot dipped galvanized G-185 coated fasteners of sizes required to properly and fully support work.

MISCELLANEOUS MATERIALS

Fasteners and Anchorage: Provide size and type as required, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, washers, and anchoring devices.

PART 3 - EXECUTION

INSTALLATION, GENERAL:

Discard units of material with defects which might impair quality of work and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.

Set carpentry work to required levels and lines, with members plumb and true to line and cut and fitted.

Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards.

Countersink nail heads on exposed carpentry work and fill holes.

Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required.

WOOD GROUND, NAILERS, BLOCKING AND SLEEPERS:

Provide wherever shown and where required for screeding or attachment of other work. Formed to shapes as shown, and cut as required for true line and level of work to be attached. Coordinate location with other work involved.

Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry/concrete during installation of work. Where possible, anchor to foot work before concrete placement.

Provide permanent grounds of dressed, preservative treated, key-beveled lumber not less than 1 /2" wide and of thickness required to bring face of ground to exact thickness of finish material involve. Remove temporary grounds when no longer required.

Wood Framing - General: Provide framing members of sizes and on spacing shown and frame openings as shown. Do not splice structural members between supports. Anchor and nail as shown, and to comply with "Recommended Nailing Schedule" of Manual for "House Framing and National Design Specifications for Wood Construction" published by NFPA.

INSTALLATION OF CONSTRUCTION PANELS:

General: Comply with applicable recommendations contained in Form No. E 30 F, "APA Design/Construction Guide - Residential & Commercial" for types of construction panels and applications indicated.

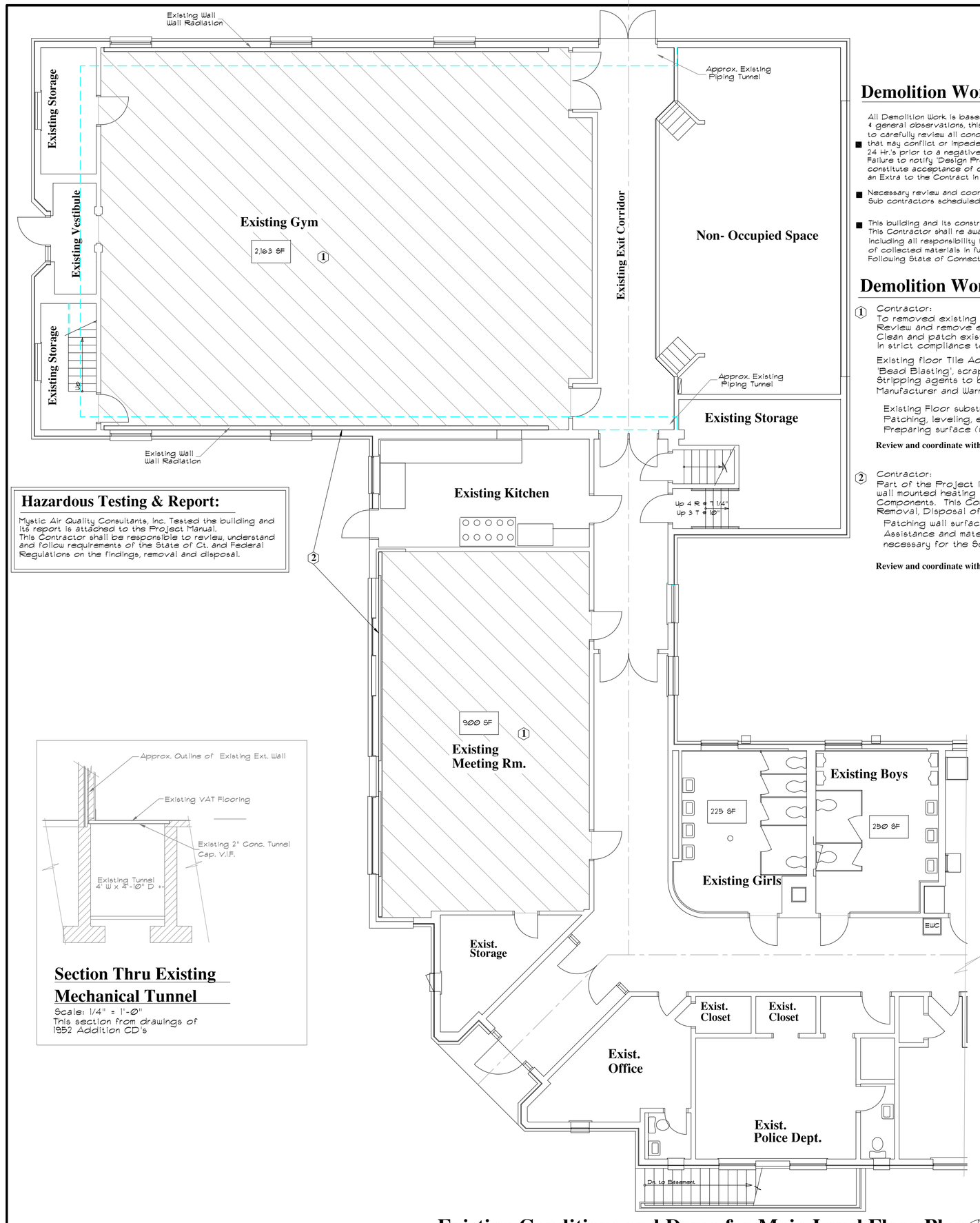
Fastening Methods: Fasten indicated gypsum panels with self-drilling self-tapping bugle head screws. Fasten wood panel to framing following recommended nailing schedule.

Plywood Backing Panels: Nail to supports

Holes, Cuts and notches not previously approved by the manufacturer shall not be permitted.

Provide minimum fasteners required by manufacturers for properly securing members in place, ready to receive design forces.

END OF SECTION 06100



Existing Conditions and Demo for Main Level Floor Plan

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

Demolition Work General Notes:

All Demolition Work is based on information obtained from field review, measurements, & general observations, this Contractor and its Subcontractors Shall Be Responsible to carefully review all conditions, and report to the Architect of Record on conditions

- that may conflict or impede the intended Demolition and or New Work in writing at least 24 Hr's prior to a negative impact to the General or its Sub-contractors, Vendors, Failure to notify "Design Professionals" or commencement of such work and its issues, shall constitue acceptance of conditions, insert and ability to install as noted, and not become an Extra to the Contract in Time or added Funds.
- Necessary review and coordination shall occur between the General Contractor, and All Sub contractors scheduled installation, routing, support and required new work and materials.
- This building and its construction has been Field Reviewed / Tested for ACM materials and this This Contractor shall re suare and have read the reports, its content for Hazardous Materials, Including all responsibility for necessary Materials, Labor, removal, packaging, and Disposal of of collected materials in full accordance with all ' Rules, Regulations, Requirements for such materials Following State of Connecticut & Federal regulations for Documentation and Disposal.

Demolition Work Notes:

1 Contractor:
To removed existing vinyl wall based and adhesive.
Review and remove existing VAT / VCT Flooring and all adhesive.
Clean and patch existing conc. subfloor for scheduled New Floor Finish in strict compliance to Floor Finish Material Manufacturer's requirements

Existing floor Tile Adhesive, shall be removed by Mechanical methods: "Bead Blasting", scraping or other accepted methods. No Chemical Stripping agents to be used, unless expressly acceptable to flooring Manufacturer and Warranty Requirements.

Existing Floor substrate (conc.) to receive new schedule materials.
Patching, leveling, existing conc. substrate.
Preparing surface (walls and floor) for new work.

Review and coordinate with New Architectural's, details and requirements.

2 Contractor:
Part of the Project is the removal and replacement of existing wall mounted heating radiation covers, brackets, fasteners and Components. This Contractor shall be responsible for the Review Removal, Disposal of said materials following rules and regulations.

Patching wall surfaces.
Assistance and materials for new fasteners, and such, coordination necessary for the Scheduled Installation.

Review and coordinate with New Architectural's & Mechanical details and requirements.

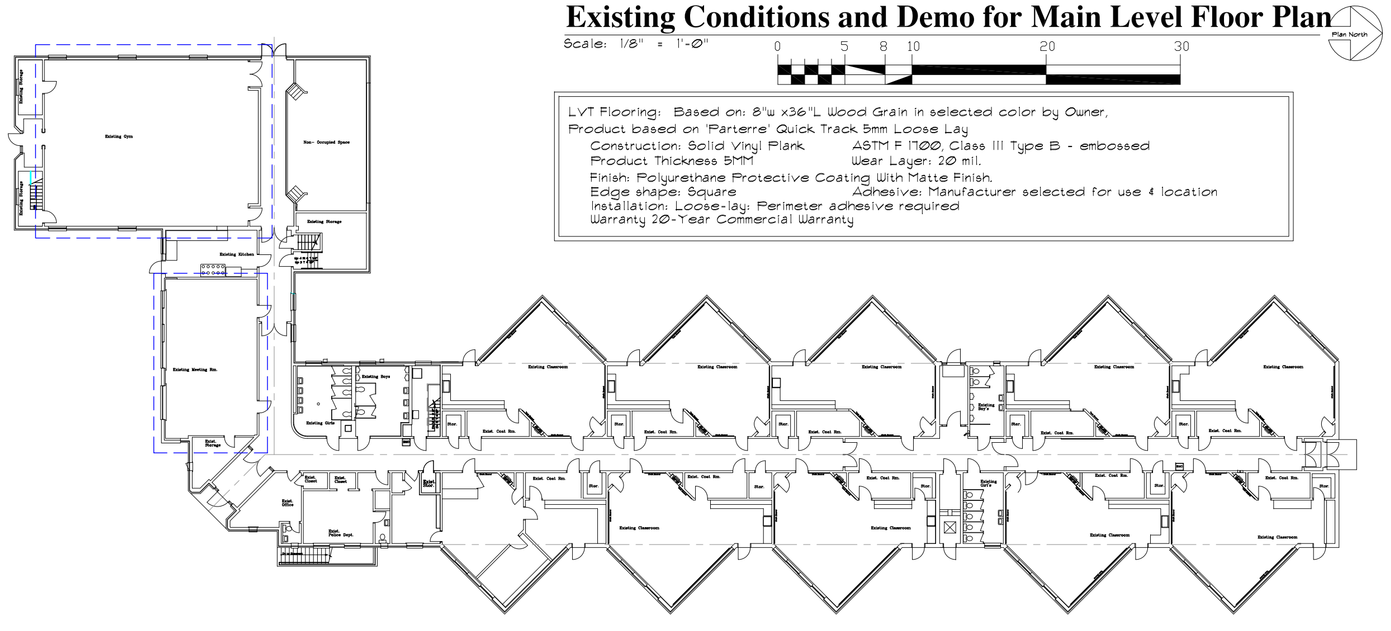
Hazardous Testing & Report:

Mystic Air Quality Consultants, Inc. Tested the building and its report is attached to the Project Manual.
This Contractor shall be responsible to review, understand and follow requirements of the State of Ct. and Federal Regulations on the findings, removal and disposal.

