TOWN OF MANSFIELD

Department of Facilities Management

Request For Proposal (RFP)

Replacement of Air Handler Units

Submission Deadline:

2:00 p.m. Thursday, January 28, 2021

Submission Contact and Address:

Director of Facilities Management

Facilities Management Department

4 South Eagleville Road

Mansfield, Connecticut 06268

mansfieldct.gov

TOWN OF MANSFIELD
MANSFIELD, CONNECTICUT

NOTICE OF BID

Replacement of Air Handler Units
Mansfield Department of Facilities Management

Due to the current public health crisis, bidders wishing to submit a proposal for this solicitation are requested to respond online through a secure E-Procurement portal. Responses can be submitted at the following link: mansfieldct.bonfirehub.com under the bid title "Replacement of Air Handler Units". Bidders will be required to create a Bonfire profile before submitting their bid. Step-by-step instructions on how to register as a vendor are available at this website: Vendor Registration. Due to the bid collection change to a secure online platform, multiple copies of your bid are no longer required. Please upload one (1) copy of all required bid documentation. Qualifications and proposals will be accepted until **Thursday, January 28, 2021 at 2:00pm.** Proposals received after that time will not be considered.

The Instructions to Bidders, Form of Bid, Scope of Services, and other contract documents may be examined and downloaded from the "Your Government" "RFQ, RFP, and Bid Postings" section of the Town of Mansfield website mansfieldct.gov.

The Town of Mansfield hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation, and they will not be discriminated against on the grounds of race, color, national origin or sex, in consideration for an award. An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply.

If you intend to bid please notify Allen Corson, Director of Facilities Management at (860) 429-3331 or by email at maintenance@mansfieldct.org so you may receive any and all addendum.

To receive consideration bids must be uploaded to the Bonfire platform no later than the day and hour mentioned above.

The Town of Mansfield reserves the right to accept or reject any or all bids; to waive any informality; or to accept any bid deemed in the best interests of the Town of Mansfield.

All bids shall be considered valid for a period of ninety (90) days.

Charmaine Bradshaw-Hill
Director of Finance
Town of Mansfield

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INSTRUCTIONS TO BIDDERS

TOWN OF MANSFIELD
MANSFIELD, CONNECTICUT 06268

Replacement of Air Handler Units
Mansfield Department of Facilities Management

1.01: TIME FOR OPENING BIDS

Due to the current public health crisis, bidders wishing to submit a proposal for this solicitation are requested to respond online through a secure E-Procurement portal. Responses can be submitted at the following link: mansfieldct.bonfirehub.com under the bid title "Replacement of Air Handler Units". Bidders will be required to create a Bonfire profile before submitting their bid. Step-by-step instructions on how to register as a vendor are available at this website: Vendor Registration. Due to the bid collection change to a secure online platform, multiple copies of your bid are no longer required. Please upload one (1) copy of all required bid documentation. Qualifications and proposals will be accepted until **Thursday, January 28, 2021 at 2:00pm.** Proposals received after that time will not be considered.

1.02: PREPARATION OF PROPOSALS

Proposals must be made upon forms contained herein. The blank spaces in the Proposal must be filled in correctly where indicated. The Bidder must state the prices for which he proposes to do each item of the work contemplated. In case of discrepancy where both words and the numerals are requested, the words shall govern. Ditto marks are not considered writing or printing and shall not be used. The Bidder shall sign his Proposal correctly. If the Proposal is made by an individual, his name, post office address and telephone number must be shown. If made by a firm, partnership, or corporation, the Proposal must be signed by an official of the firm, partnership, or corporation authorized to sign contracts, and must show the post office address and telephone number of the firm, partnership, or corporation. Failure to do so may disqualify the bid.

The bidder shall insert the price per stated unit and the extensions against each unit which he proposed to provide. In the event of a discrepancy between the unit price and the extension, the unit price shall govern. (If discounts are shown and there is an error in the extension of the total, the discount offered shall govern.) If the price bid per unit is based on any unit other than that stated, the bidder shall state the unit on which the unit price is based.

Each bid must be submitted to the Bonfire platform.

All information shall be entered in ink or by typewriter. Mistakes may be crossed out and corrections inserted before submission of your bid. The person signing the bid shall initial corrections in ink.

Corrections and/or modifications received after the closing time specified will not be accepted.

1.03 SUBMISSION OF PROPOSALS

All proposals can be submitted at the following link: mansfieldct.bonfirehub.com under the bid title "Replacement of Air Handler Units". Bidders will be required to create a Bonfire profile before submitting their bid. Step-by-step instructions on how to register as a vendor are available at this website: Vendor Registration. Due to the bid collection change to a secure online platform, multiple copies of your bid are no longer required. Please upload one (1) copy of all required bid documentation.

If any bidder contemplating submitting a proposal is in doubt as to the true meaning of any part of these specifications, he may submit requests for information and/or clarification in writing via e-mail to maintenance@mansfieldct.org by January 21, 2021. No interpretations as to the meaning of the plans, specifications, or other Contract Documents shall be made to any bidder orally.

A bid will not be accepted if it is received at mansfieldct.bonfirehub.com after the stated time of opening as shown on the bid proposal form. Unsigned bids shall be rejected.

Contractors may be required to furnish a Performance Bond if awarded the contract. Attorneys-in-fact who sign contract bonds must file, with each bond, a certified and effectively dated copy of their power of attorney. Certificates of Insurance may be required and must be furnished by the Contractor prior to any work being performed.

Purchases made the Town are exempt from Fair Trade Laws as well as the payment of any sales, excise, or Federal Transportation taxes. Such taxes must not be included in the bid prices. Tax exemption certificates, for merchandise accepted by the Town, will be completed at the request of the Contractor furnishing the goods and services.

1.04 COST OF BID PREPARATION

The Town shall not reimburse the bidder for the cost of developing, presenting, or providing any response to this solicitation. Offers submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner.

1.05 PRE-BID WALK-THROUGH / FAMILIARITY WITH THE WORK

Attendance at a pre-bid walkthrough is mandatory to review the project scope, site, and conditions as well as address any questions regarding the project. Please email maintenance@mansfieldct.org or call 860-429-3331 to schedule an individual walkthrough.

Each bidder is cautioned to examine the specifications, drawings, samples, etc. pertaining to the bid to fully acquaint himself with the exact existing conditions relating to the work and has fully informed himself as to the work involved and the difficulties and restrictions attending the performance of this bid. Failure on the part of the bidder to examine all pertinent documents samples or job areas shall not entitle him to any relief from the

conditions imposed in the proposal, the specifications, and the contract. Unsigned bids or bids without an original signature will not be accepted.

At the time of the opening of bids each bidder shall be presumed to have inspected the work and to have read and to be thoroughly familiar with all of the Contract Documents (including addenda). The failure or omission of any Bidder to receive or examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to his bid.

1.06 ADDENDA AND INTERPRETATIONS

When a bidder desires an interpretation or clarification of any ambiguity in the bidding documents, he must contact the Director of Facilities Management prior to the bid opening. The Director of Facilities Management's interpretation shall be final and will be made known to all bidders concerned.

If any bidder contemplating submitting a proposal is in doubt as to the true meaning of any part of these specifications, he may submit requests for information and/or clarification in writing via e-mail to maintenance@mansfieldct.org by January 21, 2021. No interpretations as to the meaning of the plans, specifications, or other Contract Documents shall be made to any bidder orally.

Addenda information will be available online at http://www.mansfieldct.gov. It is strongly suggested that bidders check for any addenda a minimum of forty-eight hours in advance of the bid deadline. Failure of any bidder to receive any such addendum or interpretations shall not relieve any bidder from any obligations under his bid as submitted. Each bidder is responsible for checking the Town's website to determine if the Town has issued any addenda and, if so, to complete its proposal in accordance with the RFP as modified by the addenda. All addenda so issued shall become part of the Contract Documents. Oral explanations will not be binding on the Town.

1.07 SAMPLES

When samples are requested they shall be delivered by the bidder properly identified at the time at the bid opening unless the bidding document indicates a different time. Samples shall be submitted free of charge. Samples will be removed by the bidder at his expense. The Town will not be responsible for any samples which are destroyed or mutilated in examination. If samples are not removed within thirty (30) days after written notice to the Vendor, they shall be considered as abandoned and the Town shall have the right to dispose of them as its own property. The Director of Finance may, at his discretion, hold the sample or samples of the successful bidder or bidders, for comparison with articles delivered on the Purchase Order, or orders issued subsequent to the award.

1.08 ANTI-DISCRIMINATION

The Contractor agrees and warrants that in the performance of this Contract it will not discriminate or permit discrimination against any person or group of persons on the grounds of sex, race, color, religion, age marital status, ancestry, national origin, past history of mental disorder, mental retardation or physical disability or other basis in any

manner prohibited by the laws of the United States, the State of Connecticut, or the Town of Mansfield.

1.09 APPLICABLE LAW

The Contract pursuant to this solicitation shall be governed by, and the Town and Contractor shall have all remedies all recorded each by the Uniform Commercial Code, as adopted in the State of Connecticut, except as otherwise provided in such Contract or in laws pertaining specifically to the Town. This Contract shall be governed by the laws of the State of Connecticut, and suits pertaining to this contract shall be brought only in federal or state courts in the State of Connecticut.

1.10 INTERPRETATION OF BIDS

Qualified bids are subject to rejection in whole or in part. A qualified bid is defined as one limiting or modifying any of the terms and conditions and/or specifications of the invitation to bid.

Bidders are cautioned to initial erasures, alterations or corrections. Failure to do so may result in rejection of bids.

Unless limited by the term no substitute, the use of the name of a manufacturer or of any particular make, model, or brand in describing an item, does not restrict bidders to that manufacturer or specific article, this means being used simply to indicate the character or quality of the article so described; but the article offered must be of such character and quality that it will serve the purpose for which it is to be used, equally as well as that specified, and shall be deemed by the Town to be so warranted by the bidder. Bids on comparable items must clearly slate the exact article being offered, and bidder shall furnish such other information concerning the article being offered as necessary to evaluate its acceptability for the purpose intended. If the bidder does not indicate that the article he offers is other than as specified, it will be understood that the bidder is offering the article exactly as specified.

The Director of Finance reserves the right to reject any or all bids, or the bid for any one or more commodities or contracted services included in any or all bids, to waive any Informality in bids and unless otherwise specified, to buy any part or the whole from one or more bidders when it is to the Town's best interest to do so.

1.11 INTERPERTATION – PAROL EVIDENCE

The contract pursuant to this solicitation is intended by the parties as a final expression of their agreement and is intended also as a complete and exclusive statement of the terms of such Contract. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in the contract. Acceptance or acquiescence in a course of performance rendered under the contract shall not be relevant to determine the meaning of the contract even though the accepting or acquiescing party had knowledge of the nature of this performance and opportunity to object.

1.12 DELIVERY

All prices bid must be on the basis of F.O.B. destination, inside delivery, unloaded and assembled unless otherwise indicated in the bidding documents. The contractor shall be responsible for all freight costs.

It shall be understood and agreed that any and all commodities furnished shall comply fully with all applicable O.S.H.A., and Federal and State laws and regulations.

Any equipment delivered must be standard new equipment, latest model, except as otherwise specifically stated in bidding documents. Where any part or nominal appurtenances of equipment are not described, it shall be understood that all the equipment and appurtenances which are usually provided in the manufacturer's stock model shall be furnished.

Delivery must be made as ordered and in accordance with the bidding documents. The decision of the Director of Finance as to reasonable compliance with delivery terms shall be final. Burden of proof of delay in receipt of order shall rest with the Contractor.

Commodities shall be securely and properly packed for shipment according to accepted standard commercial practice, without extra charge for packing cases, bailing or sacks, the containers to remain the property of the Town unless otherwise stated in the bidding documents.

1.13 AWARD OF CONTRACT

Award will be made to the lowest responsible qualified bidder.

A Bidder, if requested, must be prepared to present evidence of experience, ability, service facilities and financial standing necessary to meet satisfactorily the requirements set forth or implied in the bid.

The Director of Finance reserves the right to reject the bid of any bidder in default of any prior contract or guilty of misrepresentation, or of any company having as its sales agent or representative, or member of the firm any individual in default or guilty of misrepresentation.

Any and all work will need to be accomplished in the projected timeframes put forth in this Request for Proposal, or in any attached listing of projects by location and projected completion work dates. Contract award may be as a package or broken down by each service based on the best value for the Town of Mansfield.

Each bid will be received, with the understanding that the acceptance in writing by the Director of Finance of the offer to furnish any or all of the commodities described there in, shall constitute a contract between the Bidder and the Town, which shall bind the Bidder on his part to furnish and deliver the commodities at the prices given and in accordance with conditions of said accepted bid and specifications.

No alterations or variations of the terms of the contract shall be valid or binding upon the Town unless made in writing and signed by the Director of Finance. The placing, in the mail to the address given in the bid or delivery of a notice of award to a bidder will constitute

notice of acceptance of an oiler. When so requested by the Director of Finance, the Contractor shall execute a formal contract with the Town for the complete performance specified therein. The contract may be terminated or annulled by the Director of Finance upon nonperformance of contract terms or failure of the Contractor to furnish performance surety and/or insurance certificates within ten (10) days from date of request. Any unfulfilled deliveries against such contract may be purchased from other sources at the Contractor's expense.

Failure of a Contractor to deliver within the time specified or within reasonable time as interpreted by the Director of Finance or failure to make replacements of rejected commodities when so requested, immediately or as directed by the Director of Finance, will constitute authority for the Director of Finance to purchase in the open market, the commodities to replace the commodities rejected or not delivered. The Director of Finance reserves the right to authorize immediate purchased in the open market against rejections on any contract when necessary. On all such purchases, the Contractor agrees promptly to reimburse the Town for excess costs occasioned by such purchases. Such purchases will be deducted from the contract quantities.

However, should public necessity demand it, the Town reserves the right to use or consume commodities delivered which are substandard in quality, subject to an adjustment in price to be determined by the Director of Finance.

1.14 BEST CUSTOMER PREFERENTIAL PRICING

The contractor shall reduce the contract price of any good or service for which a contract award is executed to an amount equal to or lower than any pricing offered to any other commercial customer or the general public. This reduction in price shall be applied when the goods or services are identical to those contracted for and quantities requested meet any minimum quantity requirements for such pricing.

1.15 CERTIFICATION

By signature of the proposer, the proposer certifies:

The submission of the offer did not involve collusion or other anticompetitive practices.

The proposer had not given, offered to give, not intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause shall result in the rejection of the offer. Signing the offer with a false statement shall void the offer, any resulting Contract and may be subjected to legal remedies by law.

The proposer submitting the offer hereby certifies that the Individual signing the offer and/or Contract is an authorized agent for the proposer and has the authority to bind the proposer to the contract.

1.16 CLAYTON ACT ASSIGNMENT OF RIGHTS

The Contractor and/or Subcontractor offers and agrees to assign to the Town of Mansfield all rights, responsibilities and interest in all causes of action it may have under Section 4 of the Clayton Act. 15 U.S.C. Section 15, or under Connecticut General Statutes 35-24 et. seq., as amended, rising out of the purchase of services, property, or intangibles of any kind pursuant to the Agreement, or Subcontracts thereunder. This assignment shall be made and become effective at the time the Town awards or accepts such Agreement, without further acknowledgment by the parties. In the alternative, at the option of the Town, the Contractor and/or Subcontractor agrees to pay to the Town its proportionate share of recoveries for antitrust violations which relate to purchases pursuant to this Contract, or Subcontracts hereunder. The Contractor and/or Subcontractor agree promptly to notify the Director of Finance of the Town of Mansfield of suspected antitrust violations and claims.

1.17 CONTRACT

The contract pursuant to this solicitation shall be based upon the request for bid issued by the Town and the offer submitted by the Contractor in response to the request for bid. The offer shall substantially conform to the terms, conditions, specifications and other requirements set forth within the text of the request for bid. The Town reserves the right to clarify any contractual terms with the concurrence of the Contractor. However, any substantial nonconformity in the offer, as determined by the Town Director of Finance, shall be deemed nonresponsive and the offer rejected.