Section Thru Existing Mechanical Tunnel

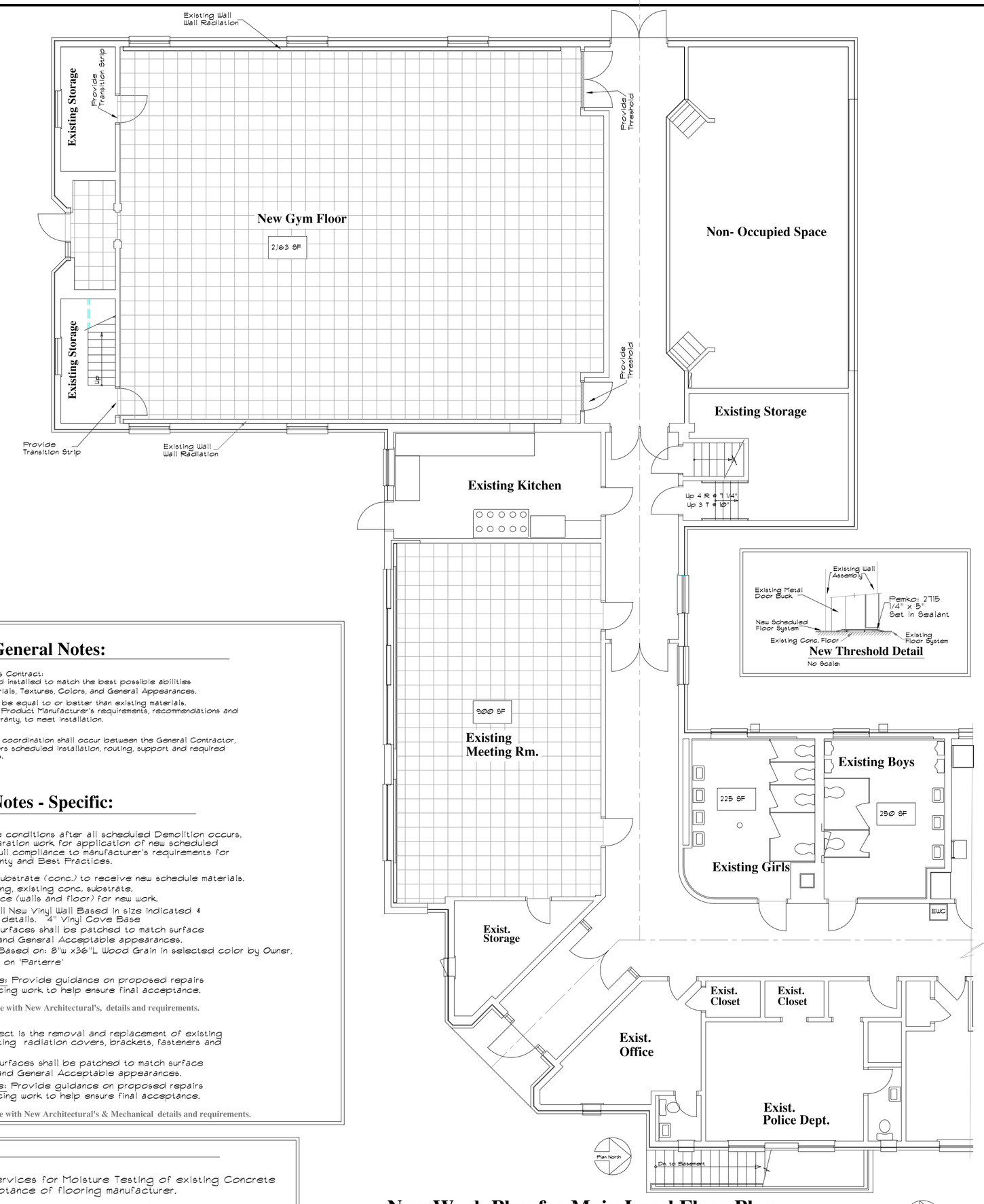
Scale: 1/4" = 1'-0"
This section from drawings of 1992 Addition CD's

LVT Flooring: Based on: 8"w x36"L Wood Grain in selected color by Owner,
Product based on "Parterre" Quick Track 5mm Loose Lay
Construction: Solid Vinyl Plank — ASTM F 1700, Class III Type B - embossed
Product Thickness 5MM — Wear Layer: 20 mil.
Finish: Polyurethane Protective Coating With Matte Finish.
Edge shape: Square — Adhesive: Manufacturer selected for use & location
Installation: Loose-lay: Perimeter adhesive required
Warranty 20-Year Commercial Warranty



Key Plan Main Level Floor

No Scale:



New Work Plan for Main Level Floor Plan

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

New Work General Notes:

All New work under this Contract:
Shall be provided and installed to match the best possible abilities
Existing Finished materials, Textures, Colors, and General Appearances.

- New materials used to be equal to or better than existing materials, workmanship to Follow Product Manufacturer's requirements, recommendations and installation for full Warranty, to meet installation.
- Necessary review and coordination shall occur between the General Contractor, and All Sub contractors scheduled installation, routing, support and required new work and materials.

New Work Notes - Specific:

A Contractor:
Review substrate conditions after all scheduled Demolition occurs.
Verify that preparation work for application of new scheduled materials are in full compliance to manufacturer's requirements for installation, Warranty and Best Practices.
For:
Existing Floor substrate (conc.) to receive new schedule materials.
Patching, leveling, existing conc. substrate.
Preparing surface (walls and floor) for new work.
Review and install New Vinyl Wall Based in size indicated & as indicated in details. "4" Vinyl Cove Base
Damaged wall surfaces shall be patched to match surface Color, Texture and General Acceptable appearances.
LVT Flooring: Based on: 8"w x36"L Wood Grain in selected color by Owner, Product based on "Parterre"

Contractor Note: Provide guidance on proposed repairs before commencing work to help ensure final acceptance.

Review and coordinate with New Architectural's, details and requirements.

B Contractor:
Part of the Project is the removal and replacement of existing wall mounted heating radiation covers, brackets, fasteners and Components.
Damaged wall surfaces shall be patched to match surface Color, Texture and General Acceptable appearances.
Contractor Note: Provide guidance on proposed repairs before commencing work to help ensure final acceptance.

Review and coordinate with New Architectural's & Mechanical details and requirements.

Contractor Note:

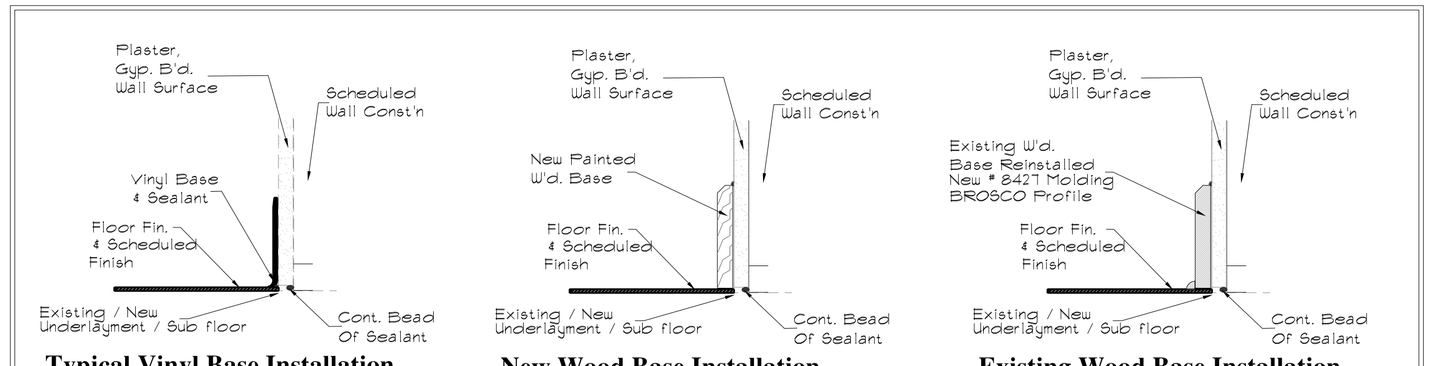
Moisture:
Shall provide the services for Moisture Testing of existing Concrete Substrate and acceptance of flooring manufacturer.

Testing: In-Situ Relative Humidity (RH) Test (ASTM F2170) or acceptable Moisture Vapor Emission Rate (MVER) Test (ASTM F1869) for acceptable moisture limits. Acceptable to Manufacturer of scheduled Floor Finish System (VCT / LVT)

If moisture exceed amounts acceptable by flooring manufacturer Refer to flooring manufacturer's acceptable Moisture Suppressant System. Cost will be taken form Allowance Values.

New Threshold Detail

No Scale:



Typical Vinyl Base Installation

No Scale:

Existing Gym: 4" High Vinyl Cove Base
Existing Meeting Rm: 4" High Vinyl Cove Base

New Wood Base Installation

No Scale:

New Wood Base:
1" x 6" Nominal Poplar
Shaped as Shown W/
Sealant Top & Bottom

Existing Wood Base Installation

No Scale:

Existing painted wood base
Cleaned, patched & Painted
W/ Continuous Bead of Sealant
Top & Bottom

Revisions: Date:

Fred Marzec - Architects, LLC
Architects and Planners
99 Colonel Brown Road
Griswold, CT. 06351
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Email address: fred@fredmarzec.com

Scheduled Renovations to Fair Oaks School Community Center

836 Old Colchester Road Oakdale, CT.

Existing Conditions /Demo

Floor Plan
Plan Detail
Detail

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PROJECT NO.: 2022-03.03

SCALE: AS NOTED
DRAWN BY: FRED M.
CHECKED BY:
DATE: March 15, 2022

A1

Sheet 1 of 1

MECHANICAL SYMBOL LEGEND

ALL ITEMS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT

GENERAL

- EQUIPMENT TO BE REMOVED
- NEW / EXISTING — POINT TO CONNECT NEW TO EXISTING. VERIFY SIZE AND LOCATION IN FIELD PRIOR TO INSTALLATION
- S — SWITCH
- S — TEMPERATURE SENSOR
- T — WALL THERMOSTAT
- H — WALL MOUNTED HUMIDISTAT
- CO2 — CARBON DIOXIDE DETECTOR
- T C — COOLING THERMOSTAT (REVERSE ACTING)
- T H/C — HEATING/COOLING THERMOSTAT
- THERMOSTAT GUARD w/ KEY LOCK BY HONEYWELL MODEL VERSAGUARD
- SP — DUCT MOUNTED STATIC PRESSURE SENSOR
- SD — DUCT MOUNTED SMOKE DETECTOR
- HS — DUCT MOUNTED HUMIDITY SENSOR
- TS — DUCT MOUNTED TEMPERATURE SENSOR
- DP — DUCT MOUNTED DEW POINT SENSOR

DUCTWORK

- SUPPLY CEILING DIFFUSER THROW PATTERN
- RETURN/EXHAUST CEILING REGISTER
- CEILING EXHAUST FAN WITH FLEXIBLE CONNECTION
- SIDE WALL GRILLE/REGISTER
- LINEAR DIFFUSER
- FLOOR GRILLE/REGISTER
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN/EXHAUST DUCT UP
- RETURN/EXHAUST DUCT DN.
- MITERED ELBOWS 90° w/ VANES
- MITERED ELBOWS 45° w/ VANES
- 30° 2 PIECE CUT ELBOW
- CUT ELBOW 45° 3 PIECE
- CUT ELBOW 60° 3 PIECE
- CUT ELBOW 90° 3 PIECE
- CUT ELBOW 90° 5 PIECE
- ROUND ELBOWS 90° LONG RADIUS (R/D=1.5)
- ROUND ELBOWS 90° SHORT RADIUS (R/D=1.25)
- ROUND ELBOWS 45° LONG RADIUS
- ROUND ELBOWS 45° SHORT RADIUS
- ROUND DUCT DROP
- ROUND DUCT RISER
- TAKE-OFF W/ BRANCH DAMPER (REFER TO DETAIL FOR TAKE-OFF TYPE)
- BULLHEAD SPLIT SUPPLY (OR)
- BULLHEAD CONVERGE RETURN/EXHAUST
- HORIZONTAL OFFSET
- FLEXIBLE CONNECTION (6" NEOPRENE)
- LINED DUCT - SIZE INDICATES INSIDE DIMENSION (24x12)
- 24x12 — RECTANGULAR DUCT - FIRST FIGURE IS SIDE SHOWN (24x12)
- SPIRAL DUCTWORK (26ø)
- FLEXIBLE DUCTWORK
- DUCT HUMIDIFIER
- DUCT FILTER BOX
- VOLUME DAMPER (OPPOSED BLADE TYPE)
- MD — MOTORIZED CONTROL DAMPER
- BDD — BACK DRAFT DAMPER
- FD — DYNAMIC FIRE DAMPER HORIZONTAL
- FD — DYNAMIC FIRE DAMPER VERTICAL
- OA — OUTSIDE AIR MEASUREMENT STATION
- DUCT CAP
- WELDED DUCT
- EXISTING DUCT TO REMAIN (SHOWN LIGHT)
- EXISTING DUCT TO BE REMOVED (SHOWN DARK)
- ACCESS PANEL ON BOTTOM OF DUCT
- ACCESS PANEL ON SIDE OF DUCT
- TRANSITION - ECCENTRIC
- TRANSITION - CONCENTRIC
- RECTANGULAR TO ROUND TRANSITION
- EXHAUST/RETURN/INTAKE FLOW ARROW
- SUPPLY AIR FLOW DIRECTION