Such contract shall contain the entire agreement between the Town and the Contractor relating to this requirement and shall prevail over any and all previous Agreements, contract, proposals, negotiations, purchase orders or master Agreements in any form.

1.18 CONTRACT AMENDMENTS

The contract pursuant to this solicitation shall be modified only by a written contract amendment signed by the Town Director of Finance and persons duly authorized to enter into contracts on behalf of the Contractor.

1.19 GRATUITIES

The Town may, by written notice to the Contractor, cancel the contract if it is found that gratuities, in the form of entertainment, gifts or otherwise, were offered or given by the Contractor or any agent or representative or the Contractor, to any officer or employee or the Town amending, or the making of any determinations with respect to the performing of such contract. In the event this contract is canceled by the Town pursuant to this provision, the Town shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Contractor the amount of the gratuity.

1.20 INSURANCE

The Contractor shall procure and maintain insurance against claims for injuries or losses to persons or property that are alleged to have arisen in connection with activities of the Contractor and any agents, representatives, subcontractors or employees. Insurance

companies must be licensed by the State of Connecticut or otherwise acceptable to the Town. The cost of such insurance, including required endorsements or amendments, shall be the sole responsibility of the Contractor. Full disclosure of any non-standard exclusions is required for all required coverages.

The coverage indicated below at *not less than* the specified limits are required for this project (agreement):

A. Comprehensive General Liability coverage naming the TOWN OF MANSFIELD as additional insured, written on an occurrence basis: $1,000,000 per occurrence, $2,000,000 aggregate

B. Automobile Liability coverage, including coverage for hired or borrowed autos: $1,000,000 per accident-combined single limit

C. Workers' Compensation Coverage, (as per Connecticut law and custom) and employer's liability coverage $100,000 (each accident) / $500,000 (Disease, each employee) / $100,000 (Disease, policy limit) limits or "Certificate of Solvency" issued by Connecticut Workers' Compensation Commission for self-insurers.

D. Umbrella/Excess Liability: The contractor will maintain coverage applying over the underlying Commercial General Liability/Automobile Liability, Pollution Liability (where applicable), and Employer Liability section of the Workers' Compensation coverage. Minimum limits: $2,000,000 per occurrence/$2,000,000 annual aggregate. The Town of Mansfield shall have the sole discretion in increasing or reducing the Umbrella/Excess Liability coverage requirements depending on the scope and/or size of the work to be performed by Contractor/Bidder.

Commercial General Liability, Commercial Auto Liability, and Umbrella/Excess Liability coverage shall be written on a Primary, Non-Contributory Basis.

The required insurance form shall be certified by a duly authorized representative of the insurer(s) and incorporated into and made a part of this agreement. Properly executed certificates signifying adequate coverage in effect for the duration of the contract with renewal certificates issued not less than 30 days prior to expiration of a policy period, must be submitted with the bid on file with the Town prior to commencement of this project (agreement).

Insurance as required by the Town of Mansfield shall be furnished by the Contractor to the Town. The Town of Mansfield shall be listed as “additional insured” by name on all insurance certifications except Worker’s Compensation & Employers Liability. Failure of the Contractor to maintain all required insurance in accordance with the Contract shall constitute a material breach of the Contract and shall subject the Contractor the Town’s withholding liquidated damages from the Contractor in the amount of five percent (5%) of the total Contract price, as it may be amended by construction orders, subject to the continued commercial availability of such coverage.

The Contractor shall not commence work under this contract until he has obtained all the insurance required above of the Information for Bidders attached hereto and such insurance has been approved by the Town. The Contractor shall furnish the Town with

certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of policies. Such certificates shall also contain substantially the following statements: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the Town." The Town of Mansfield shall be listed as “additional insured” by name on all such insurance certifications.

Each policy of insurance shall include a waiver of subrogation in favor of the Town of Mansfield and shall provide no less than thirty (30) days’ notice to the Town in the event of a cancellation or change in conditions or amounts of coverage.

1.21 INDEMNIFICATION

The Bidder is aware of and agrees that, if awarded an Agreement, he is bound by the following indemnification language:

> To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards, commissions, officers, officials, employees, agents, representatives, and servants from any and all suits, claims, losses, damages, costs (Including without limitation reasonable attorneys' fees), compensation, penalties, fines, liabilities or judgments or any name or nature for:
>
> - Bodily injury, sickness, disease, or death; and/or
> - Damage to or destruction of property, real or personal; and/or
> - Financial losses (including, without limitation, those caused by loss of use)
>
> sustained by any person or concern, including officers, employees, agents, Subcontractors or servants of the Town, or the Contractor, or by the public, which is cause or alleged to have been caused in whole or in part by the negligent act(s) or omission(s) of the Contractor, its officers, employees, agents, or Subcontractors, in the performance of this Agreement or from the inaccuracy of any representation or warranty of the Contractor contained in the Contract Documents. This indemnity shall not be affected by other portions of the Agreement relating to insurance requirements.

To the fullest extent permitted by law, the Contractor agrees to release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards and commissions, officials, officers, employees, agents, representatives, and servants from any loss, claim, cost penalty, fine or damage that may arise out of the failure of the Contractor, its officers, agents, employees or Subcontractors to comply with any laws or regulations of the United States of America, the State of Connecticut, the Town of Mansfield, or their respective agencies. This undertaking shall not be affected by other portions of the Agreement relating to insurance requirements.

1.22 LAW OF WAIVER

Any breach of contract which the Town does not object to shall not operate as a waiver of the Town to seek remedies available to it for any subsequent breach.

1.23 LICENSES

Contractor shall maintain in current status all federal, state, and local licenses and permits required for the operation of the business conducted by the Contractor as applicable to this contract.

1.24 PUBLIC RECORD

All proposals submitted in response to this request shall become the property of the Town and shall become a matter of public record available for review subsequent to the award notification.

1.25 PROPERTY TAX ASSESSMENT

All owners of real estate, or of tangible personal property located in any town for three months or more during the assessment year immediately preceding any assessment day, who are nonresidents of such town, shall file lists of such real estate and personal property with the assessors of the town in which the same is located on such assessment day, if located in such town for three months or more in such year, otherwise, in the town in which such property is located for the three months or more in such year nearest to such assessment day, under the same provisions as apply to residents, and such personal property shall not be liable to taxation in any other town in this state. The list of each nonresident taxpayer shall contain his post-office and street address. The assessors shall mail to each nonresident, or to his attorney or agent having custody of his taxable property, at least fifteen days before the expiration of the time for filing lists, blank forms for filing lists of such property. The lists of taxable property of nonresidents shall be arranged in alphabetical order and separate from the lists of residents, provided no such separation shall be necessary in any town the board of assessors of which, upon the request of its property tax collector, has made rules and regulations approved of the secretary of the office of policy and management setting up an alternative method of arrangement.

1.26 PROVISIONS REQUIRED BY LAW

Each and every provision of law and any clause required by law to be in the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

1.27 RELATIONSHIP OF PARTIES

It is clearly understood that each party shall act in its own individual capacity and not as an agent, employee, partner, joint venture, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other party for any purpose whatsoever. The Contractor is advised that taxes or social security payments shall not be withheld from a Town payment issued hereunder and that Contractor should make arrangements to directly pay such expenses, if any. The Contractor understands that it is not entitled to compensation in the form of salaries, or to paid vacation or sick days by the Town. The Contractor further understands that the Town

shall not provide any insurance coverage to the Contractor, including workmen's compensation coverage.

1.28 RIGHTS AND REMEDIES

No provision in these solicitation documents or in the proposer's bid shall be construed, expressly or by implication as a waiver by either party of any existing or future right and/or remedy available by law in the event of any claim of default or breach of contract. The failure of either party to insist upon the strict performance of any term or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the acceptance of materials or services, obligations imposed by this contract or by law, and shall not be deeded a waiver of any right of either party to insist upon the strict performance of the contract.

1.29 SEVERABILITY

The provisions of this contract are severable to the extent that any provision or application held to be invalid shall not affect any other provision or application of the contract which may remain in effect without the invalid provision or application.

1.30 SUBCONTRACTS

No subcontract shall be entered into by the Contractor with any other party to furnish any of the material/service specified herein without the advance written approval of the Town's Director of Finance. All subcontracts shall comply with federal and state laws and regulations which are applicable to the services covered by the subcontract and shall include all the terms and conditions set forth herein which shall apply with equal force to the subcontract, as if the subcontractor were the Contractor referred to herein. The Contractor is responsible for contract performance whether or not subcontractors are used. The Town shall not unreasonably withhold approval and shall notify the Contractor of the Town's position within a reasonable period of time.

1.31 SUBMISSION OF INVOICES

The following provisions regarding submission of invoices are an integral part of these bidding documents, and as such, will create a contractual obligation on the part of the awarded vendor. Failure to comply with these contractual requirements may result in a breach of contract:

All invoices submitted to the Town of Mansfield for goods or services shall contain the following minimum information:

- Town Order Number.
- Complete description and quantity of goods and services rendered.
- Agency and name of individual requesting goods or rendering of services.
- Complete price information including gross amount, discount if applicable, net amount and itemization of labor charges if applicable.
- Additional information as may be required by contract.

All invoices must be forwarded to the Town Department to whom goods and services were rendered.

1.32 TOXIC SUBSTANCES

In accordance with section 31-40 of the General statutes of Connecticut any person who supplies any toxic substance as defined in 31·40 shall provide the following information:

1) The generic or basic chemical name of the toxic substance;
2) The level at which exposure to the substance is determined to be hazardous, if known;
3) The acute and chronic effects of exposure of hazardous levels;
4) The symptoms of such effects;
5) Appropriate emergency treatment;
6) Proper conditions for safe use and exposure to such toxic substance;
7) Procedures for cleanup of leaks and spills of such toxic substance; and
8) A label on each container of any such substance which states, in a clearly legible and conspicuous form, that a toxic substance is contained therein.

This information shall be disclosed at the time of the bid opening and chemical data sheets will also be required if the products meet the toxic substance criteria.

1.33 VENDOR WARRANTY

Vendor hereby agrees to:

a. Perform contract in accordance with the specifications and bid under which the contract was awarded.
b. Warranty the products or services against defective material or workmanship and to repair or replace any damage or marring of products occasioned in transit.
c. Furnish adequate protection from damage for all work and to repair damages of any kind, for which he or his workmen are responsible, to the premises or equipment, to his own work or to the work of other contractors.
d. Indemnify, defend, and hold harmless the Town, its agencies, agents, offices, servants or employees from any action, law suit or judgment arising out of detects in its products, materials or workmanship, negligence in its activities or breach of its agreement with the Town, including the cost of defense and counsel fees.

Articles which in any respect fail to conform to the specifications upon which the award is made will be rejected and held subject to the Bidder's disposition and expense.

SCOPE OF SERVICES

Replacement of Air Handler Units
Mansfield Department of Facilities Management

GENERAL INFORMATION

The Facilities Management Department is requesting a proposal from contractors for the removal and installation of air handler units at the Mansfield Community Center and Mansfield Middle School. The scope of work consists of removing the existing Air Handler Unit (AHU) that services the Mansfield Community Center locker rooms and installing one (1) new AHU unit in its place. The removal of duct work and replacement with new duct work and dehumidification is part of the scope of work for the Mansfield Community Center. There is an additional location at the Mansfield Middle School, where the scope of work consists of removing two (2) AHU units and installing two (2) units in the same location over the Auditorium. All work shall comply, in every respect, with Town and State regulations and laws, as well as all applicable Code requirements (Town and State).

PROJECT OBJECTIVE AND SCOPE

The contractor must perform all work in accordance with the proposed plans (Exhibit 1 for the Mansfield Community Center) as well as the requirements set forth below:

1. Coordinate installation, disconnection, and demolition schedule so as to mitigate impacts to the Community Center business operations and allow for the least amount of HVAC downtime during business hours.
2. Disconnect and re-connect all power supplies, and add new power supplies if needed for new unit.
3. Remove and dispose of existing units.
4. At the Community Center location, install one (1) new AHU, capable of heating and cooling the specified area, mounted in the same location as the existing AHU. All duct work and dehumidification shall be included with installation. At the Middle School location, install two (2) new AHU units, capable of heating and cooling the specified area, mounted in the same locations as the existing AHU's. The Town is looking for units that provide the most energy efficient ratings and provides any rebates for energy savings.
5. HVAC units serving the auditorium shall include hot gas reheat style humidity control units (assuming they are 30-40% OA), use stainless steel heat exchangers, include CO2 demand control ventilation, have enough static to do MERV-13 filters, and UVG in the RTU's.
6. Coordinate with the Town's existing controls contractor (Alerton Building Management Software) to install building automation system controls to integrate into existing control system. New units shall have new controls, new operating systems software and hardware, and have connections to existing building automation system. Coordinate with the Town's existing roofing contractor (Offshore Construction), as needed.
7. Town seeking design to include ultra violet lighting and MERV 13 filters in the units.
8. Outfit new AHU with hail guards, venting, economizer, and refrigerants.
9. Provide start-up and testing in accordance with manufacturer specifications.

10. Provide all necessary deliverables required for future operation, inspection, and maintenance of the new AHU, including but not limited to line drawings and manufacturer's guides.
11. Provide systems operation and basic maintenance training to Town Staff.

The Contractor is required to have certified and skilled technicians under the direction of a mechanical contractor who has all applicable State licenses. The Contractor must comply will all local and State laws, rules, and regulations for a licensed HVAC company and provide its state contractor licensing information.

It shall be the responsibility of the Contractor to supply all necessary tools and equipment to perform the work as requested.

Installations shall be made in a neat and skillful manner, in accordance with the best practices of the trade. Upon completion of the work, the Contractor shall conduct an operating test in the presence of the designated Town representative and shall demonstrate that the HVAC system is operating properly.

The Contractor shall submit catalog cuts for all new equipment including all warrant information.

PERMITS

The Contractor is responsible for obtaining any necessary permits and for paying all associated fees. The Contractor shall also be responsible for ensuring necessary inspections are scheduled and completed satisfactorily. Utility locates for any exterior work are the responsibility of the Contractor.

PROJECT SITE CLEANLINESS

It will be the responsibility of the Contractor to leave the work area in a clean, "broom swept" state upon completion of the work at the end of each work day. The Contractor must remove all debris generated and dispose of it in an appropriate manner.

SAFETY

The Contractor shall be responsible for all safety training, procedures, and requirements. Observance of any employees working in an unsafe manner shall be grounds for issuance of a Stop Work Order by the Town and possibly for termination of the contract.

INSURANCE

The Contractor shall provide insurance as set forth in this RFP.

PERFORMANCE AND PAYMENT BONDS

The Contractor will be required to submit a bond equal to the cost of the project in accordance with terms set forth in this RFP.

EXPERIENCE AND QUALIFICATIONS

A. Please provide a brief history and overview of your company and its organizational structure.
B. State why your company is well qualified to provide the services, including the size of the company, size of the team assigned to the City, years in commercial HVAC business (minimum of five years required), and the location of the office (s) from which this work will be performed.

C. Provide copies of all state and local licenses and/or certificates to verify your company's qualifications in HVAC maintenance, repair, and installation.
D. Demonstrate experience with the design-build strategy, including a brief profile of description of similar projects that your company has performed. The projects should be listed by order of most similar to the Project and in evaluation of the Project site. Each project should include a total dollar amount and the key contact for the owner as a reference for the project.
E. Confirm your adherence to the Scope of Work and provide details as to how you plan to meet the Town's needs.
F. A preliminary work plan with proposed project completion date must be submitted with your proposal.

PRICING

Submit a fee proposal including all of Contractor's costs and expenses to fully perform the services (including all equipment and labor) associated with the scope of work.