PIPING

- HWS — HEATING HOT WATER SUPPLY
- HWR — HEATING HOT WATER RETURN
- CWS — CHILLED WATER SUPPLY
- CWR — CHILLED WATER RETURN
- DTS — DUAL TEMP SUPPLY (HEATING/CHILLED WATER)
- DTR — DUAL TEMP RETURN (HEATING/CHILLED WATER)
- HPS — HIGH PRESSURE STEAM (100psi)
- LPS — LOW PRESSURE STEAM (15psi)
- SCR — STEAM CONDENSATE RETURN (GRAVITY)
- PCR — PUMPED CONDENSATE STEAM RETURN
- L — LIQUID REFRIGERANT LINES
- S — SUCTION REFRIGERANT LINES
- CD — CONDENSATE DRAIN
- CTWS — COOLING TOWER WATER SUPPLY
- CTWR — COOLING TOWER WATER RETURN
- PIPE TURNING DOWN
- PIPE TURNING UP
- TEE OFF TOP
- TEE OFF BOTTOM
- DROP AND RUN
- DROP AND TURN
- TEE UP
- TEE DOWN
- VALVE IN RISER
- PIPE CAP
- CLEAN-OUT
- UNION (DIELECTRIC TYPE ON DISSIMILAR METALS)
- FLANGED (DIELECTRIC TYPE ON DISSIMILAR METALS)
- BALL VALVE
- GATE VALVE
- GATE VALVE
- BUTTERFLY VALVE
- GLOBE VALVE
- DIAPHRAGM VALVE
- OS-Y GATE VALVE
- 3-WAY VALVE
- 4-WAY VALVE
- CHECK VALVE (SWING TYPE)
- CHECK VALVE w/ BALL DRIP
- PRESSURE REDUCING VALVE
- PLUG VALVE
- CIRCUIT SETTER w/ GAGE PORT
- MULTI PURPOSE VALVE
- AUTOMATIC BALANCING VALVE
- PUMP
- STRAINER w/ BLOW DOWN (INLINE)
- PIPE DRAIN w/ BALL VALVE & CAP
- EPDM FLEXIBLE CONNECTION
- EPDM FLEXIBLE CONNECTION
- UP/DN — PITCH UP/DN. IN DIRECTION OF FLOW
- F&T STEAM TRAP
- ANCHOR
- PIPE GUIDE
- WALL SLEEVE
- FS — FLOW SWITCH
- FM — FLOW RATE METER (IN GPM)
- FS — FLOW SENSOR
- T — TEMPERATURE SENSOR
- SAFETY RELIEF VALVE PIPE TO FLOOR DRAIN
- MANUAL NON-RISING
- MANUAL LEVER
- QUICK OPEN LEVER
- M — PNEUMATIC ACTUATOR
- M — ELECTRIC ACTUATOR
- S — ELECTRIC ACTUATOR
- THERMOMETER w/ STOP
- PRESSURE GAGE w/ STOP
- AUTO. AIR VENT

ABBREVIATIONS

ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT

AFF	ABOVE FINISHED FLOOR	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
AC	AIR CONDITIONING UNIT	HV	HEATING & VENTILATING UNIT
AD	ACCESS DOOR	HHE	HEATING WATER HEAT EXCHANGER
AFF	ABOVE FINISHED FLOOR	HE	HEAT EXCHANGER
AF	AIR FILTER	HWP	HOT WATER PUMP
AHU	AIR HANDLING UNIT	HW	HOT WATER
AP	ACCESS PANEL	HWR	HOT WATER RETURN
ARCH	ARCHITECT	HWS	HOT WATER SUPPLY
ATC	AUTOMATIC TEMPERATURE CONTROL	HZ	HERTZ
AS	AIR SEPARATOR	IN	INCHES
AV	AIR VENT	IRV	INTAKE ROOF VENT
BB	BASEBOARD	KEF	KITCHEN EXHAUST FAN
BD	BAROMETRIC DAMPER (COUNTER BALANCED)	KW	KILOWATT
BDD	BACKDRAFT DAMPER	LAT	LEAVING AIR TEMPERATURE
BHP	BRAKE HORSEPOWER	LD	LINEAR DIFFUSER
BLDG	BUILDING	LF	LINEAR DIFFUSER
BOD	BOTTOM OF DUCT	LF	LINEAR FEET
BTU	BRITISH THERMAL UNITS	LPH	LOUVERED PENTHOUSE
BTUH	BTU PER HOUR	LPS	LOW PRESSURE STEAM
BV	BALL VALVE	LRA	LOCKED ROTOR AMPS
B	BOILER	LWT	LEAVING WATER TEMPERATURE
CB	CHILLER BOILER	MAU	MAKE-UP AIR UNIT
CC	COOLING COIL	MBH	THOUSANDS OF BTU'S PER HOUR
CEF	CEILING EXHAUST FAN	MCA	MINIMUM CIRCUIT AMPS
CFM	CUBIT FEET PER MINUTE	MD	MOTORIZED DAMPER
CH	CEILING HEATER	MECH	MECHANICAL
CH	CHILLER	MOCP	MAXIMUM OVER CORRENT PROTECTION
CP	CONDENSATE PUMP	MTD	MOUNTED
CP	CONTROL PANEL	N/A	NOT APPLICABLE
CO	CLEAN OUT	NC	NORMALLY CLOSED
CO2	CARBON DIOXIDE	NEZV	NONE ELECTRIC ZONE VALVE
COP	CENTER OF PIPE	NIC	NOT IN CONTRACT
CR	CONDENSATE RECEIVER	NO	NORMALLY OPEN
CRP	CONDENSATE RETURN PUMP	NTS	NOT TO SCALE
CT	COOLING TOWER	OA	OUTSIDE AIR
CUH	CABINET UNIT HEATER	OAT	OUTSIDE AIR TEMPERATURE
CTWP	COOLING TOWER WATER PUMP	OBD	OPPOSED BLADE DAMPER
CWP	CHILLED WATER PUMP	OD	OUTSIDE DIAMETER
CV	CONVECTOR	P	PUMP
CU	CONDENSING UNIT	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROL	PSI	POUNDS PER SQUARE INCH GA.
DB	DRY BULB	PR	PANEL RADIATOR
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DIFF	DIFFUSER	PTAC	PACKAGED TERMINAL AIR CONDITIONER
DN	DOWN	R	RETURN
DX	DIRECT EXPANSION	RA	RETURN AIR
DP	DEW POINT	REF	ROOF EXHAUST FAN
DWG	DRAWING	REQ'D.	REQUIRED
DHE	DOMESTIC WATER HEATER EXCHANGER	RG	RETURN GRILLE
E	EXISTING	RH	RELATIVE HUMIDITY
EAT	ENTERING AIR TEMPERATURE	RH	REHEAT COIL
EBB	ELECTRIC BASEBOARD	RLA	RATED LOAD AMPS
EFF	EFFICIENCY	RM	ROOM
EF	EXHAUST FAN	RPM	REVOLUTIONS PER MINUTE
EH	ELECTRIC HUMIDIFIER	RTU	ROOF TOP UNIT
ELEC	ELECTRICAL	RVD	REMOTE CONTROLLED VOLUME DAMPER
ELV	ELEVATION	S	SUPPLY
ERV	ENERGY RECOVERY UNIT	SA	SUPPLY AIR
ESP	EXTERNAL STATIC PRESSURE	SA	SOUND ATTENUATOR
ET	EXPANSION TANK	SAT	SUPPLY AIR TEMPERATURE
EUH	ELECTRIC UNIT HEATER	SCT	SATURATED CONDENSING TEMPERATURE
EWT	ENTERING WATER TEMPERATURE	SD	SMOKE DAMPER
EXH	EXHAUST	SF	SQUARE FEET
EXP	EXPANSION	SH	STEAM HUMIDIFIER
°F	DEGREES FAHRENHEIT	SFD	SMOKE/FIRE DAMPER
FA	FRESH AIR	SP	STATIC PRESSURE
FA	FREE AREA	SQ	SQUARE
FBT	FLAT BOTTOM TRANSIENT	SST	SATURATED SUCTION TEMPERATURE
FCU	FAN COIL UNIT	STL	STEEL
FD	FIRE DAMPER	T	THERMOSTAT
FLA	FULL LOAD AMPS	T.B.D.	TO BE DEMOLISHED
FLEX	FLEXIBLE	TU	TERMINAL UNIT
FMS	FLOW MEASURING STATION	TYP.	TYPICAL
FPI	FINS PER INCH	UC	UNDERCUT DOOR 3/4" (MIN.)
FPM	FEET PER MINUTE	UH	UNIT HEATER
FOS	FUIL OIL SUPPLY	UV	UNIT VENTILATOR
FOR	FUIL OIL RETURN	VAV	VARIABLE AIR VOLUME
FTR	FINNED TUBE RADIATION	VD	VOLUME DAMPER
FTT	FLAT TOP TRANSITION	VFD	VARIABLE FREQUENCY DRIVE
FT	FEET	W/	WITH
GAL	GALLONS	W/O	WITHOUT
GALV	GALVANIZED	WB	WET BULB TEMPERATURE
GC	GENERAL CONTRACTOR	WG	WATER GAUGE
GPM	GALLONS PER MINUTE	WMS	WIRE MESH SCREEN
GV	GATE VALVE	ZV	ZONE VALVE
HC	HEATING COIL	WH	WATER HEATER
HP	HORSEPOWER		
HP	HEAT PUMP		

PROJECT GENERAL NOTES

1. SCOPE OF WORK SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, HOISTING, RIGGING, INSURANCE, ETC., TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED FOR A COMPLETE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION, AS INTERPRETED BY THE ARCHITECT/ENGINEER.
2. MECHANICAL EQUIPMENT AND SUCH OTHER APPARATUS AS MAY REQUIRE MAINTENANCE AND OPERATION FROM TIME TO TIME SHALL BE MADE EASILY ACCESSIBLE. ALTHOUGH THE EQUIPMENT MAY BE SHOWN ON THE DRAWINGS IN CERTAIN LOCATIONS, THE CONSTRUCTION MAY DISCLOSE THAT SUCH LOCATIONS DO NOT MAKE ITS POSITION READILY ACCESSIBLE. IN SUCH CASES, THE OWNER OR HIS REPRESENTATIVE SHALL BE NOTIFIED BEFORE ADVANCING THE CONSTRUCTION TO A STAGE WHERE A CHANGE WILL REFLECT ADDITIONAL EXPENSE.
3. THE DRAWINGS SHOW THE LAYOUT OF THE MECHANICAL SYSTEMS AND INDICATE THE APPROXIMATE LOCATIONS OF DUCTWORK, PIPING, BRANCHES AND ELBOWS, AND EQUIPMENT. THE RUNS AND QUANTITY OF DUCTWORK, PIPING, OFFSETS AND ELBOWS AS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT ROUTING OF QUANTITY DUCTWORK, PIPING, OFFSETS AND ELBOWS SHALL BE DETERMINED BY THE STRUCTURAL CONDITIONS, POSSIBLE OBSTRUCTIONS AND COORDINATION DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT THE DESIGN OF THE SYSTEMS MAY BE CHANGED, BUT REFERS ONLY TO EXACT RUNS BETWEEN GIVEN POINTS.
4. IT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR TO STUDY ALL DRAWINGS AND DETAILS SO THAT THE INSTALLATION OF ALL NEW WORK CAN BE FULLY COORDINATED. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE OF EQUIPMENT.
5. HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATION OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EQUIPMENT, DUCTS OR PIPES INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED.
6. HVAC CONTRACTOR SHALL COORDINATE ALL WALL, CEILING, FLOOR, ROOF AND BEAM PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER.
7. PRODUCTS REQUIRED BY CONSTRUCTION BUT NOT SPECIFICALLY DESCRIBED HEREIN SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE A/E.
8. PROVIDE ALL MATERIALS, LABOR, AND ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEMS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
9. INSTALL ALL MATERIALS, ACCESSORIES AND EQUIPMENT ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR A COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS MANUFACTURERS INSTRUCTIONS.
10. INSTALLATION OF THE HVAC SYSTEM SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT OF EQUIPMENT.
11. ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR HVAC EQUIPMENT INSTALLATION SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
12. INSTALL ALL PIPING BELOW DUCTWORK UNLESS CLEARANCE CONDITION REQUIRES PIPING TO BE ABOVE.
13. WHERE DUCTWORK PENETRATES ANY SMOKE AND/OR FIRE RATED PARTITIONS PROVIDE UL LISTED DYNAMIC FIRE AND/OR SMOKE DAMPERS PER NFPA GUIDELINES. INSTALL DAMPER PER MANUFACTURE INSTRUCTIONS.
14. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO UNITS AND RELATED ACCESSORIES.
15. EXACT ELEVATION FOR SIDE WALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION.
16. INSTALL ROOM THERMOSTATS OR SENSORS 54" (MAXIMUM) ABOVE FINISHED FLOOR OR AS OTHERWISE DIRECTED BY THE ARCHITECT.
17. CONTRACTOR SHALL COORDINATE WITH ALL STEEP GRANT REQUIREMENTS.

DRAWING LIST

SHEET NUMBER	SHEET NAME
M-0	MECHANICAL SYMBOL LEGEND
M-1	MECHANICAL FIRST FLOOR EXISTING AND NEW WORK
M-2	MECHANICAL SCHEDULES
M-3	MECHANICAL DETAILS
M-4	MECHANICAL SCHEDULES

STAMP

STATE OF CONNECTICUT · MICHAEL C. PETERSON · PROFESSIONAL ENGINEER

Revisions: Date:

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Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road Oakdale, CT.

MECHANICAL SYMBOL LEGEND

FZA PROJECT PU-22-00438

PROJECT NO.: 2021-01.27

SCALE: AS NOTED
DRAWN BY: AT
CHECKED BY: MCP
DATE: MAR. 22, 2022

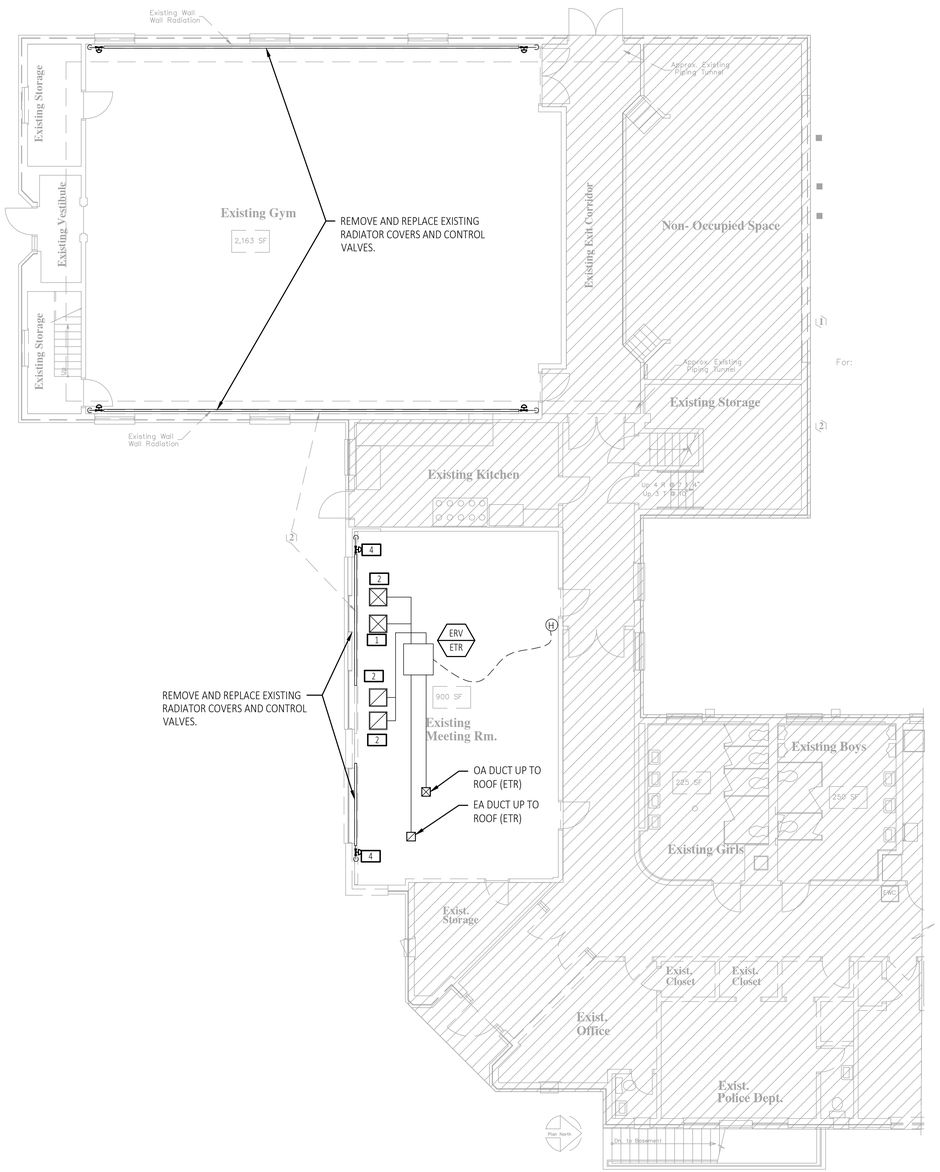
M-0

GENERAL SHEET NOTES

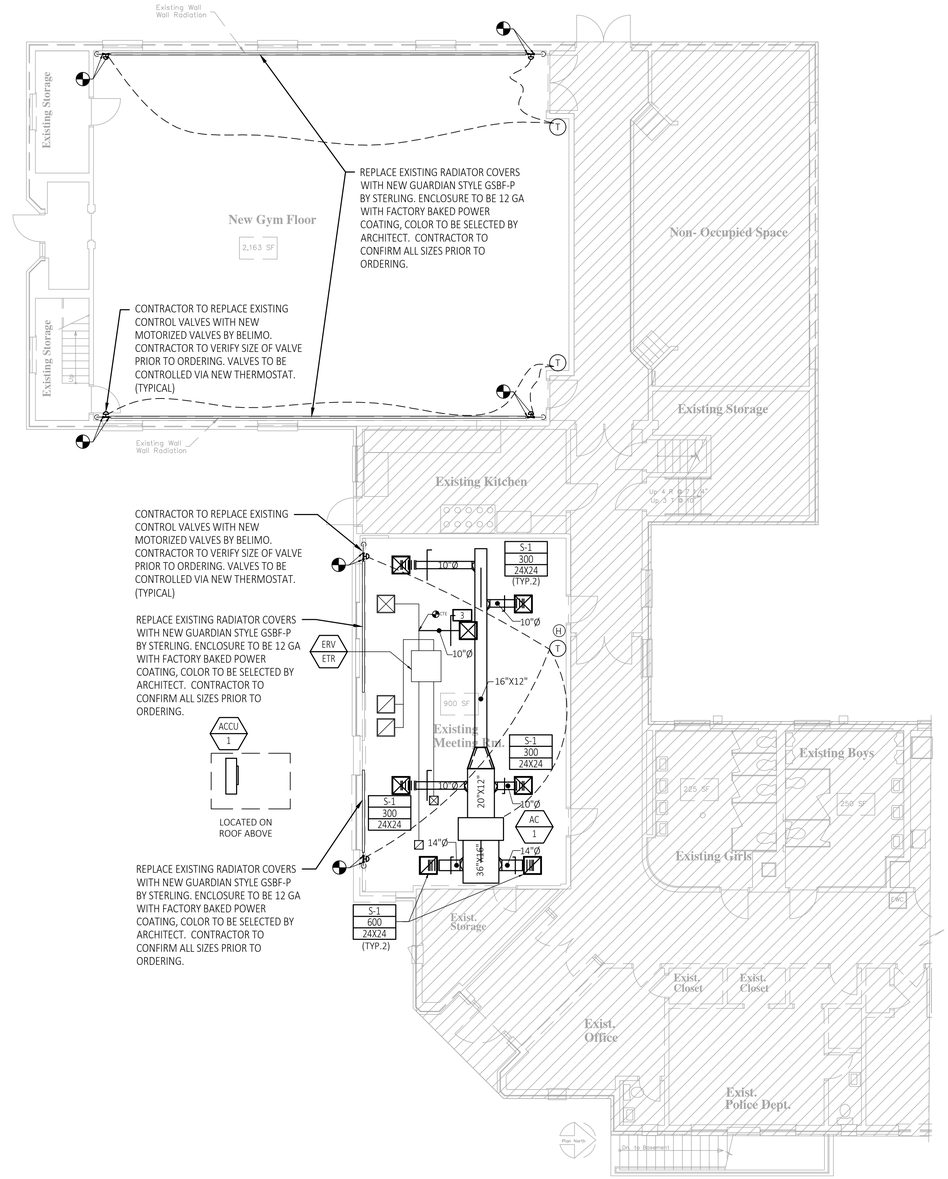
1. ACCU-1 LOCATED IN THE ROOF .
2. ALL CONDENSATE TO BE ROUTED TO NEAREST SANITARY DRAIN IN BASEMENT .
3. ALL DUCTWORK AND PIPING BOTH IN ATTIC SPACE AND INTERIOR TO THE ENVELOPE SHALL BE INSULATED TO CODE.
4. CONTRACTOR TO RE-BALANCE/RE-COMMISSION EXISTING UNIT.
5. ELECTRICAL CONTRACTOR TO PROVIDE POWER TO THE NEW EQUIPMENT,COORDINATE IN FIELD.

KEYED SHEET NOTES

1. EXISTING DIFFUSER TO BE RELOCATED
2. EXISTING TO REMAIN
3. RELOCATED DIFFUSER
4. REPLACE THE EXISTING VALVE WITH THE ACTUATOR AND CONNECT TO THE NEW THERMOSTAT AS A SECOND STAGE OF HEATING.