PROPOSAL REQUIREMENTS

The applicant shall submit a proposal to include the following:

- Bid Proposal Form
- Attachment A – Insurance Requirements
- Attachment B – Questionnaire Concerning Occupational Health & Safety
- Attachment C – Certification of Non-Collusion
- Attachment D – Summary of Work Experience
- Attachment E – Qualifications Statement

SELECTION CRITERIA

Proposals will be reviewed and analyzed based on the following criteria:

- Completion of all RFP requirements.
- Experience of current staff providing installation services.
- Professional references from prior serviced clients.
- Ability to meet the Town's needs.
- Fee for services.

TOWN OF MANSFIELD
MANSFIELD, CONNECTICUT 06268
BID PROPOSAL

Replacement of Air Handler Units
Mansfield Department of Facilities Management

BID OPENING: 2:00 p.m., Thursday, January 28, 2021

To: mansfieldct.bonfirehub.com

The undersigned, as bidder, agrees to remove and replace air handler units as specified herein and the Contractor declares that he has carefully examined the Specifications, Form of Contract, and the site of the work and he proposes and agrees that, if this Proposal is accepted, he will contract with the Town in accordance with the copy of the Contract Documents; this Proposal form and Specifications being part of and included in a copy of said documents, to provide all necessary equipment and services to do all the work as specified in the Contract in the manner therein prescribed, and that he will take in full payment for the work, the unit or lump sum price applicable to that stated in the schedule below.

FIRM: _____
Name

_____
Street

_____
City, State, Zip Code

NAME: _____
Printed Name

TELEPHONE NUMBER: _____

FAX NUMBER: _____

EMAIL ADDRESS: _____

SIGNED: _____

DATE: _____

The Contractor proposes to furnish all supervision, technical personnel, labor, materials, equipment, tools, appurtenances, services, and all else whatsoever required to perform all work described in the contract bidding documents for the "Replacement of Air Handler Units" as amended by the addendum noted below for the amounts shown herein under Schedule of Bids.

Addendum No._____ Dated:_____

Addendum No._____ Dated:_____

Addendum No._____ Dated:_____

Addendum No._____ Dated:_____

It is understood and agreed that the Owner has the privilege of rejecting any or all Bids and of waiving informality in any bid.

It is further understood and agreed that this bid shall be irrevocable for ninety (90) calendar days after bid receipt date.

SCHEDULE OF BID

NOTE: All prices must be clearly written, in ink or typed, in words as well as figures, for the entire Bid. In the event of a discrepancy between the unit price in words and unit price in figures, the written unit price in words shall govern.

Town of Mansfield

Replacement of Air Handler Units

The undersigned proposes to furnish all labor, equipment, and materials as specified in the scope of work and permits required for the removal and installation air handler units for the Mansfield Community Center and Mansfield Middle School in accordance with the accompanying scope of work, for the prices specified below.

This bid includes Addenda numbered:_____

The proposed lump sum cost for the Mansfield Community Center location is:

_____ $_____

(Written Words) (Figures)

The proposed lump sum cost for the Mansfield Middle School location is:

_____ $_____

(Written Words) (Figures)

CONTRACT TIME

The Contract shall remain in effect from the date of contract signing through September 1, 2021. Awarded bidder shall be pre-qualified with the Town for one (1) year from the date of the signed contract to perform similar work. As other similar projects arise, the Town shall negotiate scope of work and price with the pre-qualified bidder subject to availability of funds and upon mutual written consent.

BIDDER QUALIFICATIONS

If the Bidder is a Corporation, fill out:

The Bidder is a Corporation, organized under the laws of _____, having its principal office at _____. The Principal Officers of said Corporation, with their titles and addresses, are as follows:

_____

_____

_____

Bid must be accompanied by either a Certified Check or a Bid Bond, as provided in the Instructions to Bidders, if required.

The Bidder is required to state that he has done work on a similar character to that included in the proposed Contract, and give references that will enable the Owner to judge his experience, ability to meet completion date, skill, and business standing. The Bidder is required to complete Attachment D – Summary of Work Experience and submit with their proposal.

CERTIFICATE OF INSURANCE

The Bidder is required to submit a Certificate of Insurance in amounts and types specified in Attachment A and shall obtain and maintain insurance through the duration of the Contract.

CONTRACT FORM

The parties shall enter into a contract in substantially the same form as the attached subject to technical and other modifications as the parties mutually agree.

ANTI-COLLUSION

No person or persons other than those named herein are interested in this Bid or in the Contract proposed to be taken. Said contract is made without any connection with any other person or persons making any bid for the same work and is in all respects and without collusion or fraud. The Bidder is required to complete Attachment C – Certification of Non-Collusion and submit with their proposal.

ANTI-DISCRIMINATON

The Contractor agrees and warrants that in the performance of this Contract it will not discriminate or permit discrimination against any person or group of persons on the grounds of sex, race, color, religion, age marital status, ancestry, national origin, past history of mental disorder, mental

retardation or physical disability or other basis in any manner prohibited by the laws of the United States, the State of Connecticut, or the Town of Mansfield.

SUPERVISION

The Contractor shall employ full time on-the-job Project Superintendent as his representative.

CLAYTON ACT ASSIGNMENT OF RIGHTS

The Contractor and/or Subcontractor offers and agrees to assign to the Town of Mansfield all rights, responsibilities and interest in all causes of action it may have under Section 4 of the Clayton Act..15 U.S.C. Section 15, or under Connecticut General Statutes 35-24 et. seq., as amended, rising out of the purchase of services, property, or intangibles of any kind pursuant to the Agreement, or Subcontracts thereunder. This assignment shall be made and become effective at the time the Town awards or accepts such Agreement, without further acknowledgment by the parties. In the alternative, at the option of the Town, the Contractor and/or Subcontractor agrees to pay to the Town its proportionate share of recoveries for antitrust violations which relate to purchases pursuant to this Contract, or Subcontracts hereunder. The Contractor and/or Subcontractor agree promptly to notify the Director of Finance of the Town of Mansfield of suspected antitrust violations and claims.

INDEMNIFICATION

The Bidder is aware of and agrees that, if awarded an Agreement, he is bound by the following indemnification language:

> To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards, commissions, officers, officials, employees, agents, representatives, and servants from any and all suits, claims, losses, damages, costs (Including without limitation reasonable attorneys' fees),compensation, penalties, fines, liabilities or judgments or any name or nature for:
>
> - Bodily injury, sickness, disease, or death; and/or
> - Damage to or destruction of property, real or personal; and/or
> - Financial losses (including, without limitation, those caused by loss of use)
>
> sustained by any person or concern, including officers, employees, agents, Subcontractors or servants of the Town, or the Contractor, or by the public, which is cause or alleged to have been caused in whole or in part by the negligent act(s) or omission(s) of the Contractor, its officers, employees, agents, or Subcontractors, in the performance of this Agreement or from the inaccuracy of any representation or warranty of the Contractor contained in the Contract Documents. This indemnity shall not be affected by other portions of the Agreement relating to insurance requirements.

To the fullest extent permitted by law, the Contractor agrees to release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards and commissions, officials, officers, employees, agents, representatives, and servants from any loss, claim, cost penalty, fine or damage that may arise out of the failure of the Contractor, its officers, agents, employees or Subcontractors to comply with any laws or regulations of the United States of America, the State of Connecticut, the Town of Mansfield, or their respective agencies. This undertaking shall not be affected by other portions of the Agreement relating to insurance requirements.

BIDDER:

_____
COMPANY

_____
SIGNATURE BY DULY AUTHORIZED (SEAL)

_____
PRINT OR TYPE NAME

_____
TITLE

_____
DATE

_____
ADDRESS

_____
TELEPHONE

_____
FAX

_____
EMAIL ADDRESS

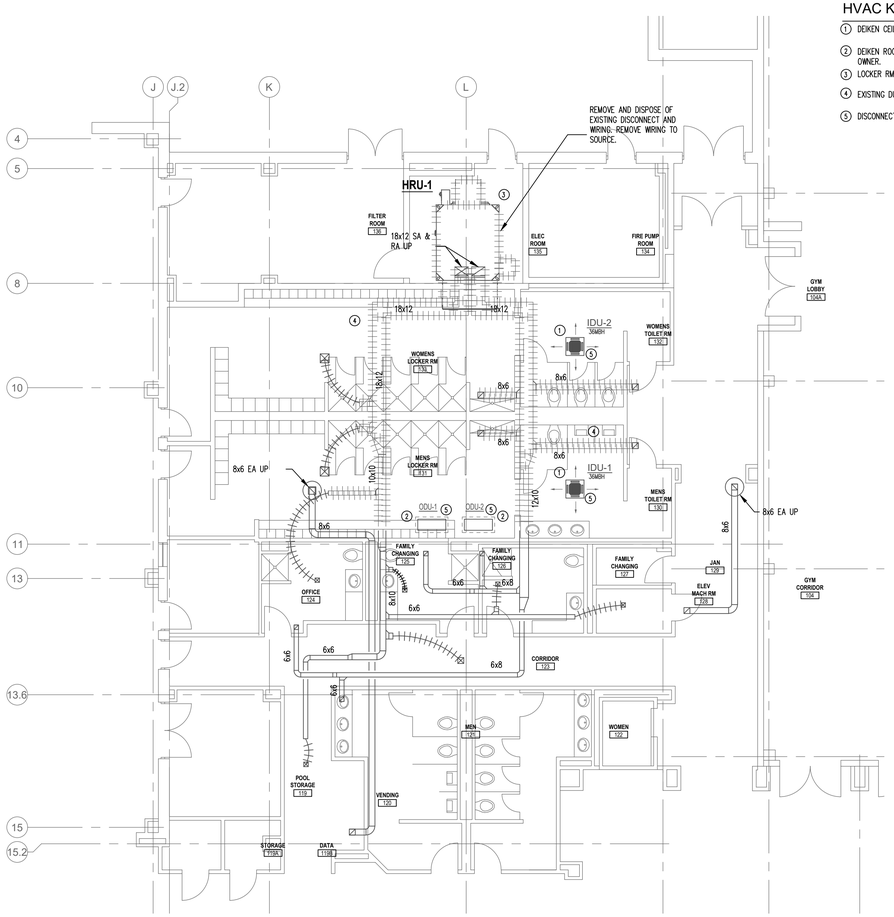
_____
VENDOR FEIN

EXHIBIT 1

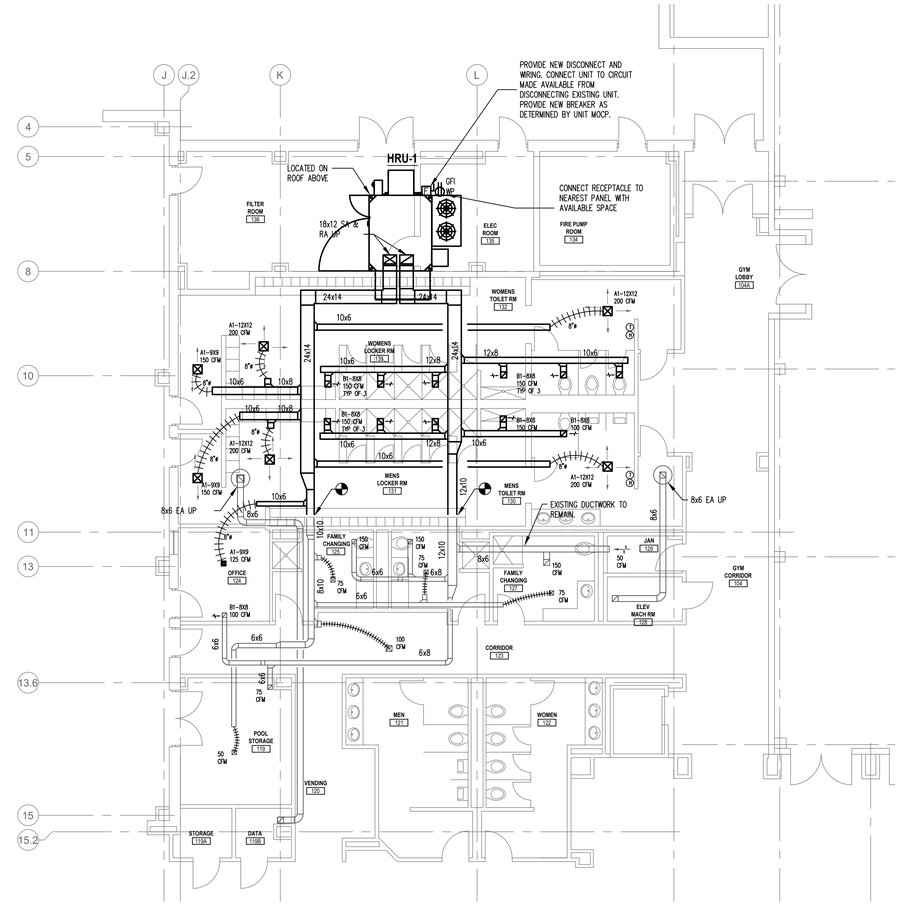
MANSFIELD COMMUNITY CENTER PLANS

HVAC KEY NOTES:

1. DEIKEN CEILING CASSETTE UNIT TO BE REMOVED AND RETURNED BACK TO OWNER.
2. DEIKEN ROOFTOP CONDENSING UNIT TO BE REMOVED AND RETURNED BACK TO OWNER.
3. LOCKER RM HEAT RECOVERY UNIT TO BE REMOVED.
4. EXISTING DUCTWORK SHOULD BE REMOVED AS SHOWN DASHED.
5. DISCONNECT UNIT, REMOVE AND DISPOSE OF WIRING TO SOURCE.



1 FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8"=1'-0"



2 FIRST FLOOR NEW WORK PLAN
SCALE: 1/8"=1'-0"

GENERAL DEMOLITION NOTES:

1. GENERAL DEMOLITION NOTES SHALL APPLY TO ALL MECHANICAL DRAWINGS.

2. PORTIONS OF EXISTING SYSTEMS ARE OMITTED FROM AREAS THAT HAVE NO TRADE ASSOCIATED SCOPE TO MAINTAIN GRAPHICAL CLARITY.

3. VISIT THE SITE AND EXAMINE CAREFULLY THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF WORK PRIOR TO THE SUBMISSION OF A PROPOSAL.

4. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN SUCH AN EXAMINATION HAS BEEN MADE.

5. NOTES AND GRAPHIC REPRESENTATIONS SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED.

6. EXTENT OF DEMOLITION WORK SHALL INCLUDE, BUT NOT LIMITED TO, MECHANICAL WORK ASSOCIATED WITH THE REMOVAL OF INLETS/OUTLETS, MECHANICAL DEVICES AND ALL ASSOCIATED DISTRIBUTION AND SUPPORTS.

7. ALL WORK REQUIRED TO REMAIN IN SERVICE BUT INTERFERING WITH THE ALTERATIONS SHALL BE RELOCATED AND RECONNECTED USING MATERIALS AND STANDARDS OF THIS CONTRACT.

8. EQUIPMENT AND DEVICES TO BE REMOVED SHALL BE DISCONNECTED PRIOR TO ANY DEMOLITION WORK. EQUIPMENT INDICATED TO BE REMOVED SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS, UNLESS OTHERWISE INDICATED.

9. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION.

10. FIELD VERIFY EXISTING DUCTWORK CONFIGURATION LOCATION PRIOR TO REMOVAL.

11. COORDINATE WORK IN ADJACENT TENANT AREAS WITH TENANTS AND UCONN FACILITIES MANAGEMENT DEPARTMENT. COORDINATION SHALL INCLUDE TIME TABLES FOR WORK IN ADJACENT TENANT AREAS.

12. PATCH, REPAIR AND PAINT ALL WALLS, CEILINGS AND MASONRY EFFECTED BY NEW WORK, DEMOLITION, RELOCATED EQUIPMENT, DUCTWORK & PIPING. PATCHING SHALL MATCH EXISTING SURFACES.