1 FIRST FLOOR -EXISTING WORK
SCALE: 1/8" = 1'-0"
0 8'-0" 16'-0" 24'-0"



1 FIRST FLOOR - NEW WORK
SCALE: 1/8" = 1'-0"
0 8'-0" 16'-0" 24'-0"

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MECHANICAL FIRST FLOOR EXISTING AND NEW WORK

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M-1

FZA PROJECT PU-22-00438

ACCU - SPLIT SYSTEM CONDENSING UNIT SCHEDULE (OUTDOOR UNIT)

UNIT NO.	MAKE MODEL NUMBER	UNITS SERVED	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	MINIMUM SUCTION (IN. O.D.)	MINIMUM LIQUID (IN. O.D.)	COOLING OUTDOOR TEMP DB (°F)	HEATING OUTDOOR TEMP WB (°F)	SEER	ELECTRICAL DATA			NOTES
										V/PH/HZ	MCA	MOCP	
ACCU-1	MITSUBISHI PUZ-A36NKA7	AC-1	36.0	40.0	5/8	3/8	95.0	47	19.1	208/1/60	25	31	1-6

NOTES:
1. LOW-AMBIENT KIT AND WIND BAFFLES FOR OPERATION DOWN TO 0°F.
2. R410A REFRIGERANT.
3. SEAL PER MFG REQUIREMENTS.
4. INSTALL WITH VIBRATION ISOLATORS AND 18" SNOW STAND WITH SNOW HAIL GUARDS.
5. PROVIDE BASE PAN HEATERS.
6. POWER WIRING AND INTERCONNECTING WIRING SHALL BE INSTALLED PER MFG INSTRUCTIONS.

AC - SPLIT SYSTEM CONDENSING UNIT SCHEDULE (INDOOR)

UNIT NO.	MAKE MODEL NUMBER	UNITS SERVED	AREA SERVED	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	MINIMUM SUCTION (IN. O.D.)	MINIMUM LIQUID (IN. O.D.)	MAXIMUM AIRFLOW (CFM)	ELECTRICAL DATA		NOTES
									V/PH/HZ	MCA	
AC-1	MITSUBISHI PEAD-A36AA7	ACCU-1	MEETING ROOM	36.0	40.0	5/8	3/8	1200	208/1/60	POWERED BY OUTDOOR	1-6

NOTES:
1. COORDINATE POWER AND DISCONNECT REQUIREMENTS WITH ELECTRICIAN.
2. R410A REFRIGERANT.
3. SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE WITH WIRED REMOTE CONTROL THERMOSTAT.
5. INDOOR UNITS POWERED BY RESPECTIVE OUTDOOR UNIT.
6. EXISTING FIN TUBE RADIATION TO BE SECOND STAGE OF HEAT.

DIFFUSER/GRILLE/REGISTER SCHEDULE

SUPPLY DIFFUSERS

S-00 ◁— TAG
000 ◁— CFM
0x0 ◁— SIZE

TAG	MAKE MODEL NUMBER	ANGLE OF AIR DEFLECTION	MOUNTING SURFACE	ACCESSORIES	SYMBOL	NOTES
S-1	PRICE 24x24 SPD SERIES	360° HORIZONTAL	CEILING SURFACE	PROVIDE ADAPTER TO ROUND DUCT AS SPECIFIED	☒	1-2

RETURN DIFFUSERS

R-00 ◁— TAG
000 ◁— CFM
0x0 ◁— SIZE

TAG	MAKE MODEL NUMBER	MOUNTING SURFACE	ACCESSORIES	SYMBOL	NOTES
R-1	PRICE 24x24 PDDR SERIES	CEILING GRID	PROVIDE ADAPTER TO DUCT CONNECTION AS SPECIFIED	⧄	1-2

NOTES:
1. WHERE RETURN AIR DUCTS AND PLENUMS ARE FULL SIZE OPEN IN CEILING SPACES, PROVIDE ¼" MESH SCREENS IN AIR STREAM PRIOR TO FILTERS.
2. COORDINATE ALL TRIM STYLE, FINISH, AND COLOR WITH ARCHITECT.

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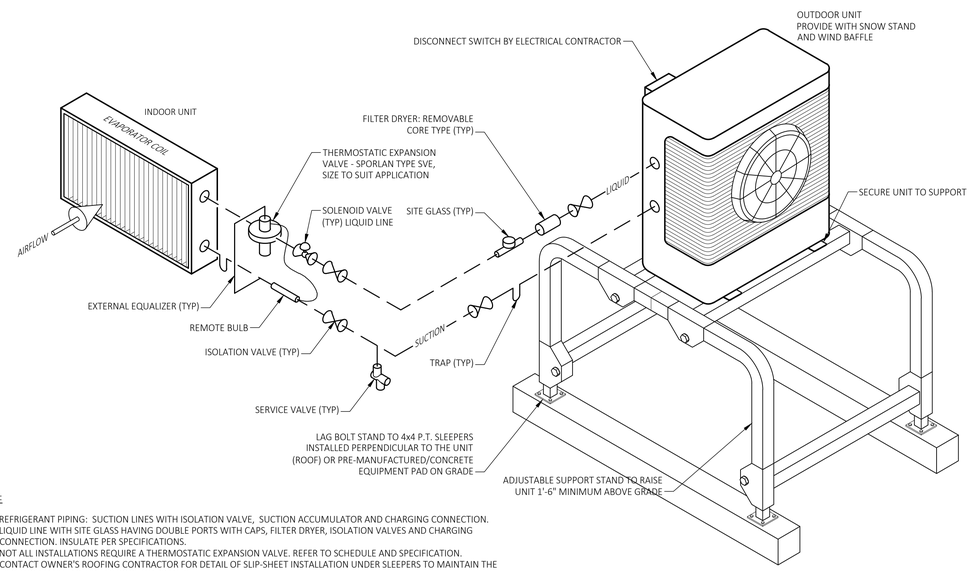
M-2

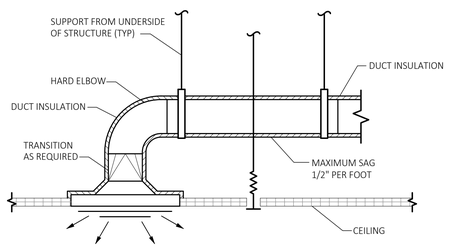


NOTES:

1. REFRIGERANT PIPING: SUCTION LINES WITH ISOLATION VALVE, SUCTION ACCUMULATOR AND CHARGING CONNECTION. LIQUID LINE WITH SITE GLASS HAVING DOUBLE PORTS WITH CAPS, FILTER DRYER, ISOLATION VALVES AND CHARGING CONNECTION. INSULATE PER SPECIFICATIONS.
2. NOT ALL INSTALLATIONS REQUIRE A THERMOSTATIC EXPANSION VALVE. REFER TO SCHEDULE AND SPECIFICATION.
3. CONTACT OWNER'S ROOFING CONTRACTOR FOR DETAIL OF SLIP-SHEET INSTALLATION UNDER SLEEPERS TO MAINTAIN THE EXISTING MANUFACTURER'S ROOF WARRANTY.

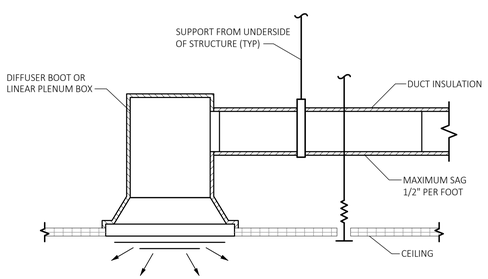
1 SPLIT SYSTEM & HEAT PUMP REFRIGERANT PIPING DIAGRAM

NTS



NOTE:

1. THIS CONFIGURATION TO BE USED ONLY WHEN SPACE RESTRAINTS WILL NOT ALLOW USE OF THE DIFFUSER BOOT.



2 DUCTWORK DIFFUSER/GRILLE CONNECTION DETAIL

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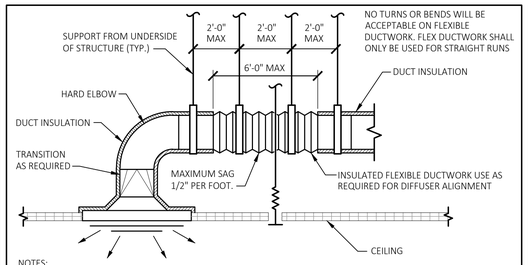
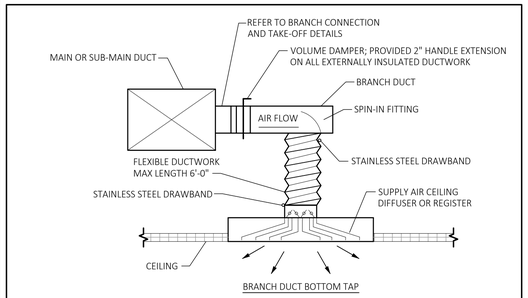


NOTES:

1. THIS CONFIGURATION TO BE USED ONLY WHEN SPACE RESTRAINTS WILL NOT ALLOW USE OF DIFFUSER BOOT.
2. NO FLEX DUCT SHALL BE USED ABOVE HARD CEILINGS OR FOR CLEAN ROOMS.
3. ALL FLEXIBLE DUCT CONNECTIONS SHALL BE BAND CLAMPED, SCREWED AND TAPED TO SOLID DUCT TO SEAL.

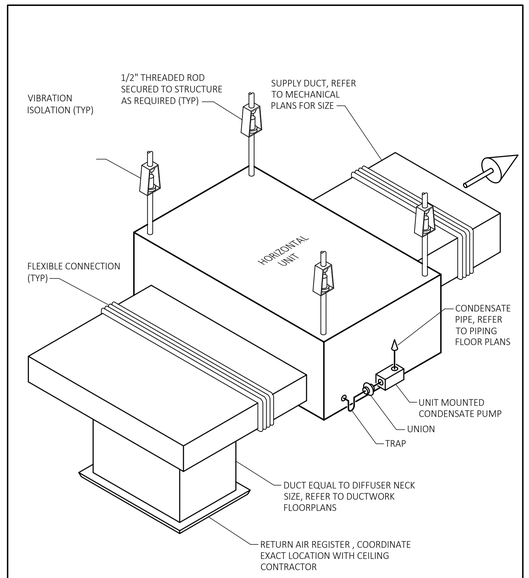
3 FLEXIBLE DUCTWORK DIFFUSER CONNECTION DETAIL

NTS



4 DIFFUSER/REGISTER CONNECTION DETAIL

NTS



5 HORIZONTAL FAN COIL/AIR HANDLING UNIT DETAIL

NTS

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MECHANICAL DETAILS

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M-3

MECHANICAL SPECIFICATIONS

PART 1 – GENERAL PROVISIONS FOR MECHANICAL WORK:

1.01 GENERAL REQUIREMENTS:

A. SCOPE OF WORK SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, HOISTING, RIGGING, INSURANCE, ETC., TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED FOR A COMPLETE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION, AS INTERPRETED BY THE ARCHITECT/ENGINEER.

B. APPLY AND PAY FOR ALL NECESSARY INSPECTION FEES, LICENSES AND PERMITS REQUIRED BY THE PROPER AUTHORITIES HAVING JURISDICTION.

C. THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS STOP.

D. NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION.

E. ANY UTILITY OUTAGES OR SYSTEM SHUTDOWNS FOR CONSTRUCTION SHALL BE SCHEDULED WITH THE ARCHITECT/OWNER PRIOR TO COMMENCING OF WORK.