13. KEEP CARPETS CLEAN OF DEBRIS. ANY DAMAGE ASSOCIATED WITH DEMOLITION WILL BE THE RESPOSIBILITY OF THE CONTRACTOR.

GENERAL HVAC NOTES:

1. GENERAL DRAWING NOTES SHALL APPLY TO ALL MECHANICAL DRAWINGS.
2. FIELD VERIFY LOCATIONS OF MECHANICAL EQUIPMENT BEFORE FABRICATION OF PIPING & DUCTWORK.
3. DUCTWORK DIMENSIONS INDICATED ON PLANS ARE CLEAR INSIDE DIMENSIONS. PROVIDE TURNING VANES IN MITERED FITTINGS.
4. VERIFY EQUIPMENT CONNECTIONS WITH MANUFACTURER'S INSTALLATION DRAWINGS. PROVIDE PIPE & DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE DIMENSIONS BEFORE FABRICATION.
5. COORDINATE DUCTWORK & PIPE ROUTING WITH ALL TRADES. PROVIDE OFFSETS AND FITTINGS AS REQUIRED FOR INSTALLATION. CONTRACTOR SHALL BEAR COSTS ASSOCIATED WITH ROUTING MODIFICATIONS.
6. PROVIDE VOLUME DAMPER ON ALL BRANCH DUCTWORK TAKE-OFFS.
7. PROVIDE CONTROL WIRING FROM SENSORS TO MECHANICAL EQUIPMENT.
8. PROVIDE FLEXIBLE DUCTWORK CONNECTORS ON INLET AND OUTLET OF AIR HANDLING EQUIPMENT.
9. PROVIDE ALL SERVICE/ACCESS CLEARANCES FOR MECHANICAL EQUIPMENT PER MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS. COORDINATE PRIOR TO INSTALLATION OF EQUIPMENT, PIPING, AND DUCTWORK.
10. FIRECAULK ALL FIRE RATED PENETRATIONS.

ELECTRICAL POWER NOTES:

1. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE BUILDING CODES.

2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.

3. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND LOCATIONS. VERIFY WITH ARCHITECTURAL PLANS AND COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO ROUGH-IN. NOTIFY THE ARCHITECT/E.C. OF ANY DISCREPANCIES IF DISCREPANCIES ARE NOTED. DO NOT PROCEED WITHOUT ARCHITECTURAL APPROVAL.

4. HVAC AND PLUMBING EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. E.C. SHALL COORDINATE EXACT LOCATIONS AND POWER REQUIREMENTS OF APPLICABLE HVAC AND PLUMBING EQUIPMENT WITH MECHANICAL DRAWINGS. E.C. SHALL MAKE ALL FINAL CONNECTIONS TO ALL CONTROLS, OWNER-SUPPLIED EQUIPMENT, MECHANICAL AND PLUMBING EQUIPMENT AS NEEDED.

5. E.C. SHALL PROVIDE DISCONNECT SWITCHES AND STARTERS AS REQUIRED FOR ALL EQUIPMENT WHERE THE DISCONNECT SWITCH IS NOT PROVIDED WITH THE EQUIPMENT OR BY OTHERS. ELECTRICAL EQUIPMENT LOCATIONS 0 BE FIELD VERIFIED.

6. E.C. SHALL SUPPLY AND INSTALL FEEDERS, FUSES AND CIRCUIT BREAKERS TO MATCH THE NAME-PLATE RATING OF ALL EQUIPMENT. THIS SHALL BE INCLUDED IN THE INITIAL BID PROPOSAL AND NO EXTRAS WILL BE ACCEPTED..

7. ALL HOMERUNS TO PANELBOARDS DESIGNATED SHALL CONSIST OF 2#12 AWG & 1#12 GROUND IN 3/4" CONDUIT TO PANEL LABELED AT THE HOMERUN SYMBOL UNLESS OTHERWISE NOTED.

8. ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO HVAC CONTROL WIRING; COORDINATE ALL REQUIREMENTS WITH DIV 15.

ELECTRICAL GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE BUILDING CODES.

2. E.C. SHALL OBTAIN AND PAY FOR BOTH ROUGH AND FINAL INSPECTION AND OBTAIN A CERTIFICATE OF "ELECTRICAL INSPECTION". THIS CERTIFICATE SHALL BE PRESENTED WITH REQUEST FOR FINAL PAYMENT.

3. IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE AND OPERATING ELECTRICAL SYSTEM. THE E.C. SHALL FURNISH AND INSTALL ALL WIRING, CONDUIT, EQUIPMENT, MATERIAL, ETC. AS REQUIRED,, EXCEPT WHERE SPECIFICALLY NOTED AS BEING FURNISHED BY OTHERS. SHOULD THERE BE ANY QUESTIONS CONCERNING RESPONSIBILITY, THE QUESTIONS SHALL BE SETTLED BEFORE BID SUBMISSION AND CONTRACT SIGNING. NO EXTRA CHARGES WILL BE ALLOWED.

4. THE E.C. SHALL COORDINATE ALL PHASING OF WORK WITH THE ARCHITECT, GENERAL CONTRACTOR AND/OR OWNER OF THE PROJECT.

5. REFER TO THE ARCHITECTURAL DRAWINGS FOR SPECIFIC DETAILS, ARRANGEMENTS, MOUNTING HEIGHTS, CEILING CONSTRUCTION, ETC. ALL COLORS AND FINISHES TO BE SELECTED BY THE ARCHITECT.

6. ALL ELECTRICAL EQUIPMENT SHALL BE SEISMICALLY SUPPORTED AS REQUIRED BY THE LOCAL AND STATE BUILDING CODE.

7. ALL NECESSARY MOUNTING HARDWARE, HANGERS, BRACKETS, RAILS, YOKES, STEMS, CHAINS, ETC. SHALL BE FURNISHED AND INSTALLED BY E.C.

8. ALL WIRING INSTALLED UNDER THIS CONTRACT SHALL BE TESTED FOR PROPER CONNECTIONS AND SHORT CIRCUITS PRIOR TO THE TURNING OVER OF WORK AS A COMPLETE UNIT.

9. ALL CONDUITS PASSING THROUGH PARTITIONS ARE TO BE APPROPRIATELY SLEEVED AND SEALED.

10. E.C. SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF APPROVAL AND FINAL ACCEPTANCE.

11. ALL CONDUIT AND WIRING SHALL BE RUN CONCEALED IN WALLS, FLOORS AND CEILINGS UNLESS OTHERWISE NOTED TO BE EXPOSED.

12. ALL WIRING SHALL BE TYPE THWN OR THW UNLESS OTHERWISE NOTED. FOR CONDUCTORS LARGER THAN #6 AWG, TYPE XHHW WILL BE ACCEPTED.

13. CONDUCTORS SIZED #10 AWG AND SMALLER WITHIN A CABLE ASSEMBLY (NM SHEATHED CABLE; METAL CLAD; ARMORED CABLE) SHALL BE SOLID WIRE CONDUCTORS. CONDUCTORS SIZED LARGER THAN #10 AWG IN SUCH ASSEMBLIES SHALL BE STRANDED TYPE. COMMUNICATIONS AND CONTROL WIRE SHALL BE #14 GAUGE STRANDED, SHIELDED UNLESS OTHERWISE DIRECTED BY INSTALLATION MANUALS AND STANDARDS.

14. ALL CIRCUITS BACK TO PANEL SHALL REQUIRE 20A-1 POLE BREAKERS UNLESS OTHERWISE NOTED

15. ALL DRAWINGS ARE SCHEMATIC IN NATURE; ALL DEVICES SHALL BE INSTALLED IN ALL AREAS AND LIVING SPACES PER NEC AND SHALL BE DIMENSIONED IN FIELD TO MEET PROPER CODES; ALL DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION DURING BID PROCESS AND/OR ADJUSTED IN FIELD DURING CONSTRUCTION

16. ALL WORK IS NEW UNLESS OTHERWISE NOTED.

ELECTRICAL DEMOLITION NOTES:

1. CERTAIN SYSTEMS, SUCH AS THE FIRE ALARM SYSTEM, SECURITY SYSTEM, ETC...MAY REQUIRE STAND-BY WATCHES DURING SHUT-DOWN. E.C. SHALL ARRANGE AND PAY FOR ANY SUCH STAND-BY WATCHES.

2. THE E.C. SHALL REMOVE ALL EQUIPMENT INCLUDING CONDUIT AND WIRE BACK TO POWER SOURCE. SOME CONDUIT AND WIRING MAY BE HIDDEN, E.C. SHALL CARRY THE COST TO REMOVE SAID WIRING AT NO ADDITIONAL COST TO THE OWNER.

3. ANY DEMOLITION WORK REQUIRING THE SHUT-DOWN OF ELECTRICAL SERVICE TO THE BUILDING OR ANY PORTION THEREOF, THE E.C. SHALL MAKE ARRANGEMENTS WITH THE OWNER AND OTHER CONCERNED AUTHORITY.

4. ALL ITEMS SCHEDULED FOR DEMOLITION SHALL BE REMOVED FROM SITE UNLESS OTHERWISE NOTED. E.C. SHALL BE RESPONSIBLE FOR CLEANING OF SITE ON A DAILY BASIS.

CONNECTIONS TO EXISTING CONDITIONS:

1. WHERE NEW CIRCUITS ARE TO ADDED TO EXISTING PANELBOARDS, CONFIRM THAT PANEL HAS SUFFICIENT SPACE AND CAPACITY FOR NEW LOADS.

2. MODIFY EXISTING PANEL DIRECTORIES TO REFLECT NEW CIRCUITS, ADDED OR DELETED.

3. WHERE NOT SPECIFICALLY INDICATED, NEW CIRCUITS ARE TO BE EXTENDED TO THE NEAREST APPROPRIATE PANEL.

4. ALL NEW CIRCUITRY SHALL BE COMPLETE WITH REQUIRED BRANCH CIRCUIT PROTECTION AND GROUNDING CONNECTIONS.

5. ANY WORK REQUIRING THE SHUT-DOWN OF ELECTRICAL SERVICE TO THE BUILDING AND/OR ANY PORTION THEREOF, THE E.C. SHALL MAKE ARRANGEMENTS WITH THE OWNER AND ANY OTHER CONCERNED AUTHORITY.

6. CERTAIN SYSTEMS, SUCH AS THE FIRE ALARM SYSTEM, SECURITY SYSTEM, ETC...MAY REQUIRE STAND-BY WATCHES DURING SHUT-DOWN. E.C. SHALL ARRANGE AND PAY FOR ANY SUCH STAND-BY WATCHES.

7. EXISTING SYSTEMS AFFECTED BY NEW WORK SHALL BE TESTED COMPLETELY FOR INTEGRITY AND PROPER OPERATION. RE-FEED CIRCUITS UP-STREAM AND DOWN-STREAM OF DEVICES BEING REMOVED.

8. MAKE ANY REVISIONS TO THE EXISTING WORK FOUND NECESSARY TO MAINTAIN ORIGINAL OPERATION. FURNISH AND INSTALL ALL NECESSARY ELECTRICAL EQUIPMENT AND DEVICES AS NEEDED AT NO ADDITIONAL COST TO THE OWNER.

acorn Consulting Engineers Inc.
- Mechanical - Electrical Engineering for Building Systems -
P.O. Box 311 • Farms Village Plaza • 244 Farms Village Road
West Simsbury, CT 06092 • (860) 651-1949 • fax (860) 651-1957
www.acornengineers.com

Crosskey Architects LLC
Architecture Preservation Interiors
750 Main Street, Hartford, CT 06103
T: (860)724-3000 F: (860)724-3013

STATE OF CONNECTICUT · W. MARK GENDRON · No. 17876 · LICENSED PROFESSIONAL ENGINEER

Mansfield Community Center Locker Room HVAC Upgrades

Mansfield, CT

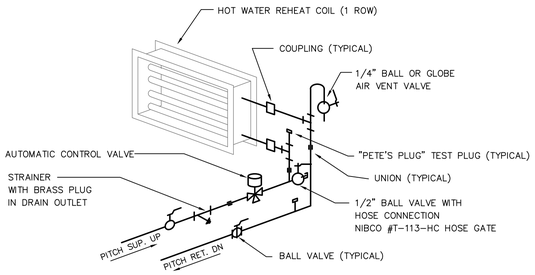
Drawn:	MRP/SS
Date:	09/20/2019
Revisions	

Mechanical and Electrical Floor Plans

ME-1

Copyright © 2015

ACORN PROJECT NUMBER: 19114
PLOT DATE:

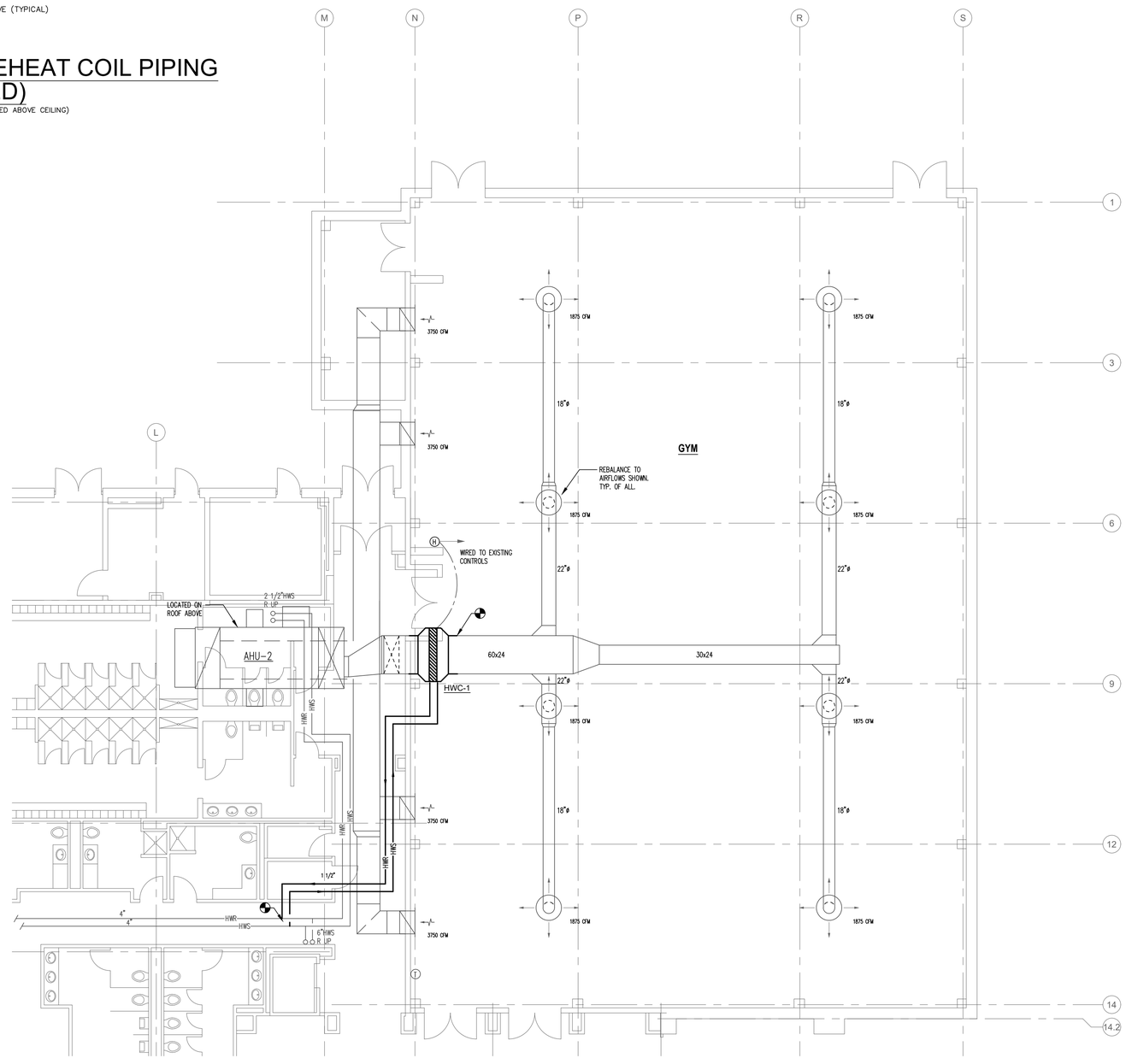


TYPICAL HOT WATER REHEAT COIL PIPING (UPFEED)

(FOR DUCT OR BOX COILS MOUNTED ABOVE CEILING)
NOT TO SCALE

COIL SCHEDULE

TAG	MANUF.	MODEL NO.	CFM	SIZE *	MBH	F.V. FPM	EAT °F	LAT °F	EWT °F	LWT °F	GPM	W.P.D. FT W.G.	A.P.D. IN W.G.	ROWS	NOTES
HWC-1	COILMASTER	HWS01C07-30.00X84.00R	15,000	84"x30"	388	786	52	75	180	159	39	4.2	.18"	1	



1 BASKETBALL COURT PLAN
SCALE: 1/8"=1'-0"

GENERAL HVAC NOTES:

1. ALL WORK IS NEW UNLESS NOTED OTHERWISE.
2. ALL PIPING SHALL BE CONCEALED ABOVE CEILINGS AND WITHIN WALLS EXCEPT WHERE SHOWN OR NOTED OTHERWISE.
3. PROVIDE DRAIN VALVES AT LOW POINTS AND MANUAL AIR VENTS AT HIGH POINTS OF HOT WATER HEATING SYSTEM.
4. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER TRADES.
5. ALL EQUIPMENT SUPPORTS, DUCTWORK AND PIPE HANGERS TO BE CONNECTED FROM BUILDING STRUCTURE.
6. PROVIDE SHUT-OFF VALVES AT ALL BRANCH PIPING TAKE-OFFS.
7. ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE SEALED TO MAINTAIN RATING.
8. CONTRACTOR IS RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR THE PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
9. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY & ALL DISCREPANCIES.
10. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY PIPE, FITTING OR MINOR DETAIL. SYSTEM & COMPONENTS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.
11. CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS WITH FACILITIES AND SERVICES TO MEET REQUIREMENTS INDICATED AND IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.

Dehumidification: **SEQUENCE OF OPERATION**

When Heat is NOT operating: Dehumidification will be enabled whenever the supply fan status is on and the space temperature is greater than the heating setpoint. The controller will measure the return air or space humidity and calculate a cooling coil output to maintain the humidity at or below 60rh (adj.). The dehumidification output is compared to the temperature control based cooling coil output, with the greater being sent to the valve. Once enabled, dehumidification will disable when the temperature is less than the heating setpoint minus 2 degrees.

When Heat IS operating: Dehumidification will be enabled whenever the supply fan status is on and the temperature is greater than the heating setpoint + 1. The controller will measure the return air or space humidity and calculate a cooling coil output to maintain the humidity at or below 60rh (adj.). The dehumidification output is compared to the temperature control based cooling coil output, with the greater being sent to the valve. Once enabled, dehumidification will disable when the temperature is less than the heating setpoint.

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STATE OF CONNECTICUT · W. MARK GENDRON · No. 17876 · LICENSED · PROFESSIONAL ENGINEER

Mansfield Community Center Locker Room HVAC Upgrades

Mansfield, CT

Drawn:	MRP/SS
Date:	09/20/2019
Revisions	

Mechanical and Electrical Floor Plans

ME-2

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ACORN PROJECT NUMBER: 19114
PLOT DATE:

AIR HANDLING UNIT SCHEDULE

UNIT No.	MANUF./MODEL	FAN SECTIONS								DX COOLING COIL SECTION						HEATING COIL SECTION									WEIGHT	REMARKS
		O.A. CFM	E.A. CFM	O.A. PERCENT	E.S.P.	T.S.P.	RPM	HP	ELEC.	TOT. CAP. MBH	SENS. CAP. MBH	EDB/EWB °F	LDB/LWB °F	ROWS/FPF	APD IN W.G.	CAPACITY MBH	E.A.T. °F	L.A.T. °F	E.W.T. °F	L.W.T. °F	GPM	W.P.D. FT W.G.	A.P.D. IN W.G.	ROWS/FPF	LBS.	
HRU-1	ADDISON PROA096B1	2300	2500	100%	1.2	1.6	2122	1.5	208v/3ø	100.2	66.1	82°/70°	55°/55°	6/18	0.33	136.8	50	104.9	180	125.4	5.1	6.2	0.10	4/8	2415	WITH 3-WAY HOT WATER PIPING PACKAGE (2-POSITION)

SEQUENCE OF OPERATION

The ALC controller is turned on by a switch located on its front upper left corner. Several Occupancy Control options are available for starting the unit. These can be selected from the BACview display pad on the Controls screen (requires user password). The Resident Program has an adjustable scheduler that uses the internal time clock to allow for separate Sequences for Occupied and Unoccupied periods. This can be accessed from the BACview display pad on the Schedules screen (requires user password). NOTE: All temperature-related events have an additional 10 second (fixed) "delay on make" to allow temperatures to settle.

OCCUPIED MODE:
When the BACview Schedule calls for the start of the Occupied Mode, and the ALC controller has verified that there are no fault or shutdown conditions, after a 30 second (fixed) delay the unit goes into Occupied Mode:

1. Outdoor Air Damper (OD):
- After the unit goes into Occupied Mode, the Outdoor Air (OA) damper will open. As the OA damper opens, the Outdoor Air Damper Actuator (OADA) auxiliary switches close.
- The OA damper stays open until the system reaches the end of the Occupied Mode period. It will remain open until the supply fan turns off. After the supply fan turns off, the OA damper will close.

2. Supply Fan (SF):
- As the OA damper opens, the OADA auxiliary switch will close and the SF will turn on.
- The SF will run for 60 seconds (fixed) before cooling, dehumidification, or heating will be enabled.
- The SF shall operate continuously while the unit is in the Occupied Mode. When the system reaches the end of the Occupied Mode period, the SF will continue to run for an additional 2 minutes before turning off.
- SF-VSC: Supply Fan with Variable Speed Control.
- The SF-VSC will modulate its speed based upon the SF Differential Pressure Transmitter (SF-DPT) signal and the supply duct static pressure set point.
- Optional: For constant air volume (CAV), select "Manual Override" in the BACview keypad and input the required speed (%) as determined in the field by Test and Balancing.

3. Exhaust Fan (EF):
- At the same time the SF turns on, the EF will be enabled to run.
- The EF shall be enabled to run while the unit is in the Occupied Mode. When the system reaches the end of the Occupied Mode period, the EF will be enabled to run for an additional 2 minutes before turning off.
- EF-VSC: Exhaust Fan with Variable Speed Control.
  If the Zone Differential Pressure Transmitter (ZN-DPT) signal is above the building static pressure set point, the EF-VSC will modulate its speed based upon the ZN-DPT and the set point. If the ZN-DPT signal is below the building static pressure set point, the EF will modulate down to 0% (adjustable) speed.
- Optional: For constant air volume (CAV), select "Manual Override" in the BACview keypad and input the required speed (%) as determined in the field by Test and Balancing.

4. Energy Conservation Wheel (ECW):
- After the SF turns on, the ECW is enabled.
- ECW with VFD Controlled Defrost (WM-VFD):
- When the OAT is 3°F (adjustable) or more above or below the RAT, the ECW will be on. It will be off if the OAT is less than 3°F (adjustable) above or below the RAT. If the WExAT goes below 25°F (adjustable), it will modulate speed down to 10 Hz (minimum, adjust- able) to allow for wheel defrosting. It will increase speed as the WExAT rises toward 25°F (adjustable) or more.

5. Cooling Mode:
- Cooling Mode is available when the Entering Coil Air Temperature (ECAT) is 1°F (fixed) above the ECAT cooling lower limit (55°F, adjustable) and there is a demand for cooling.
- When the Entering Coil Air Temperature (ECAT) is 1°F (adjustable) or more above the ECAT cooling set point (70°F, adjustable), compressor #1 turns on.
- When the SAT is 2°F (adjustable) or more above the
- SAT cooling set point (70°F, adjustable), compressor
- #2 turns on -- not less than 30 minutes (adjustable) after compressor #1 turned on.
- When the SAT is 2°F (adjustable) or more below the
- SAT cooling set point (70°F, adjustable), compressor
- #2 turns off.
- When the ECAT is 1°F (adjustable) or more below the
- ECAT cooling set point (70°F, adjustable), compressor
- #1 turns off.
- Minimum SF-VSC modulation shall be 50%
- (adjustable; 50% min.).
- Optional: When enabled, if there is a call for 1st stage cooling, 2nd stage cooling will be enabled after a
- 10-minute (adjustable) delay. Both compressors modulate based upon the cooling set point. Default is "OFF".
- Compressor enabling logic includes a 5-minute (fixed) minimum run-time and a 5-minute (fixed) minimum timeoff delay to prevent compressor short cycling.
- Digital Compressors:
- The ALC controls the capacity of the digital compressor by rapidly loading and unloading the compressor in 15 second intervals.
- The digital compressor will modulate based upon the SAT sensor and set point (70°F, adjustable).
- If the DX LAT drops to 38°F or less for 3 minutes, the ALC controller will issue an alarm and the compressor stops. When the DX LAT warms back up to 55°F or more, the compressor turns back on.
- If there is a current call for 1st stage cooling and compressor #1 is shut down due to an alarm (HPS1, LPS1, or DX LAT1), compressor #2 will be turned on to take its place until it returns.
- Hot Gas Reheat (HGRH) - On/Off:
- When the SAT is 1°F (adjustable) or more below the SAT cooling set point (70°F, adjustable), HGRH turns on and cycles based upon the SAT cooling set point.
- When SAT is 2°F (adjustable) or more above the SAT cooling set point, HGRH turns off.

6. Dehumidification Mode:
- Dehumidification Mode is available if the ECAT is 1°F (fixed) above the dehumidification lower limit of 60°F (adjustable) and there is no call for heating.
- When the Entering Coil Air Dew Point (ECDP) is 1°F (adjustable) or more above the Supply Air Dew Point (SADP) set point (53°F, adjustable), Dehumidification Mode is enabled. After the minimum time-off delay, compressor #1 turns on.
- When the SADP is 2°F (adjustable) or more above the SADP set point (53°F, adjustable), and after minimum time-off delay, compressor #2 turns on -- not less than 30 minutes (adjustable) after compressor #1 turned on. Both compressors respond in sequence and run at full cooling.
- HGRH is enabled to operate as necessary based upon the SAT dehumidification set point (70°F, adjustable).
- When SADP is 1°F (adjustable) or more below SADP set point (53°F, adjustable), compressor #2 turns off.
- When the ECDP is 2°F (adjustable) or more below the SADP set point (53°F, adjustable), compressor #1 turns off and Dehumidification Mode is disabled.
- Digital Compressors:
- The ALC controls the capacity of the digital compressor by rapidly loading and unloading the compressor in 15 second intervals.
- The digital compressor will modulate based upon the SADP sensor and SADP set point (53°F, adjustable).
- Hot Gas Reheat (HGRH) - On/Off:
- When the SAT is 1°F (adjustable) or more below the SAT dehumidification set point, HGRH turns on and cycles based upon the SAT dehumidification set point .
- When the SAT is 2°F (adjustable) or more above the
  SAT dehumidification set point, HGRH turns off.

7. Heating Mode:
- Heating Mode is available when the ECAT is 1°F (fixed) below the ECAT heating upper limit (60°F, adjustable)and there is a demand for heating.
- When the ECAT is 1°F (adjustable) or more below the ECAT heating set point (55°F, adjustable), heating is enabled and operates based upon SAT heating set point (70°F, adjustable).
- When ECAT is 1°F (adjustable) or more above ECAT heating set point (55°F, adjustable), heating is disabled.
- Modulating Heat:
- Modulating Gas Furnace: On demand for heating, the ALC controller modulates the gas furnace controller to control the gas flow based upon the SAT heating set point (70°F, adjustable).

UNOCCUPIED MODE:
- When the Occupancy Control indicates the end of the Occupied Mode, the compressor(s) and outdoor fan(s) will turn off (subject to minimum run-time) or the heating system will turn off. The SF and EF will continue to run for 2 minutes before turning off.
- After this, the ECW will turn off and the OA damper will close. The unit is now off.

Safety Switches:
- High Pressure Switch (HPS1): If HPS1 is open, compressor #1 will turn off and the ALC controller will issue an alarm. After manually resetting HPS1, the HPS1 alarm will reset. Following a minimum time off delay, compressor #1 will turn on. If the ALC controller records 3 high pressure start/restart failure incidents within 1 hour, compressor #1 is locked out and the ALC controller will issue an alarm. The compressor lock-out can be reset in the BACview display pad or by cycling the power of the ALC controller.
- This sequence is the same for compressor #2, Y2, and HPS2.
  Low Pressure Switch (LPS1): If LPS1 is open after the LPS1 by-pass time, the ALC controller will issue an alarm and compressor #1 turns off. After 30 seconds (fixed), the LPS1 alarm will reset. Following a minimum time off delay, compressor #1 will turn on. If the ALC controller records 3 low pressure start/ restart failure incidents within 1 hour, compressor
  #1 is locked out and the ALC controller will issue an alarm. The compressor lock-out can be reset in the BACview display pad or by cycling the power of the ALC controller.
- This sequence is the same for compressor #2, Y2, and
  LPS2.

Safety Shutdown:
- If a compressor fails to start 3 times in an hour due to high pressure switch lock out.
- If a compressor fails to start 3 times in an hour due to low pressure switch lock out.
- If a compressor fails to start 3 times in an hour due to DX leaving air temperature lock out.
- If the ALC controller detects an SAT sensor failure.