F. SUBMIT SHOP DRAWINGS OF ALL HVAC EQUIPMENT AND RECORD DRAWINGS FOR ALL WORK PROVIDED UNDER THIS CONTRACT TO THE ARCHITECT/OWNER FOR HIS USE PRIOR TO ORDERING, FABRICATING OR INSTALLING SAME.

G. ALL MATERIALS SHALL BE NEW. ALL EQUIPMENT SHALL BEAR THE U.L. LABEL.

H. RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP DAILY UPDATED ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED ON THE CONTRACT DRAWINGS. THE RECORD DRAWINGS SHALL BE KEPT AT THE JOB SITE, AVAILABLE TO THE OWNER AT ALL TIMES AND LABELED AS "PROJECT RECORD INFORMATION – JOB SET". WHEN WORK IS COMPLETED THIS CONTRACTOR SHALL PROVIDE TO THE OWNER ONE COMPLETE SET OF MARKED-UP ORIGINAL PRINTS, UPDATED CAD DRAWINGS AND A CD WITH CAD FILES.

1.02 GUARANTEES:

A. ALL WORK, MATERIALS AND EQUIPMENT SHALL BE GUAR ANTEED AGAINST DEFECTS RESULTING FROM THE USE OF INFERIOR MATERIALS, EQUIPMENT, OR WORKMANSHIP FOR ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE CONTRACT, OR FROM FULL ACCEPTANCE BY THE OWNER, WHICHEVER IS EARLIER. ALL DEFECTIVE MATERIAL OR WORKMANSHIP AS WELL AS DAMAGES TO THE WORK OF ALL TRADES RESULTING FR360M SAME SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

B. THE GUARANTEE PERIOD SHALL BE FOR ONE (1) YEAR FROM THE DATE OF ACCEPTANCE, WHICH SHALL BE THE DATE OF FINAL PAYMENT OR THE DATE OF FORMAL NOTICE OF ACCEPTANCE, WHICHEVER IS EARLIER.

C. CERTIFICATION SHALL BE SUBMITTED BY THE CONTRACTOR ATTESTING TO THE FACT THAT SPECIFIED PERFORMANCE CRITERIA ARE MET BY ALL EQUIPMENT.

D. IF, WITHIN ANY GUARANTEE PERIOD, REPAIRS OR CHANGES TO GUARANTEED WORK ARE REQUIRED AS A RESULT OF THE USE OF DEFECTIVE MATERIALS OR EQUIPMENT, INFERIOR WORKMANSHIP OR WORK THAT IS NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT, AND UPON RECEIPT OF NOTICE FROM THE OWNER, THE FOLLOWING SHALL BE DONE WITHOUT EXPENSE TO THE OWNER:

1. REPAIR ALL DAMAGE TO THE BUILDING OR SITE/EQUIPMENT OR CONTENTS THEREOF WHICH IS THE RESULT OF THE USE OF DEFECTIVE MATERIALS OR EQUIPMENT OR INFERIOR WORKMANSHIP, OR OF WORK NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.
2. MAKE GOOD ANY WORK OR MATERIALS, OR THE EQUIPMENT AND CONTENTS OF SAID BUILDING OR SITE DISTURBED IN FULFILLING ANY SUCH GUARANTEE.
3. IN FULFILLING THE REQUIREMENTS OF THE CONTRACT OR OF ANY GUARANTEE EMBRACED IN OR REQUIRED THEREBY, ANY WORK GUARANTEED UNDER ANOTHER CONTRACT IS DISTURBED, RESTORE SUCH DISTURBED WORK TO ORIGINAL CONDITION AND GUARANTEE SUCH RESTORED WORK TO THE SAME EXTENT AS IT WAS GUARANTEED UNDER SUCH OTHER CONTRACT.
4. IF UPON FAILURE TO PROCEED PROMPTLY AFTER NOTICE TO COMPLY WITH THE TERMS OF THE GUARANTEE, THE OWNER MAY HAVE THE DEFECTS CORRECTED AND CONTRACTOR AND HIS SURETY SHALL BE LIABLE FOR ALL EXPENSES INCURRED.

1.03 CONTRACTORS RESPONSIBILITIES:

A. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY INJURIES TO PEOPLE, EMPLOYEES OR DAMAGE DONE TO BUILDING PREMISES OR ADJOINING AREAS OR TO OTHER WORK RESULTING FROM EXECUTION ON HIS PART OF WORK, IN ANY MANNER WHATSOEVER.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PROTECTION OF HIS WORK, MATERIALS, PEOPLE OR EMPLOYEES FROM INJURY OR LOSS DONE BY OTHERS AND SHALL MAKE GOOD SUCH INJURY AT HIS OWN EXPENSE.

C. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

D. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF CONTRACTOR'S EMPLOYEES, MATERIALS OR EQUIPMENT.

1.04 COORDINATION AND INTERPRETATION OF DRAWINGS:

A. THIS CONTRACTOR, PRIOR TO SUBMITTING BID SHALL VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND TO INSPECT THAT ALL PROVISIONS HAVE BEEN MADE FOR ALL ASPECTS OF THIS PROJECT.

B. IF DISCREPANCIES EXIST BETWEEN DRAWINGS AND/OR SITE CONDITIONS, THE HVAC CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER PRIOR TO SIGNING OF CONTRACT. REQUESTS FOR COMPENSATION FOR EXTRA WORK, WHICH WOULD HAVE BEEN EVIDENT BY COMPLIANCE WITH THE PREVIOUS STATEMENT, WILL NOT BE CONSIDERED.

C. MECHANICAL EQUIPMENT AND SUCH OTHER APPARATUS AS MAY REQUIRE MAINTENANCE AND OPERATION FROM TIME TO TIME SHALL BE MADE EASILY ACCESSIBLE. ALTHOUGH THE EQUIPMENT MAY BE SHOWN ON THE DRAWINGS IN CERTAIN LOCATIONS, THE CONSTRUCTION MAY DISCLOSE THAT SUCH LOCATIONS DO NOT MAKE ITS POSITION READILY ACCESSIBLE. IN SUCH CASES, THE OWNER OR HIS REPRESENTATIVE SHALL BE NOTIFIED BEFORE ADVANCING THE CONSTRUCTION TO A STAGE WHERE A CHANGE WILL REFLECT ADDITIONAL EXPENSE.

D. IT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR TO STUDY ALL DRAWINGS AND DETAILS SO THAT THE INSTALLATION OF ALL NEW WORK CAN BE FULLY COORDINATED. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE OF EQUIPMENT.

E. HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATION OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EQUIPMENT, DUCTS OR PIPES INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

F. HVAC CONTRACTOR SHALL COORDINATE ALL WALL, CEILING, FLOOR, ROOF AND BEAM PENETRATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER..

1.05 DEMOLITION:

A. ANY AND ALL DEMOLITION OF INACTIVE HVAC SYSTEMS WITHIN THE CONTRACT LIMITS SHALL BE BY THIS CONTRACTOR. EACH BIDDER FOR WORK UNDER THIS SECTION OF THE SPECIFICATION SHALL INCLUDE IN HIS BID ALL COSTS INVOLVED IN DISCONNECTING ALL EQUIPMENT, PIPING, DUCTWORK AND UNUSED CONTROL WIRING SERVING EXISTING HVAC EQUIPMENT THAT IS TO BE REMOVED. COORDINATE ALL SHUTDOWN OF EXISTING SYSTEMS AS REQUIRED, WITH THE ARCHITECT/OWNER, THROUGH THE GENERAL CONTRACTOR.

B. CONTRACTOR SHALL VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. DEMOLITION WORK WILL REQUIRE CAREFUL SITE EXAMINATION PRIOR TO BIDDING.

C. PRIOR TO COMMENCING DEMOLITION, CONTRACTOR SHALL IDENTIFY WITH OWNER ANY EQUIPMENT TO BE RETURNED TO THE OWNER AFTER DEMOLITION. ALL OTHER DEBRIS SHALL BE DISPOSED OF BY THIS CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

D. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF THE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, VALVES, ETC., IN DESIGNATED AREAS. CUT & CAP DUCTWORK BACK TO MAINS. PATCH ALL WALL PENETRATIONS TO MATCH EXISTING.

E. THIS CONTRACTOR SHALL PROTECT WORK AGAINST INJURY OR DAMAGE; AND CAREFULLY STORE MATERIAL AND EQUIPMENT TO BE RELOCATED. OPEN ENDS OF WORK SHALL BE CLOSED WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

F. SEE MECHANICAL RELOCATION DRAWINGS FOR NEW LOCATIONS OF EQUIPMENT CALLED OUT "TO BE RELOCATED." ALL RELOCATED EQUIPMENT SHALL HAVE ASSOCIATED ELECTRICAL AND CONTROLS EQUIPMENT RELOCATED ACCORDINGLY.

G. LEGALLY RECOVER THE REFRIGERANT IN EXISTING EQUIPMENT AND EVACUATE PRIOR TO DISPOSAL OF THE EQUIPMENT. THE RECOVERED REFRIGERANT SHALL BE RECLAIMED, RECYCLED OR DISPOSED OF IN COMPLIANCE WITH ENVIRONMENTAL PROTECTION AGENCY (EPA) AND AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI) REQUIREMENTS AND PROCEDURES.

1.06 EQUIPMENT:

A. PRODUCTS REQUIRED BY CONSTRUCTION BUT NOT SPECIFICALLY DESCRIBED HEREIN SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT AND ENGINEER.

B. PROVIDE ALL MATERIALS, LABOR, AND ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEMS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.

C. PROVIDE ALL HANGERS AND SUPPORTS AS REQUIRED TO SUPPORT ALL NEW PIPING, DUCTWORK AND EQUIPMENT.

D. ALL EXPOSED EQUIPMENT (REGISTERS, UNIT HEATERS, ETC..) SHALL HAVE COLORS SELECTED BY THE ARCHITECT, UNLESS NOTED OTHERWISE.

D. PRODUCTS REQUIRED BY CONSTRUCTION BUT NOT SPECIFICALLY DESCRIBED HEREIN SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT AND ENGINEER.

E. PROVIDE ALL MATERIALS, LABOR, AND ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEMS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.

F. PROVIDE ALL HANGERS AND SUPPORTS AS REQUIRED TO SUPPORT ALL NEW PIPING, DUCTWORK AND EQUIPMENT.

G. ALL EXPOSED EQUIPMENT (REGISTERS, UNIT HEATERS, ETC..) SHALL HAVE COLORS SELECTED BY THE ARCHITECT, UNLESS NOTED OTHERWISE.

1.07 EXECUTION:

A. ALL ROUGH CUTTING, CORE DRILLING AND PATCHING REQUIRED FOR INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL FINISH PATCHING RELATIVE TO THIS CONTRACTOR'S WORK SHALL BE THE RESPONSIBILITY OF OTHER TRADES IN ACCORDANCE WITH OTHER SECTIONS OF THIS SPECIFICATION. COORDINATE ALL WORK FOR A COMPLETE AND FINISHED INSTALLATION.

B. INSTALL ALL MATERIALS, ACCESSORIES AND EQUIPMENT ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR A COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS MANUFACTURERS INSTRUCTIONS.

C. INSTALLATION OF THE HVAC SYSTEM SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT OF NEW AND EXISTING EQUIPMENT.

D. ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR HVAC EQUIPMENT INSTALLATION SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.

E. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO UNITS AND RELATED ACCESSORIES.

F. EXACT LOCATION OF EQUIPMENT TO BE DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLAN. ENGINEER SHALL APPROVE FINAL LOCATION.