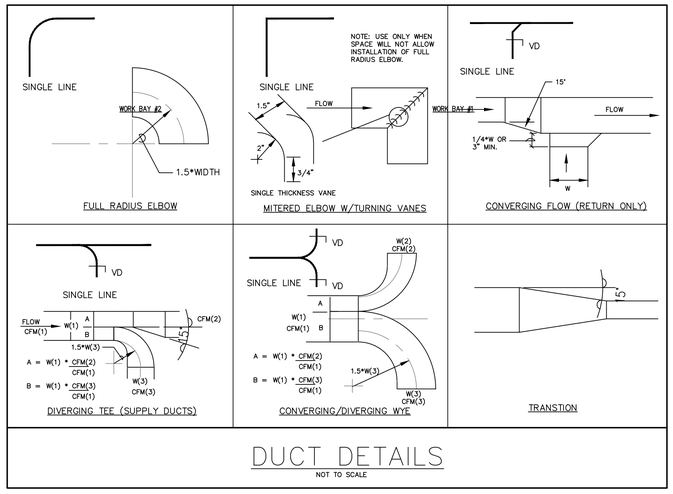
Standard Alarms: (alarms require reset in the BACview or cycling the power of the ALC controller unless noted)
1. OADA Alarm: When the OADA fails to open or closes due to OADA-A (adj.) being open; following 2 minute (adjustable) delay. Unit will automatically shut down.
2. OADA Hand: When the OADA is commanded closed but the OADA-A (adj.) still indicates to the ALC it is open; following 2 minute (adjustable) delay.
3. ECW Alarm: When the ECW fails to start or stops due to WM-CS open; following 1 minute (adjustable) delay.
4. ECW Hand: When the ECW is commanded off but the WM-CS still indicates to the ALC it is on; follow- ing 1 minute (adjustable) delay.
5. Supply Fan Alarm: When the SF fails to start and the SF-APS does not confirm air flow to ALC, following 1 minute (adjustable) delay. Unit will automatically shut down.
6. Supply Fan Hand: When the SF is commanded off and the SF-APS still indicates air flow to ALC, following 1 minute (adjustable) delay. OA Damper (if existing) will be commanded to remain open.
7. Supply Fan Run Time: When the SF run time has exceeded the maximum run time allotted (adjust- able).
8. Exhaust Fan Alarm: When the EF fails to start and the EF-APS does not confirm air flow to ALC, following 1 minute (adjustable) delay.
9. Exhaust Fan Hand: When the EF is commanded off and the EF-APS still indicates air flow to ALC, following 1 minute (adjustable) delay.
10. Exhaust Fan Run Time: When the EF run time has exceeded the maximum run time allotted (adjustable).
11. Compressor #1 Alarm: Compressor stops due to CC1-CS open; following 60 second (fixed) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (Compressor #1 STOP).
12. Compressor #1 Hand: Compressor is commanded off but the CC1-CS still indicates to the ALC it is on; following 60 second (fixed) delay.
13. Compressor #1 Run Time: When the C1 run time has exceeded the maximum run time allotted (adjustable).
14. High Pressure Switch #1 Alarm: Compressor stops due to HPS1 open; following 30 second (fixed) delay. Requires HPS1 manual reset. Compressor lock out occurs if alarm happens 3 times in 1 hour (High Pressure Switch #1 STOP).
15. Low Pressure Switch #1 Alarm: Compressor stops due to LPS1 open; following 90 second (fixed) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (Low Pressure Switch #1 STOP).
16. Freeze Protection #1 Alarm: Compressor stops due to DX LAT1 freeze condition; following 3 minute (adjustable) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (FP #1 STOP).
17. Compressor #2 Alarm: Compressor stops due to CC2-CS open; following 60 second (fixed) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (Compressor #2 STOP).
18. Compressor #2 Hand: Compressor is commanded off but the CC2-CS still indicates to the ALC it is on; following 60 second (fixed) delay.
19. Compressor #2 Run Time: When the C2 run time has exceeded the maximum run time allotted (adjustable).
20. High Pressure Switch #2 Alarm: Compressor stops due to HPS2 open; following 30 second (fixed) delay. Requires HPS2 manual reset. Compressor lock out occurs if alarm happens 3 times in 1 hour (High Pressure Switch #2 STOP).
21. Low Pressure Switch #2 Alarm: Compressor stops due to LPS2 open; following 90 second (fixed) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (Low Pressure Switch #2 STOP).
22. Freeze Protection #2 Alarm: Compressor stops due to DX LAT2 freeze condition, following 3 minute (adjustable) delay. Compressor lock out occurs if alarm happens 3 times in 1 hour (FP #2 STOP).
23. Sensor Failure: Readings exceed sensor limits, following 2 minute (fixed) delay. Alarms reset automatically.
24. SAT Sensor Failure: Open: -60.2°F, Short: 296°F. Unit will automatically shut down.
25. High SAT Alarm: SAT high limit, 130°F (adjustable) with Gas Furnace Heat. Alarm resets automatically. Low SAT Alarm: SAT low limit, 40°F (adjustable), following 10 minute (adjustable) delay. Unit will automatically shut down.
26. Heat Failure: In heating mode and the SAT falls below 50°F (adjustable), following 10 minute (adjustable) delay. Alarm resets automatically.

DIFFUSER AND REGISTER SCHEDULE

TYPE	MANUFACTURER/MODEL	MATERIAL	FINISH	FRAME	SERVICE	DAMPER	REMARKS
A	PRICE AMD	ALUMINUM	B12	SURFACE	CEILING SUPPLY DIFFUSER	OBD	SEE PLANS FOR SIZES AND BLOW PATTERN.
B	PRICE 635D F/L/A	ALUMINUM	B12	SURFACE	CEILING RETURN REGISTER	OBD	SEE PLANS FOR SIZES

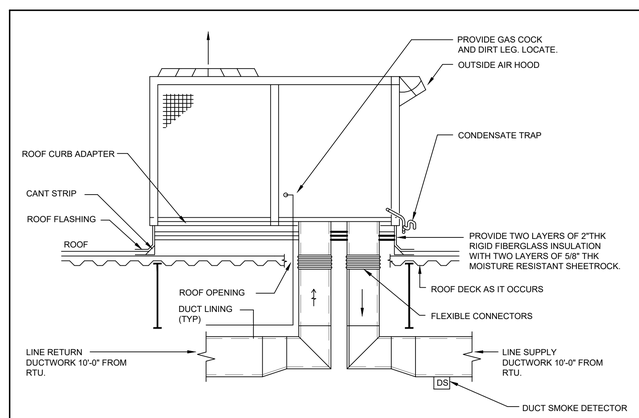
ACCESSORIES:

- HEATING COIL PERFORMANCE BASED ON 30% PROPYLENE GLYCOL/70% WATER MIX.
- INTEGRAL CONTROL PANEL TO PROVIDE FOR SINGLE POINT POWER CONNECTION. PANEL TO INCUDE:
- FUSED MAIN DISCONNECT
- FAN MOTOR STARTERS
- FUSED BRANCH MOTOR CIRCUITS
- FUSED CONTROL TRANSFORMER
- FACTORY WIRED AND FACTORY INSTALLED NON-FUSED DISCONNECT.
- FACTORY INSTALLED UNPOWERED GFI WEATHERPROOF CONVENIENCE OUTLET.
- AUXILLARY CONTACTS FOR ENERGY MANAGEMENT SYSTEM
- FACTORY START-UP
- EACH UNIT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. POWER WIRING BY DIV.16
- FREEZE STAT TRIP
- ECONOMIZER MODE (DIGITAL OUTPUT)
- UNOCCUPIED MODE (DIGITAL INPUT) -RECIRC DAMPERS OPEN, O.A. AND EXHAUST AIR DAMPERS CLOSED.
- INSTALL FACTORY FURNISHED ITEMS SHIPPED LOOSE FOR FIELD INSTALLATION.
- 30% PLEATED FILTERS AND CLEANABLE EXHAUST FILTERS. WARRANTY.
- PREMIUN EFFECIENT MOTORS.
- TRAVERSING DEFROST CONTROL.
- TWO POSITION MOTORIZED OUTSIDE AIR FACE AND BYPASS, EXHAUST AIR, SUPPLY AIR AND RECIRC DAMPERS. DAMPER ACTUATOR BY SUBCONTRACTOR.



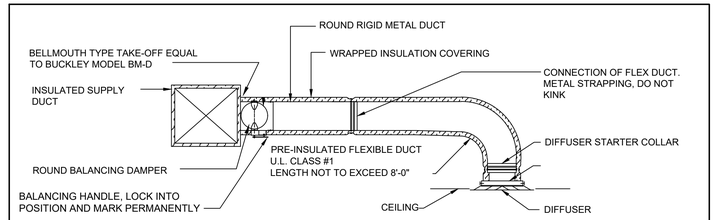
DUCT DETAILS

NOT TO SCALE



PACKAGED HEAT RECOVERY UNIT DETAIL

NO SCALE



NOTES:
1. PROVIDE AT FLEXIBLE DUCT CONNECTION METAL OR "PANDUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX. SECURE THE INSULATION OVER THE DRAW BAND WITH AN ADDITIONAL DRAWBAND.
2. PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
3. PROVIDE MINIMUM 2" COLLARS FOR ATTACHMENT OF THE FLEX DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
4. BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.
5. PROVIDE 45° TAKE-OFF WHERE DUCT HEIGHT WILL NOT ACCOMMODATE A BELLMOUTH TYPE FITTING.

FLEXIBLE SUPPLY DUCT INSTALLATION DETAIL

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STATE OF CONNECTICUT · MARK GENDRON · No. 17876 · LICENSED PROFESSIONAL ENGINEER

Mansfield Community Center Locker Room HVAC Upgrades

Mansfield, CT

Drawn:	MRP/SS
Date:	09/20/2019
Revisions	

Mechanical and Electrical Details

ME-3

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ACORN PROJECT NUMBER: 19114
PLOT DATE:

HVAC SPECIFICATIONS

1.1 GENERAL:
Architect's General Conditions are a part of this Division. Perform work in strict accordance with applicable Codes and Regulations of local and State agencies and utility companies. The Contractor shall bear the cost of all fees, permits, licenses and taxes, and utility company charges in connection with the work.
Submit six (6) copies of manufacturer's drawings of the following to the Architect/Engineer for approval: Fans, louvers,electric heaters, ductwork, diffusers, registers and grilles, dampers, equipment identification, mechanical insulation, testing and balancing and all other equipment as shown on the Drawings and herein specified

Submittals must be computer generated selections from manufacturers' software. Submittals must be generated by manufacturers or manufacturers' representatives. Photocopies and Internet printouts will be rejected. Submittals must be hard copies. Submittals sent via email or PDF format will not be accepted or reviewed.

Submit information on any other equipment when requested by the Architect/Engineer.

Submit six (6) copies of ductwork shop drawings showing clearances with structural members and major equipment of other trades.

Coordination Drawing Section

SUBMITTALS
A. Shop Drawings: CAD-generated and drawn to 1/4 inch equals 1 foot. Show fabrication and installation details for metal ducts.
1. Fabrication, assembly, and installation, including plans, elevations, sections, components, and attachments to other work.
2. Duct layout indicating sizes and pressure classes.
3. Elevations of top and bottom of ducts.
4. Dimensions of main duct runs from building grid lines.
5. Fittings .
6. Reinforcement and spacing.
7. Seam and joint construction.
8. Penetrations through fire-rated and other partitions.
9. Equipment installation based on equipment being used on Project.
10. Duct accessories, including access doors and panels.
11. Hangers and supports, including methods for duct and building attachment, vibration isolation, and seismic restraints.

B. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which following items are shown and coordinated with each other, based on input from installers of items involved:
1. Ceiling suspension assembly members.
2. Other systems installed in same space as ducts.
3. Ceiling- and wall-mounting access doors and panels required to provide access to dampers and other operating devices.
4. Ceiling-mounting items, including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.

C. At the end of construction, provide the Owner with a complete set of As-Built Drawings, including all mechanical plans, indicate routing of piping, ducts, location of equipment, valves, cleanouts and access panels. Include all inverts and elevations. Contractor must provide As-Built documents drawn utilizing the most recent version of AutoCad. Provide the Owner with a "CD ROM" disk and one set of reproducible mylar documents.

The Contractor shall provide a guarantee covering all material and workmanship for one (1) year following the date of acceptance, except that refrigeration compressors shall be guaranteed for a period of five (5) years.

Upon completion of the project, Contractor shall fully instruct the Owner in the operation, adjustment and maintenance of equipment and systems.

Contractor shall provide Owner with three (3) sets of complete maintenance and operating instructions, and technical data, in booklet form, of all equipment and devices furnished in Contract, including as-built drawings for the project.

The Contractor shall examine the Architectural Drawings and the Drawings and Specifications of other trades to determine the extent of work. The Contractor shall visit site and become familiar with project and local conditions before submitting a Bid. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the Contract. If so directed by the Architect or Engineer, the Contractor shall, without extra charge, make reasonable modifications in the layout to prevent conflict with those of other trades and for proper installation of work. Refer to Architectural Reflected Ceiling Plan for exact location of air diffusers, registers and grilles. The Contractor shall coordinate locations of equipment with all trades before starting construction. Any modifications to the equipment layout required for installation are to be performed at no additional cost to the Owner.

Install equipment and products in accordance with the manufacturer's instructions and recommendations.

1.2 SCOPE OF WORK:
Provide a complete HVAC system including, but not limited to: Fans, louvers, electric heaters, ductwork, diffusers, registers and grilles, dampers, equipment identification, mechanical insulation, testing and balancing and all other equipment as shown on the Drawings and herein specified. System shall be complete in all respects, tested, accepted and ready for Owner's use.

1.3 FILTERS AND STRAINERS:
Any equipment which operates with filters or strainers shall have filters and strainers installed at all times. When equipment and systems are released to Owner, all equipment shall be clean and have clean, new filters installed.

1.4 WORK BY OTHERS:
Cutting and patching is specified under Division 1.

Excavation and backfill is specified under Division 2.

Access doors shall be provided where required, and are specified under Division 8.

Chases, openings and finish work is specified under the pertinent Divisions 3 through 14 sections.

Domestic water, drainage and respective connections to HVAC equipment specified under other Division 15 sections.

Except for factory installed components, all disconnect switches and starters are specified under Division 16. All power wiring to motors, starters, controllers, alarms, and all electrical devices, including disconnect switches for mechanical equipment, is specified under Division 16.

1.5 FIELD MEASUREMENTS:
The Contractor shall verify in the field all measurements necessary for the work. Verify thermostats' locations with the Owner before installation.
The Contractor shall coordinate supply and return ductwork locations with steel, conduits and piping of other trades.

1.6 MATERIALS AND METHODS:

Ductwork:
All ductwork and accessories shall be constructed, fabricated and installed in accordance with the latest SMACNA Standards manuals for low pressure, high pressure, fire damper installations and flexible ducts.

Flexible ducts to air outlets shall be UL Class 1 connectors with airtight core, galvanized wire helix and preinsulated with one (1") inch, 3/4 pcf fiberglass with a flame retardant vapor barrier, Flexmaster Type IX.

All air conditioning supply ductwork on constant volume low pressure systems shall be galvanized sheet metal, two (2") inch static pressure classification, Seal Class "C".

Where the static pressure or maximum velocity of a supply, return or exhaust duct system exceeds the standard pressure classifications given above, the ductwork shall be constructed to the pressure class which exceeds that system's pressure.

Return air ductwork shall be galvanized sheetmetal, one (1") inch static pressure classification, Seal Class "C".

Louver plenums shall be galvanized steel with flanged joints. Metal thickness shall correspond to gauge required for equal size duct. Pitch base of plenums and ducts toward louver, for moisture drainage. Plenums shall be firmly attached to louvers and caulked weathertight at joints.

Install adequate balancing devices, e.g., volume dampers, extractors, etc., to balance each system to design airflows.

Provide UL listed fire dampers and access doors at all duct penetrations of walls, floors, partitions, etc., that have a fire resistance rating. Provide dynamic rated fire dampers. Construct and install fire dampers, sleeves, access doors, etc., in conformance to manufacturer's instructions, NFPA 90A and building official.

All diffusers, registers and grilles shall be firmly attached to and supported by the duct system. Where fiberglass or flexible ducts are used, the diffuser, register or grille shall be firmly attached to and supported by the building structure.
In the case of ceiling diffusers installed in acoustic ceiling tiles, the diffuser shall be bracketed to the ceiling support grid and firmly attached to the bracket and the grid with suitable clips, screws, wire ties or other method, so as not to impose any load on the ceiling tile itself.
Floor-mounted grilles and registers shall be furnished with suitable mounting frames and hardware to withstand walking traffic.

System shall be complete in all respects, tested, accepted and ready to operate.

1.03 SUBMITTALS

Submit six (6) copies of manufacturer's drawings of the following to the Architect for approval:

Diffusers & Exhaust Fan.

Submit information on any other equipment to be used when requested by the Architect or the Engineer.

1.04 GUARANTEE

Materials, equipment and workmanship shall have standard warranty against defects in material and workmanship. Any failure due to defective or improper material, equipment, workmanship or design shall be made good, forthwith, by and at the expense of the Contractor, including any damage done to areas, materials and other systems resulting from this failure. Guarantee period shall extend for one year from the Date of Acceptance.

The HVAC Contractor shall provide a guarantee covering all material and workmanship for 1 year following the Date of Acceptance.

1.05 DEFINITION:

As used on Contract Documents, the term "to provide" shall mean "to furnish, install and connect completely in the specified or approved manner the item or material described."

1.06 OPERATING AND MAINTENANCE INSTRUCTIONS

Upon completion of the project, the HVAC Contractor shall fully instruct the Owner in the operation, adjustment and maintenance of all equipment and systems furnished.

The HVAC Contractor shall provide the Owner with three (3) sets of complete maintenance and operating instructions, and technical data, in booklet form, of all equipment and devices furnished in the Contract.

1.07 CONTRACTOR'S INSPECTION

Contract Drawings are diagrammatic and do NOT show every required fittings, etc. The Contractor shall familiarize himself with the existing site conditions, prior to submitting a bid, and shall include all equipment and accessories necessary for complete and operational systems.

The HVAC Contractor shall examine the Architectural Drawings and the drawings and specifications of other trades to determine the extent of work. The HVAC Contractor shall visit the site and become familiar with the project and local conditions before submitting a Bid. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the Contract. If so directed by the Architect or Engineer, the HVAC Contractor shall, without extra charge, make reasonable modifications in the layout to prevent conflict with those of other trades and for proper installation of work. Refer to the Architect's Reflected Ceiling Plan for exact location of air diffusers, registers and grilles. The Contractor shall coordinate locations of equipment with all trades before starting construction. Any modifications to the equipment layout required for installation shall be performed at no additional cost to the Owner.

1.08 ARRANGEMENT OF WORK:

Work shall be coordinated between trades to prevent unnecessary interference. Work shall present a neat coordinated appearance. Install work as necessary to provide maximum possible headroom, adequate clearance and ready access for inspection, operation, safe maintenance and repair, and Code conformance. Where space appears inadequate, consult the Owner before proceeding with installation.

1.09 INSURANCE:

Furnish insurance certificates required by the Owner.

1.10 PERMITS, LAWS, ORDINANCES, CODES AND STANDARDS:

Obtain and pay for permits, inspections, licenses and certificates required. Work of this Contract shall meet State Building Code, State Fire Safety Code and other laws, rules and regulations of local, State and Federal authorities; National Fire Protection Association #90A and #90B; BOCA Mechanical & Plumbing Codes; National Electrical Code; and local utility company requirements. Pay utility company backcharges. Equipment, materials and components listed UL Product Directories, shall bear UL labels.

1.11 FILTERS AND STRAINERS:

Any equipment which operates with filters or strainers shall have filters and strainers installed at all times.

1.12 WORK BY OTHERS:

The HVAC Contractor shall install all motors provided under the HVAC Contract ready for wiring by the Electrical Contractor and shall furnish and deliver to the Electrical Contractor wiring diagrams for all motor starters for installation and wiring. The HVAC Contractor shall furnish motor starters, relays and all temperature control equipment to the Electrical Contractor for installation and wiring. The General Contractor shall perform all excavation, backfill, chases, openings, cutting, patching and finish work.

1.13 FIELD MEASUREMENTS

The HVAC Contractor shall verify in the field all measurements necessary for the work. Verify thermostat locations with the Owner before installation.

The HVAC Contractor shall coordinate supply, return and exhaust ductwork locations with structure, conduits and piping of other trades.

1.14 WORKMANSHIP:

Equipment and materials shall be new, of first quality, selected and arranged to fit properly into spaces indicated. Install equipment and materials in accordance with manufacturer's recommendations.

1.15 COORDINATION WITH OWNER:

All work shall be scheduled with the Owner. Interruptions in the Owner's access to the site shall be subject to Owner limitations of date and duration.

1.16 OPERATION OF SERVICES AND UTILITIES:

Shutdown of existing services and utilities shall, without exception, be coordinated with the proper utility and with the Owner as to date, time of day, and duration before any service is interrupted. Notify the Owner of estimated duration of shutdown period at least ten days in advance of proposed shutdown.

1.17 PROTECTION:

Close open ends of work with temporary covers or plugs during construction to prevent entry of obstructing material or damaging water. Protect existing property, equipment and finishes from damage. Repair, to original condition, existing property that has been damaged during execution of the work.

1.18 CLEANING:

Work site must be kept clean. Rubbish, debris and leftover or excess materials shall be removed daily.
1.19 LUBRICATION:

No equipment shall be operated for temporary service or testing without proper lubrication. Items requiring lubrication shall be left freshly and fully lubricated at time of substantial completion. Furnish Owner with one (1) complete new set of any special lubrication devices required for servicing, e.g., grease guns, fittings and adapters.

1.20 PAINTING:

Mechanical and electrical equipment and materials shall have prime coat and standard manufacturer's finish. Painting of finished surfaces (excluding ceilings) shall be one coat primer and two coats vinyl base semi-gloss paint. Painting of ceiling shall be one coat primer and two coats flat white paint. Primer shall be omitted on repainting of existing surfaces.

1.21 CUTTING AND PATCHING:

Areas disturbed by new construction or demolition shall be patched and repaired to match existing conditions. Patch painting of ceilings shall include painting of entire ceiling of room involved. Patch painting of other surfaces shall be to nearest cut-off point.

1.22 WATERPROOFING:

Provide necessary sleeves, caulking and flashing required to make openings waterproof.

1.23 FIREPROOFING:

At closing of each working day, provide temporary firestopping in every opening cut between floors and through fire-rated partitions. Permanent firestops shall be provided around sleeves and at other permanent openings through fire-rated partitions and floors, as required. Materials used for fire stopping shall be Class A "Incombustible" with firestopping capabilities equal to that of adjacent construction.

1.24 BASES AND SUPPORTS:

Provide necessary supports, pads, bases and piers required. Equipment shall be securely attached to building structure in acceptable manner. Attachments shall be of strong and durable nature, as determined by the Owner.

1.25 ACCESS:

Provide adequately sized access doors, for access to concealed equipment and components requiring servicing or inspection. Doors shall have fire ratings equal to construction in which they are located.

1.26 TESTS:

Perform tests required by the Owner, legal authorities and agencies. Each piece of equipment, including motors and controls, shall be operated continuously for minimum one-hour test. Correct all defects appearing during tests, and repeat tests until no defects are disclosed. Final tests shall be made in the Owner's presence.

1.27 SEISMIC REQUIREMENTS:

Submit four (4) copies of a final inspection report which includes: sealed certification by a Structural Engineer with P.E. registration in the state in which the project is located, that:

Engineer has reviewed the project.
Engineer has approved the use of the devices for the particular applications.
The devices satisfy Specification- and Code-mandated seismic criteria.

PART 2 - PRODUCTS

2.01 MATERIALS AND METHODS

Ductwork:

All ductwork and accessories shall be constructed, fabricated and installed in accordance with the latest SMACNA Standards manuals for low pressure ducts, fire damper installations and flexible ductwork.

All air conditioning, supply and return ductwork shall be galvanized sheet metal, two (2") inch static pressure classification, Seal Class "C". Exhaust air ductwork to be one (1") inch classification.

Louver plenums shall be galvanized steel with flanged joints. Metal thickness shall correspond to gauge required for equal size duct. Pitch base of plenums and ducts toward louver, for moisture drainage. Plenums shall be firmly attached to louvers and caulked weathertight at joints.

Install adequate balancing; e.g., volume dampers, extractors, etc., as required to balance each system to its design airflows.

Furnish and install UL listed fire dampers and access doors at all duct penetrations of walls, floors, partitions, etc., that are required to have a fire resistance rating. Fire dampers, sleeves, access doors, etc., shall be constructed and installed in conformance to the manufacturer's instructions, NFPA 90A and the Building Official.

Insulation Systems:

Duct System Insulation:

Concealed air conditioning supply and return duct systems shall be insulated with 1-1/2" thick fiberglass duct wrap with continuous vapor barrier.

Insulate all exhaust ductwork on cold side of dampers, all plenums connected to louvers with 2" thick, rigid foil-faced fiberglass duct insulation. Acoustical lining, where shown, shall be nominal 1" think fiberglass duct liner, unless otherwise indicated. Acoustical lined ductwork shall be thermally insulated as well.

2.03 GAS/ ELECTRIC ROOFTOP UNIT

Factory assembled natural gas heating/electric cooling packaged units. Equipment shall be UL lissted and labeled, classified in accordance with ANSIZ21.47 for gas fired central furnaces and UL 1995 for central cooling air conditioners.

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized and finished with weather-resistant baked enamel finish. Unit's surface shall be tested 500 hours in a salt spray tested in compliance with ASTM B117. Service panels shall have lifting handles and be removed and reinstalled by removing only a single fastener. All exposed vertical panels and top covers in the indoor air section shall be insulated with fire-resistant, foil faced glass fiber material.

Provide one inch, throwaway filters. Filter racks shall be converted to two inch capability.

Compressors shall be direct drive hermetic, reciprocating type. Provide a centrifugal oil pump for positive lubrication to moving parts. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Crankcase heater, internal temperature and current sensitive motor overloads shall included maximum protection. Compressor shall have internal spring isolation and sound muffling to minimize vibration transmission and noise. Compressor shall be provided with a low pressure switch.

Each refrigerant circuit shall have independent fixed orifice expansion devices, service pressure ports and refrigerant line filter driers factory installed.

Evaporator and condenser coils shall be internally finned 3/8" copper tubes mechanically bonded to configured aluminum plate fin. Coils shall be leak tested at the factory to ensure pressure integrity. The evaporator coil and condenser coil shall be leak tested to 200 psig and pressure tested to 450 psig. Sloped condensate pans are provided.

The heating section shall have a drum and tube heat exchanger design using corrosion resistant steel components. A forced combustion blower shall supply premixed fuel to a single burner ignited by a pilotless hot surface ignition system. In order to provide reliable operation, a negative pressure gas valve shall be used that require blower operation to initiate gas flow. On a initial call for heat, the combustion blower shall purge the heat exchanger 45 seconds before ignition. After three unsuccessful ignition attempts, the entire heating system shall be locked out until manually reset at the thermostat. Units shall fire propane gas.

The outdoor fans shall be direct drive, statically and dynamically balanced, draw through in the vertical discharge position. The fan motors shall be permanently lubricated and have built-in thermal overload protection.

Unit shall have belt driven, forward curve centrifugal fan with adjustable motor sheaves. All motors shall be thermally protected. All indoor fan motors shall meet the U.S. Energy Policy Act of 1992.

Each unit shall be completely factory wired with necessary controls and contractor pressure lugs or terminal block for power wiring. Units shall provide an external location for mounting fused disconnect device. Micro-processor controls shall be provided for all 24 volt control functions. The resident control algorithms shall make all heating, cooling, and/or ventilation decisions in response to electronic signals from each units thermostat. The control algorithm maintains accurate temperature control, minimizes drift from set point. A centralized micro-process shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protections.

Provide the unit manufactures downflow roof curb. Roof curbs shall be designed to mate with the unit and provide support and a watertight installation. The roof curb shall allow field fabricated rectangular supply and return ductwork to be connected directly to the curb. Curb design shall comply with the National Roofing Contractors Association requirements. Curbs shall be field assembled and include wood nailer strips.

Provide economizer operation with barometeric relief. Set minimum outside air volume to that indicated on the the drawings. Provide TCS BASYS controls model SZ1009 programmable 7-day thermostat. This shall provide night set-back and unoccupied functions. Once set, outdoor dampers shall open to set position in occupied mode and close during unoccupied periods.

Provide manufacturers extended four (4) year compressor warranty.

Provide full size condensate drain trap on each units. Condensate shall flow to roof.

2.02 DIFFUSERS AND REGISTERS

Diffusers and Registers shall be as scheduled on the drawing.

PART 3 - EXECUTION

3.01 FIRE STOPS

All penetrations through fire rated walls, ceilings or floors in which pipes or ducts pass shall be sealed with a UL approved fire-stop fitting classified for an hourly rating equal to the rating of the wall, ceiling or floor.

3.02 BALANCE AIR SYSTEMS

This contract is for all labor, materials and equipment required for the air and water systems.

Air systems to be balanced include air conditioning, make-up and exhaust systems.
Balancing shall include rebalancing (adjusting of sheaves and replacing belts and motors as indicated) of exhaust fans, rooftop air conditioning units and make-up air units as required to provide air flows specified. The Balancing Contractor shall secure a set of as-built ductwork plans prior to commencing work.

The Balancing Contractor shall attend a coordination meeting with the HVAC and ATCS Contractors to coordinate sensor locations.

Upon completion of all tests and balancing operations, the Contractor shall submit five (5) copies of the certified Balancing Report to the General Contractor. This report shall include all data for each of the air and water systems.

Balancing of systems shall be followed up after building is occupied; any rebalancing shall be done as required to meet occupant's requirements without extra charge.

END OF SPECIFICATION

acorn
Consulting Engineers Inc.
- Mechanical · Electrical Engineering for Building Systems -
P.O. Box 311 • Farms Village Plaza • 244 Farms Village Road
West Simsbury, CT 06092 • (860) 651-1949 • fax (860) 651-1957
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Crosskey Architects LLC
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STATE OF CONNECTICUT
W. MARK GENDRON
No. 17876
LICENSED
PROFESSIONAL ENGINEER

Mansfield Community Center Locker Room HVAC Upgrades
Mansfield, CT

Drawn:	MRP/SS
Date:	09/20/2019
Revisions	

Mechanical and Electrical Specifications

ME-4

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ACORN PROJECT NUMBER: 19114
PLOT DATE:

ATTACHMENT A
INSURANCE REQUIREMENTS

INSURANCE REQUIREMENTS FOR CONTRACTORS

Minimum Limits of Liability

Workers Compensation		**Statutory**
Employer's Liability –	each accident	$ 100,000
	Disease, each employee	$ 500,000
	Disease, policy limit	$ 100,000

Commercial General Liability Insurance

Each Occurrence	$ 1,000,000
Fire Damage	$ 100,000
Medical Expense	$ 5,000
Personal & Adv. Injury	$ 1,000,000
General Aggregate	$ 2,000,000
Products & Completed Operations Agg.	$ 2,000,000

Business Automobile Liability Insurance

Owned, Non-Owned & Hired Auto Limit	$ 1,000,000
Combined Bodily Injury & Property Damage (each accident)	$ 1,000,000
Property Insurance – if applicable	
Special Risk including Theft	
1,000 Deductible	

Excess Liability

Each Occurrence	$ 2,000,000
Aggregate	$ 2,000,000

Certificates of insurance must be provided to the Town after being awarded the contract and before doing any work. All insurance shall be provided by companies lawfully authorized to do business in the State of Connecticut with an A.M. Best Rating of A-VII or better. The Town of Mansfield shall be named as an additional insured on the General Liability, Automobile Liability and Excess Liability (if needed) insurance policies.

Each policy of insurance shall include a waiver of subrogation in favor of the Town of Mansfield and shall provide no less than thirty (30) days' notice to the Town in the event of a cancellation or change in conditions or amounts of coverage.

ATTACHMENT B
QUESTIONNAIRE CONCERNING OCCUPATIONAL HEALTH & SAFETY

Town of Mansfield
Department of Facilities Management
QUESTIONNAIRE CONCERNING OCCUPATIONAL HEALTH AND SAFETY

The Town of Mansfield is a political subdivision of the State of Connecticut and it is required by various state statutes and regulations and by its own Town Code of Ordinances to obtain background information on prospective contractors prior to entering into a contract. The questions below are designed to assist the Town of Mansfield in procuring this information.

	Yes	No
1. Has the Bidder been cited for three or more willful or serious violations of any occupational safety and health act?	☐	☐
2. Has the Bidder received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the issuance of this Request For Bids/Proposals/Qualifications?	☐	☐
3. Has the Bidder been the recipient of one or more ethical violations from the State of Connecticut Ethics Commission during the three-year period preceding the issuance of this Request For Bids/Proposals/Qualifications?	☐	☐
4. The Bidder shall provide three (3) References for work completed within the last five (5) years.		
4a. Designer/Owner Contact Name Work Description	Contract Value ($) Phone No	
4b. Designer/Owner Contact Name Work Description	Contract Value ($) Phone No	
4c. Designer/Owner Contact Name Work Description	Contract Value ($) Phone No	

ATTACHMENT C
CERTIFICATION OF NON-COLLUSION

CERTIFICATION OF NON-COLLUSION

The Undersigned certifies, under penalties of perjury:

That this Proposal has been made by the Proposer independently, and has been submitted without collusion, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in this procurement document, designed to limit independent bidding or competition;

That the contents of the proposal have not been communicated by the Proposer or it's employees or agents to any person not an employee or agent of the Proposer or it's surety or any bond furnished with the proposal, and will not be communicated to any such person prior to the official awarding of this procurement.