G. INSTALL ROOM THERMOSTATS 48" (MAXIMUM) ABOVE FINISHED FLOOR OR AS OTHERWISE DIRECTED BY THE ARCHITECT.

1.08 SMOKE AND FIRESTOPPING:

A. FIRESTOP ALL PENETRATIONS BETWEEN FLOORS & FIRE RATED WALLS WITH APPROVED FIRE STOPPING ASSEMBLIES AS MANUFACTURED BY 3M INDUSTRY, DOW CORNING, OR HILTI. THE ASSEMBLIES SHALL COMPLY WITH THE LATEST APPLICABLE REQUIREMENTS OF THE: BUILDING CODE, NFPA STANDARDS AND OWNERS INSURANCE COMPANY. PROVIDE UL LISTED DETAIL FOR EACH TYPE OF PROPOSED APPLICABLE ASSEMBLIES WITH OF THE MECHANICAL EQUIPMENT SUBMITTAL.

B. ALL PIPING PASSING THROUGH FIRE-RATED WALLS, SLABS, FLOORS, ETC. SHALL HAVE STEEL SLEEVES EXTENDING 2" BEYOND SURROUNDING SURFACE. THE SPACE BETWEEN THE PIPES AND THE SLEEVES SHALL BE COMPLETELY PACKED WITH AN APPROVED FIRESTOPPING MATERIAL. AFTER FIRESTOPPING MATERIAL HAS BEEN INSTALLED AROUND PIPES, A 26" GAUGE SHEET METAL COLLAR SHALL BE SECURED AROUND THE PIPE TO INSURE TIGHTNESS.

1.09 EQUIPMENT, VALVE, AND PIPE IDENTIFICATION:

A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS ARE LIMITED TO SETON, BRADY OR BRIMAR WHOM HAVE A MINIMUM OF 5 YEARS EXPERIENCE IN THE MANUFACTURING OF MECHANICAL IDENTIFICATION PRODUCTS.

B. WHERE AIR OR HYDRONIC SYSTEMS HAVE BEEN BALANCED, THE CONTRACTOR SHALL PERMANENTLY MARK, ON THE DEVICE, THE CORRECT BALANCING SETTLING OF EACH VALVE, DAMPER, OR SIMILAR DEVICE.

C. EQUIPMENT IDENTIFICATION:

1. USE BLACK LAMINATED PHENOLIC NAMEPLATES 6" LONG X 3" HIGH WITH WHITE INCISED LETTERING ½" HIGH. ATTACH TO EQUIPMENT WITH STAINLESS STEEL OR BRASS SCREWS, OR RIVETS.

PART 2 – PRODUCTS

2.01 GENERAL DUCTWORK:

A. ALL DUCTWORK SHALL BE OF TOP GRADE GALVANIZED STEEL, CONSTRUCTED AND SUPPORTED AS PER SMACNA LOW PRESSURE STANDARDS. SQUARE THROAT, ROUND HEEL ELBOWS ARE NOT ACCEPTABLE. ALL ELBOWS SHALL BE SQUARE WITH TURNING VANES OR LONG RADIUS TYPE. ALL JOINTS, SEAMS, AND FITTINGS SHALL BE AIR AND WATER TIGHT USING SOLDER JOINTS, COMPOUND OR SILICONE AND SHALL BE FORMED TO PROVIDE A MINIMUM RESISTANCE TO THE AIR FLOW.

B. ALL RECTANGULAR DUCTS TO BE INSULATED SHALL BE PANELED FOR STIFFENING. ALL OTHER DUCTWORK SHALL BE CROSS BROKEN TO PREVENT VIBRATION.

C. ALL DUCTWORK CONSTRUCTION SHALL BE OF FABRICATED SHEET METAL AND BE BUILT IN ACCORDANCE WITH SMACNA STANDARDS AND PUBLICATION TITLED "HVAC DUCT CONSTRUCTION STANDARDS".

D. DUCTWORK DIMENSIONS INDICATED ON DRAWINGS ARE NET INSIDE DIMENSIONS REQUIRED FOR AIRFLOW. INCREASE DUCTWORK TO ALLOW FOR INTERNAL INSULATION THICKNESS.

E. FLEXIBLE CONNECTION: ATTACH AT INLET AND OUTLET OF FANS SO THAT METAL IS SEPARATED BY 6" MINIMUM AND SO THAT JOINT IS AIR TIGHT. PROVIDE FLEXIBLE CONNECTION AT ALL MOTORIZED EQUIPMENT AND AT BUILDING EXPANSION JOINTS. USE NEOPRENE HEAVY DUTY TYPE 6.0 INCH CLEAR DUCT TO DUCT.

F. ALL DUCTWORK SEAMS AND JOINTS SHALL BE SEALED WITH MASTIC BEFORE INSULATION IS INSTALLED. INSPECTION OF THIS SHALL BE COMPLETED BY OWNER BEFORE INSULATION IS INSTALLED.

G. NO FLEXIBLE DUCT WILL BE ACCEPTABLE.

H. QUADRANT DAMPERS OR BLASTGATES SHALL BE PROVIDED WITH A LOCKING DEVICE TO PERMANENTLY SET AIR VOLUME.

I. DUCT SUPPORTS SHALL BE SPACED NOT MORE THAN 8'-0" o.c. AND SHALL BE STEEL STRAP HANGERS, (PERFORATED STRAP NOT PERMITTED) FOR DUCTS UP TO 30" WIDE. STRAP HANGERS SHALL BE 1" x 16 GAUGE MINIMUM EXTENDING ON BOTH SIDES OF DUCT AND TURNING UNDER 2", FASTENED TO SIDES AND BOTTOM WITH SHEET METAL SCREWS.

2.02 DUCT INSULATION:

A. ALL INSULATION SHALL CONFORM WITH ALL FIRE HAZARD RATINGS AS DETERMINED BY NFPA 255, "METHOD OF TEST OF SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS", ASTM E84 OR UL 723. IN GENERAL, THE FIRE HAZARD RATING SHALL NOT EXCEED A FLAME SPREAD RATING OF 25 OR SMOKE DEVELOPED RATING OF 50.

B. ALL DUCTWORK EXPOSED TO WEATHER SHALL BE 3" RIGID BOARD R-12 VINYL WRAP.

C. SUPPLY, RETURN AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE INSULATED WITH 2" MINIMUM R-8 FIBERGLASS DUCT INSULATION AS MANUFACTURED BY OWENS CORNING OR JOHNS MANVILLE. INSULATION SHALL HAVE A FOIL-FACED VAPOR BARRIER. EXHAUST DUCTWORK DOES NOT REQUIRE INSULATION.
1. EXTERIOR OF DUCT IN CONCEALED SPACES: WRAP TIGHTLY, BUTT CIRCUMFERENTIAL JOINTS AND OVERLAP LONGITUDINAL JOINTS A MINIMUM OF TWO INCHES. ADHERE TO DUCT WITH FOUR-INCH STRIPS OF INSULATION BONDING ADHESIVE 8" OC. DUCTWORK OVER 24" WIDE: SECURE WITH MECHANICAL FASTENERS NOT MORE THAN 18" OC.
2. CIRCUMFERENTIAL JOINTS: SECURE THE TWO-INCH FLANGE OF THE FACING WITH 9/16" FLARE DOOR STAPLES 6" OC AND TAPE WITH MINIMUM OF THREE-INCH-WIDE, FOIL REINFORCED KRAFT TAPE. TAPE PIN PENETRATIONS AND PUNCTURES. IN EXPOSED APPLICATIONS, COVER JOINTS WITH THREE-INCH-WIDE, FOIL REINFORCED KRAFT TAPE.

D. AT DAMPER LOCATIONS, CUT INSULATION BACK TO EXPOSE DAMPER ADJUSTER ROD AND ACCESS DOOR. TAPE SEAL INSULATION TO DUCT.

2.03 VOLUME DAMPER:

A. PROVIDE YOUNG REGULATOR, OR APPROVED EQUAL, MANUAL ADJUSTABLE RECTANGULAR OPPOSED BLADE DAMPERS FOR DUCT HEIGHTS LESS THAN 12" WITH FACTORY-INSTALLED LOCKING HAND QUADRANTS EXTENDED 2" FOR ALL DAMPERS INSTALLED IN EXTERNALLY INSULATED DUCT: ON EACH SUPPLY, RETURN AND EXHAUST DUCT TAKE-OFF & AT EACH TAKE-OFF TO REGISTER, GRILLE OR DIFFUSER.

B. DAMPERS ARE MANUFACTURED APPROXIMATELY 5/16" SMALLER IN WIDTH AND 1/8" SMALLER IN HEIGHT THAN SIZE OF DUCT IN WHICH THEY ARE INSTALLED; E.G., NOMINAL DAMPER SIZE IS 24" X 10"; ACTUAL SIZE IS APPROXIMATELY 23-11/16" X 9-7/8".

C. DAMPER FRAME SHALL BE CONSTRUCTED OF #6063 EXTRUDED ALUMINUM REINFORCED CHANNEL WITH MINIMUM THICKNESS OF .050". OPPOSED DAMPER BLADES SHALL BE #6063 EXTRUDED ALUMINUM WITH MINIMUM THICKNESS OF .050" AND SHALL INCLUDE REINFORCING RIBS. EACH BLADE SHALL BE SUPPORTED IN THE DAMPER FRAME BY INDIVIDUAL TEFLON AXLE BEARINGS, AND SHALL BE DRIVEN BY STAINLESS STEEL CONNECTING SLIDE LINKAGE CONTROLLED BY 3/8" SQUARE STEEL CONTROL SHAFT.

D. DAMPERS 12" AND LARGER IN HEIGHT SHALL BE OPPOSED MULTI-BLADE EQUAL TO GREENHECK, NAILOR, OR VENT PRODUCTS.

E. DAMPER BLADES SHALL BE TWO GAUGES HEAVIER THAN ADJOINING DUCTWORK, AND SHALL BE RIVETED TO SUPPORTING RODS. HEM OVER EDGES PARALLEL TO RODS.

F. BRACKETS SHALL BE GALVANIZED METAL, SECURED TO DUCTWORK WITH SHEET METAL SCREW WITH LOCKING QUADRANT ARMS (SEE SEAL CLASS SECTION FOR ADDITIONAL REQUIREMENTS). PROVIDE 2" HANDLE EXTENSION FOR ALL DAMPERS ON EXTERNALLY INSULATED DUCTWORK.

2.04 REGISTERS, GRILLES, & DIFFUSERS:

A. PROVIDE ALUMINUM CONSTRUCTION DIFFUSERS, REGISTERS AND GRILLES WITH SIZES AS NOTED ON THE DRAWINGS AND HEREIN SPECIFIED. REGISTERS AND GRILLES SHALL BE AS MANUFACTURED BY TITUS, METALAIRE, PRICE, OR NAILOR.

B. DISTRIBUTION DEVICES SHALL BE FACTORY PRIMED AND FINISH PAINTED BY THE MANUFACTURER IN COLOR AS APPROVED BY THE ARCHITECT, DURING SHOP DRAWINGS.

C. COORDINATE GRILLES WITH CEILING AND WALL CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LENGTHS AND FOR FRAMING AND MITERING ARRANGEMENTS THAT MAY DIFFER FROM THOSE SHOWN ON HVAC DRAWINGS.

D. DIFFUSERS AND GRILLES WITHIN HARD GYP CEILINGS SHALL BE FURNISHED WITH PLASTER FRAMES. INSTALL GRILLES IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS.

2.05 PIPING:

A. CONDENSATE:
1. PVC PIPE: ASTM D1785, SCHEDULE 40
2. FITTINGS: ASTM D2466 OR D2467, PVC.
3. JOINTS: ASTM D2855, SOLVENT WELD.
4. PITCH ALL PIPING 1/4" – 1'-0".

B. REFRIGERANT PIPING:
1. COPPER TUBING: ASTM B88, TYPE ACR, HARD DRAWN.
2. FITTINGS: ASME B16.18, CAST BRASS, OR ASME B16.22, SOLDER WROUGHT COPPER.
3. JOINTS: SOLDER, 95-5 TIN-ANTIMONY, OR TIN AND SILVER, WITH MELTING RANGE 430 TO 535 DEGREES F.

2.06 REFRIGERANT PIPE INSULATION:

A. PROVIDE AND INSTALLED 1" THICK INSULATION ON ALL PIPING MANUFACTURED BY ARMACELL.

B. INSULATION MATERIAL SHALL BE A FLEXIBLE, CLOSED-CELL ELASTOMERIC INSULATION IN TUBULAR FORM MODEL APARMAFLEX SS. PRODUCT SHALL MEETS THE REQUIREMENTS AS DEFINED IN ASTM C 534, "SPECIFICATION FOR PREFORMED ELASTOMERIC CELLULAR THERMAL INSULATION IN SHEET AND TUBULAR FORM."

C. INSULATION MATERIALS SHALL HAVE A CLOSED-CELL STRUCTURE TO PREVENT MOISTURE FROM WICKING WHICH MAKES IT AN EFFICIENT INSULATION CONTINUOUS THRU WALLS.

D. PIPING INSULATION SHALL BE INSTALLED TO BE CONTINUOUS THRU ALL WALL PENETRATIONS.

E. UNIT IS A HEAT PUMP SO BOTH REFRIGERANT AND SUCTION LINES REQUIRE EXTERNAL INSULATION.

F. INSTALL PIPE INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING ONTO PIPING. ALL SEAMS AND BUTT JOINTS SHALL BE ADHERED AND SEALED USING ARMAFLEX 520 OR 520 BLVADHESIVE. WHEN USING AP ARMAFLEX SS, ONLY THE BUTT JOINTS SHALL BE ADHERED USING ARMAFLEX 520 OR 520 BLVADHESIVE.

G. INSULATION SHALL BE PUSHED ONTO THE PIPE, NEVER PULLED. STRETCHING OF INSULATION MAY RESULT IN OPEN SEAMS AND JOINTS.

H. ALL EDGES SHALL BE CLEAN CUT. ROUGH OR JAGGED EDGES OF THE INSULATION SHALL NOT BE PERMITTED. PROPER TOOLS SUCH AS SHARP NON-SERRATED KNIVES MUST BE USED.

I. EXTEND PIPING INSULATION CONTINUOUS AND WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE SPECIFIED.

J. HANGERS: ARMAFIX ID SHALL BE USED TO PREVENT COMPRESSION OF INSULATION AT STANDARD SPLIT, CLEVIS HANGERS OR OTHER PIPE SUPPORT SYSTEMS. TO MINIMIZE THE MOVEMENT OF ARMAFIX, IT IS RECOMMENDED THAT A PAIR OF NON-SKID PADS BE ADHERED TO THE CLAMPS. IN ADDITION, TO PREVENT LOOSENING OF THE CLAMPS, USE OF AN ANTIVIBRATORY FASTENER, SUCH AS A NYLON-LOCKING NUT, IS ALSO RECOMMENDED.

K. PVC PIPE JACKET: PROVIDE AND INSTALL ZESTON 300 SERIES PVC HEAVY-DUTY FITTING COVERS AND ZESTON PVC PIPE JACKET ON ALL EXTERIOR PIPING SPECIFICALLY DESIGNED FOR INDUSTRIAL AND COMMERCIAL APPLICATIONS.

2.04 ALL CONDENSATE PIPING:

A. PROVIDE AND INSTALLED 1" THICK INSULATION ON ALL PIPING MANUFACTURED BY ARMACELL.

B. INSULATION MATERIAL FOR REFRIGERANT PIPING SHALL BE A FLEXIBLE, CLOSED-CELL ELASTOMERIC INSULATION IN TUBULAR FORM MODEL APARMAFLEX SS. PRODUCT SHALL MEETS THE REQUIREMENTS AS DEFINED IN ASTM C 534, "SPECIFICATION FOR PREFORMED ELASTOMERIC CELLULAR THERMAL INSULATION IN SHEET AND TUBULAR FORM."

C. INSULATION MATERIALS SHALL HAVE A CLOSED-CELL STRUCTURE TO PREVENT MOISTURE FROM WICKING WHICH MAKES IT AN EFFICIENT INSULATION.

2.05 PIPE HANGERS AND SUPPORTS:

A. COPPER TUBING SHALL BE SUPPORTED WITH SPLIT RING HANGERS, COPPERIZED WITH SUPPORTING ROD.

B. PVC PIPE SHALL BE SUPPORTED NO MORE THAN 4'-0" ON CENTER.

C. USE INSULATION PROTECTION SADDLES OR SHIELDS FOR ALL INSULATED COLD PIPING AND WHERE HANGER IS OUTSIDE THE INSULATION. SECURE ALL SADDLES AND SHIELDS TO THE INSULATION TO PREVENT SLIPPAGE OR SHIFTING THAT MAY CAUSE THE SHIELD TO FALL TO THE GROUND. SADDLES SHALL BE SPOT WELDED TO HANGERS.

D. PERFORATED BAND IRON, WIRE, CHAIN OR OTHER PIPING SHALL NOT BE USED AS SUPPORTS NOR SHALL HANGER RODS PIERCE DUCTWORK.

E. USE COPPERIZED EQUIPMENT ON COPPER PIPE AND PVC COATED FOR PVC PIPE.

F. ON PIPING CONVEYING FLUID OR GASSES AT TEMPERATURES BELOW 60°F, SUPPORT SHALL BE OUTSIDE THE PIPE INSULATION. USE INSULATION PROTECTION SADDLES FOR EACH SUPPORT; SIZE SHALL BE AS PER MANUFACTURER'S RECOMMENDATION FOR EACH SIZE AND SERVICE OF PIPE.

PART 3 – CONTROL

3.02 LOCAL SPLIT DUCTED SYSTEM CONTROL

A. OCCUPIED WINTER: SUPPLY FAN SHALL RUN CONTINUOUSLY. THERMOSTAT SHALL ACTIVATE HEATING TO MAINTAIN THE THERMOSTAT SET POINT. AC STAGE 1, RADIATOR STAGE 2.

B. UNOCCUPIED WINTER: UPON A DROP IN SPACE TEMPERATURE BELOW THE NIGHT SETBACK TEMPERATURE, THE SUPPLY FAN CONDENSER SHALL BE CYCLED TO MAINTAIN THERMOSTAT NIGHT SETBACK SET POINT TEMPERATURE. AC STAGE 1, RADIATOR STAGE 2.

C. OCCUPIED SUMMER: SUPPLY FAN SHALL RUN CONTINUOUSLY. THE COOLING CIRCUITS SHALL ENERGIZE AS REQUIRED TO MAINTAIN THE THERMOSTAT SET POINTS. CONTROL VALVE SHALL BE CLOSED RADIATOR .

D. UNOCCUPIED SUMMER: SUPPLY FAN SHALL BE DE-ENERGIZED. CONTROL VALVE SHALL BE CLOSED RADIATOR.

E. ERV CONTROL TO REMAIN AS IS TO MAINTAIN OUTDOOR AIR LEVEL.

PART 4 – EXECUTION

4.01 BALANCING, ADJUSTING, TESTING, & CLEANING:

A. ALL HVAC SYSTEMS SHALL BE BALANCED BY AN INDEPENDENT TESTING AND BALANCING AGENCY CERTIFIED BY AABC. ALL TESTING SHALL BE IN ACCORDANCE WITH AABC & NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, FORM #81266. SYSTEMS SHALL BE ADJUSTED TO FLOW AND AIR QUANTITIES DESIGNED. A WRITTEN REPORT SHALL BE SUBMITTED FOR REVIEW.

B. PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS AND SERVICES FOR STARTUP TESTING AND BALANCING OF MECHANICAL SYSTEMS FOR QUANTITIES INDICATED ON DRAWINGS UPON COMPLETION OF INSTALLATION. BALANCE SYSTEMS IN ACCORDANCE WITH CODES, STANDARDS, REGULATIONS AND AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL USE RECENTLY CALIBRATED EQUIPMENT COMPATIBLE WITH INSTALLED EQUIPMENT AND SUBMIT BALANCING REPORT TO THE ENGINEER.

C. AIR BALANCING: PROVIDE COMPLETE BALANCING AND ADJUSTING OF ALL AIR SYSTEMS INCLUDING SETTING THE FLOW THROUGH ALL UNITS, DIFFUSERS, VOLUME DAMPERS AND GRILLES. RECORD ALL FAN MOTOR CURRENTS AND NAMEPLATE DATA. TEST AND ADJUST FLOW AT EACH UNIT, DIFFUSERS, AND VOLUME DAMPER. LIST DESIGN AND MEASURED FLOWS AND TEMPERATURES.

D. ALL HVAC SYSTEMS SHALL BE TESTED AND FOUND TIGHT. ANY LEAKS DEVELOPED SHALL BE CORRECTED PRIOR TO OWNER'S ACCEPTANCE OF THE NEW SYSTEMS.

4.02 PROJECT CLOSE-OUT:

A. RESTORE EXISTING FACILITIES USED DURING CONSTRUCTION TO ORIGINAL CONDITION. CLEAN PORTIONS OF THE SITE AFFECTED BY WORK OF THIS CONTRACT. REMOVE WASTE AND SURPLUS MATERIALS FROM THE SITE.

B. SUBMIT TWO COPIES OF OPERATION AND MAINTENANCE DATA BOUND IN THREE-RING BINDERS. INCLUDE WARRANTIES, SUBMITTALS, BALANCING REPORT, AND PROJECT DOCUMENTS AND CERTIFICATES. THE MANUAL SHALL ALSO INCLUDE A SCHEDULE FOR EQUIPMENT MAINTENANCE SCHEDULE SHALL PROVIDE A GENERAL OUTLINE FOR EQUIPMENT REQUIREMENT. EXAMPLE; FILTERS SHALL BE CHANGED EVERY 3 MONTHS, TEST DAMPERS ONCE A YEAR, MAINTAIN NEUTRALIZING KIT AT THE AIR HANDLERS.

C. CONTRACTOR SHALL INSTRUCT OWNER IN USE OF SYSTEM.

D. CONTRACTOR SHALL DEMONSTRATE ALL SEQUENCES OF CONTROL TO THE ENGINEER. THE TEMPERATURE CONTROL AND BALANCING SUB-CONTRACTORS SHALL ACCOMPANY THE ENGINEER DURING CHECK-OUT PROCEDURE AND SHALL DEMONSTRATE PROPER BALANCING POSITIONS OF MINIMUM FRESH-AIR SETTINGS. PERSONNEL SHALL BE EQUIPPED WITH TOOLS AND SPARE PARTS TO MAKE MINOR REPAIRS AND ADJUSTMENTS.

STAMP

STATE OF CONNECTICUT ★ MICHAEL C PETERSON 29107 LICENSED ★ PROFESSIONAL ENGINEER

Revisions: | Date:

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Scheduled Renovations to
Fair Oaks School Community Center
836 Old Colchester Road Oakdale, CT.

MECHANICAL SPECIFIC-ATIONS

FZA PROJECT PU-22-00438

PROJECT NO.: **2021-01.27**

SCALE: AS NOTED
DRAWN BY: AT
CHECKED BY: MCP
DATE: MAR. 22, 2022

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