That I have fully informed myself regarding the accuracy of the statement made in the certificate.

SIGNATURE: _____

NAME: _____

FIRM: _____

TITLE: _____

DATE: _____

ATTACHMENT D
SUMMARY OF WORK EXPERIENCE

REFERENCES

List references for similar services provided for at least five (5) clients in the past five (5) years. Please note it is the Town's intent to communicate with the references listed herein.

Client 1:
Organization Name:_____

Contact Name:_____ Phone:_____

Service Dates:_____

Project(s):_____

Client 2:
Organization Name:_____

Contact Name:_____ Phone:_____

Service Dates:_____

Project(s):_____

Client 3:
Organization Name:_____

Contact Name:_____ Phone:_____

Service Dates:_____

Project(s):_____

Client 4:
Organization Name:_____

Contact Name:_____ Phone:_____

Service Dates:_____

Project(s):_____

Client 5:
Organization Name:_____

Contact Name:_____ Phone:_____

Service Dates:_____

Project(s):_____

CONTRACT DOCUMENTS AND SPECIFICATIONS

-DRAFT-

Replacement of Air Handler Units

TOWN OF

MANSFIELD, CONNECTICUT

February 2021

TOWN OF MANSFIELD

4 SOUTH EAGLEVILLE ROAD

MANSFIELD, CONNECTICUT 06268

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CONTRACT AGREEMENT

TOWN OF MANSIELD

DEPARTMENT OF FACILITIES MANAGEMENT

REPLACEMENT OF AIR HANDLER UNITS

This agreement made and entered into on the_____ day of_____, 2021, between:

THE TOWN OF MANSFIELD, acting by and through its Town Manager, and hereinafter referred to as "Town",

_____, a corporation organized and existing under the laws of the State of_____, a partnership, or an individual doing business as_____ and hereinafter referred to as "Contractor,"

WITNESSETH;

That for and in consideration of the payments and agreements hereinafter mentioned, the CONTRACTOR hereby agrees with the TOWN to commence and complete the work described as follows:

REPLACEMENT OF AIR HANDLER UNITS

Hereinafter called the PROJECT, for the sum of _____ ____ Dollars ($_____) and all work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor insurance, and other accessories and services necessary to complete said project in accordance with the conditions and prices stated in the Bid Form/Proposal, the General Conditions and Special Conditions of the contract, the plans, which include all maps, plots, blueprints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents all of which are attached hereto and made a part hereof and collectively evidence and constitute the contract.

The CONTRACTOR hereby agrees to commence work under this contract on or before _____ and to fully complete the Replacement of Air Handler Units by _____, 2021, completion date for that project. The TOWN agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions, and deductions as provided in the General Conditions of the contract, and to make payments on account thereof as provided in Section 22, "Payment to Contractor" of the General Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in two (2) counterparts, each of which shall be deemed an original, in the year and day first mentioned above.

CONTRACTOR	TOWN
_____	_____
	Town Manager
_____	
_____	

(SEAL)

Recommended for approval:

_____
Director of Facilities Management

_____
Date

SUPPLEMENT TO CONTRACT
AGREEMENT
TOWN OF MANSFIELD
DEPARTMENT OF FACILITIES MANAGEMENT
REPLACEMENT OF AIR HANDLER UNITS

1. In the event of inconsistencies among the Contract Documents, this Document and the basic Contract Agreement it supplements, shall govern. If there are inconsistencies within or between parts of the Contract Documents that are not resolved by application of the immediately foregoing sentence, or between the Contract Documents and applicable standards, codes and ordinances, the Contractor shall (1) provide the better quality or greater quantity of work or (2) comply with the more stringent requirement. The terms and conditions of this paragraph shall not, however, relieve the Contractor of any of its obligations set forth elsewhere in the Contract Documents.

2. In performing its obligations under this Contract, the Contractor shall comply with all applicable statutes, laws, ordinances, regulations, codes, rules or orders of, or issued by, any governmental body having jurisdiction over the Performance of the Work

3. Each and every provision of law and Clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

4. The rights stated in the Contract Documents are cumulative and not in limitation of any Rights of the Town granted in the Contract Documents, at law, or in equity.

5. In no event shall the Town or its agents have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Town in the Contract Documents.

6. If any governmental body having jurisdiction over the Work requires licenses or registrations for the performance of the Work, or any part thereof, the Contractor shall hold said valid licenses or registrations as may be required by law to prosecute the Work to completion. If any part of the Work for which such a license or registration is required is to be performed by Subcontractors of any tier, the Contractor shall take reasonable actions to ensure that any such Subcontractor holds such valid licenses or registrations as may be required by law to prosecute said Work to completion.

7. To ensure that any Subcontractor is bound by the terms set forth in this Agreement between the Town and Contractor, the Contractor agrees to include a provision in each

Subcontract that incorporates by reference the terms of this Agreement and the Contract Documents incorporated by reference herein that shall apply to all work performed on this project by any Subcontractor in the following or similar terms: “The contractor and subcontractor shall be mutually bound by the terms of this agreement, and, to the extent that provisions of the prime

contract apply to the work of the subcontractor, the contractor shall assume toward the subcontractor all obligations and responsibilities that the owner, under the prime contract, assumes toward the contractor, and the subcontractor shall assume toward the contractor all obligations and responsibilities which the contractor, under the prime contract, assumes toward the owner and the architect.

8. The Contractor agrees that any contract it makes with any Subcontractor to do any of the Work pursuant to this Agreement shall contain a provision that the [Sub]contractor shall act as a Subcontractor to the Contractor, and that the Subcontractor agrees that it shall have no rights of any kind against the Town.

9. The Town will not be liable for damages to the Contractor as a result of delays suffered in completing the project. Extensions of time are the sole remedy available to the Contractor for this contingency.

10. The acceptance of Final Payment by the Contractor shall constitute a waiver of all claims by the Contractor, except those previously made in writing and designated as unresolved by the Contractor. In return for receipt of any partial payment, the Contractor or any Subcontractor receiving such partial payment shall issue a release of all claims through the date covered by any such partial payment in exchange for receipt of such payment.

11. By executing this Agreement, the Contractor warrants that its authorized representative has examined and compared the various components of the design documents, and has otherwise satisfied himself or herself to their accuracy, and thereby releases and holds the Town harmless from any liability for damages caused by either party's negligence to the full extent permitted by law.

12. Even if there is an ongoing dispute between the parties to this Agreement, the parties agree that the Work required by this Agreement shall continue until the project is completed.

13. The Work in this Contract should not interfere with safe operation of adjacent buildings and site. If interference appears possible because of new connections to existing work or other reasons, the Work involved must be done at a time and in a manner directed by the Town as a part of the Contract.

14. The Parties to this Agreement will make a good faith effort to resolve, without resort to litigation any dispute between or among the Town, Contractor, Consultants or Subcontractors.

15. The Contractor agrees to participate in mediation when required to do so by the Town to resolve a dispute with each other.

16. If, after good faith effort, either party determines that either a mediator cannot be agreed upon, or mutually agree ground rules cannot be agreed upon, either party may give notice of its intent to litigate. No litigation may commence earlier than sixty (60) days after sending notice of intent to litigate, unless failure to commence litigation is reasonably likely to result in demonstrable harm.

17. If the dispute cannot be resolved by the principals during the process, then either party may bring the dispute to a court of competent jurisdiction, namely, the Superior Court for the Judicial District of Tolland at Rockville. The notice period for litigation shall be limited to sixty (60) days.

18. Should a subcontractor, at any time, refuse or neglect to supply a sufficiency of properly skilled workers or of material of the proper quality or quantity, or fail in any respect to prosecute the Work required of such subcontractor pursuant to the contract between the subcontractor and the Contractor with competence, promptness and diligence, or fail in the performance of any of its covenants with the Contractor, in addition to any rights of the Contractor to address any such situation, the Town may at its option terminate the Agreement between the Contractor and such subcontractor after serving a three days written notice to the Contractor and such subcontractor. In the case of such discontinuance by the Town, the Town shall ensure that the subcontractor is paid the fair value of such subcontractor's work performed and materials supplied to the project to the date of termination of the contract of the subcontractor by the Town.

So agreed:

CONTRACTOR	TOWN
_____	_____ Town Manager
_____	
_____	_____ Director of Facilities Management
	_____ Date

EXHIBIT I

Contractor's Indemnification

The Contractor is aware of and agrees that he is bound by the following indemnification language:

To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards, commissions, officers, officials, employees, agents, representatives, and servants from any and all suits, claims, losses, damages, costs (Including without limitation reasonable attorneys' fees),compensation, penalties, fines, liabilities or judgments or any name or nature for:

- Bodily injury, sickness, disease, or death; and/or
- Damage to or destruction of property, real or personal; and/or
- Financial losses (including, without limitation, those caused by loss of use)

sustained by any person or concern, including officers, employees, agents, Subcontractors or servants of the Town, or the Contractor, or by the public, which is cause or alleged to have been caused in whole or in part by the negligent act(s) or omission(s) of the Contractor, its officers, employees, agents, or Subcontractors, in the performance of this Agreement or from the inaccuracy of any representation or warranty of the Contractor contained in the Contract Documents. This indemnity shall not be affected by other portions of the Agreement relating to insurance requirements.

To the fullest extent permitted by law, the Contractor agrees to release, defend, indemnify, and hold harmless the Town of Mansfield, their respective boards and commissions, officials, officers, employees, agents, representatives, and servants from any loss, claim, cost penalty, fine or damage that may arise out of the failure of the Contractor, its officers, agents, employees or Subcontractors to comply with any laws or regulations of the United States of America, the State of Connecticut, the Town of Mansfield, or their respective agencies. This undertaking shall not be affected by other portions of the Agreement relating to insurance requirements.

STATE OF CONNECTICUT:

COUNTY OF:

Signed:

_____
Contractor

By_____

Address_____

_____

Date _____, 2021

Subscribed and Sworn to before me
on this day of _____, 2021.

_____
Notary Public

GENERAL CONDITIONS

1. Contract and Contract Documents

The plans, scope of services, and addenda shall form part of the contract and provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the contract documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

2. Definitions

The following terms as used in these General Conditions are respectively defined as follows.

A. "Contractor" - A person, firm or corporation with whom this contract is made by the Town.

B. "Subcontractor" - A person, firm or corporation supplying labor, equipment or materials for work at the site of the project for, and under separate contract or agreement with, the Contractor.

C. "Work on (at) the project" - Work to be performed at the locations of the project including the transportation of materials, equipment and supplies to or from the location(s) of the project by the employees of the contractor and any subcontractor.

D. "Owner or Town" - The Town of Mansfield, Connecticut, acting by and through its Town Manager, Director of Facilities Management, Director of Finance, or their authorized representative.

E. "Engineer" - The Town of Mansfield Director of Facilities Management, or his authorized representative.

3. Materials, Services and Facilities

It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time. Any work necessary to be performed after regular hours, on Sundays or Legal Holidays, shall be performed without additional expense to the Owner.

4. Contractor's Title to Material

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

5. Inspection and Testing of Materials

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be as stipulated by the Owner. The Owner will pay for all laboratory inspection services directly, and not as part of the contract.

The Contractor shall supply in a timely fashion samples of any materials required to be tested along with certified test reports and certificates of compliance when required. No material shall be incorporated into the work without testing. Any material incorporated into the work and found to be deficient will be removed or replaced at the Contractor's sole expense.

Materials of construction, particularly those upon which the strength and durability of the finished product may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for users intended.

6. "Or Equal" Clause

Whenever a material, article or piece of equipment is identified in the project documents by reference to manufacturers' or vendors' names, trade-names, catalogue numbers, etc., it is intended merely to establish a standard; and, any material, article or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the Town, of equal substance and function. It shall not be purchased or installed by the Contractor without the Town's written approval.

7. Patents

The Contractor shall hold and save the owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the owner, unless otherwise specifically stipulated in the Contract Documents. If the Contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood that, without exception, the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify

and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

8. Surveys, Permits and Regulations

Unless otherwise expressly provided for in this contract, the Owner will furnish to the Contractor control survey points only for the execution of the work, and the Town shall provide all surveying necessary for the layout of the work. The Contractor shall execute, procure and pay for all permits, licenses and approvals necessary for the execution of his contract. The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to the performance of the work.

The Contractor is hereby notified that all permit and permit applications contained herein shall be made a part of this Contract, and that the Contractor shall be bound to comply with all requirements of such permits and permit applications as though the Contractor were the permittee. If at the time the permit is received its contents differ from that which is outlined in the application, the permit shall govern.

9. Contractor's Obligations

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings, and in accordance with the directions of the Town as given from time to time during the progress of the work. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete all work to the satisfaction of the Town.

10. Weather Conditions

In the event of temporary suspension of work, or during inclement weather, or whenever the Town shall direct, the Contractor will, and will cause his Subcontractors to protect carefully insofar as is reasonably possible given the nature of the work, his and their work and materials against damage or injury from the weather. If, in the opinion of the Town, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to so protect his work, such material shall be removed and replaced at the expense of the Contractor.

11. Protection of Work and Property - Emergency

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property, from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representative.

In case of an emergency which threatens loss or injury of property and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Town, in a diligent manner. He shall notify the Town immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Town for approval.

Where the Contractor has not taken action but has notified the Town of an emergency threatening injury to persons or damage to the work of any adjoining property, he shall act as instructed or authorized by the Town.

The manner of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 14 of the General Conditions.

12. Reports, Records, and Data

The Contractor shall submit to the Owner, in a format satisfactory to the Town, such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract. Certified payroll records indicating the payment of all labor on this contract shall be submitted to the Owner along with all requests for payment.

13. Superintendence by Contractor

At the site of the work, the Contractor shall designate one person who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Town.

14. Changes in Work

No changes in the work covered by the approved contract documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

A. Unit bid prices previously approved
B. An agreed lump sum
C. The actual cost of:

1. Labor, including foremen;

2. Materials entering permanently into the work;

3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;

4. Power and consumable supplies for the operation of power equipment;

5. Insurance;

6. Social Security and old age and unemployment contributions.

To the cost under 14 (c), there shall be added a fee to be agreed upon but not to exceed fifteen percent (15%) of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

15. Extras

Without invalidating the contract, the Owner may order extra work of the kind bid upon or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner and the price is stated in the order.

16. Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed by and between the Contractor and Owner, that the date of beginning and the time for completion as specified in the contract of work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on or before the date specified.

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay the Owner the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

It is further agreed that time is of the essence of each and every portion of this contract and of the specification wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

A. To any preference, priority or allocation order duly issued by the government of the United States or the State of Connecticut.

B. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather;

C. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections a and b of this article: Provided further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the cause of delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

17. Correction of Work

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Owner who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Owner, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Owner shall be equitable.

18. Conditions Found Different

Should the Contractor encounter conditions at the site materially differing from those indicated in the contract documents, he shall immediately give notice to the Owner of such conditions before they are disturbed. The Owner will thereupon promptly investigate the

conditions, and if he finds that they materially differ from those indicated in the Specifications, he will at once make such changes in the contract documents as he may find necessary, and any increase or decrease of cost resulting from such changes is to be adjusted in the manner provided in paragraph 14 of the General Condition.

19. Claims for Extra Costs

No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of subparagraph 14(c) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls, and vouchers covering all items of cost and, when requested by the Owner, give the Owner access to accounts relating thereto.

20. Right of the Owner to Terminate Contract

If the Contractor is adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a received is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he fails to make the prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, providing sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven days written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the work by whatever method he may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished.

If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be in the manner provided in Section 22, and this obligation for payment shall survive the termination of the Contract.

If the work is stopped for a period of thirty days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the work under a contract with the Contractor, or if the work should be stopped for a period of thirty days by the Contractor because the Owner has not made payment thereon as provided in Section 22, then the Contractor may, upon seven additional days written notice to the Owner, terminate the Contract and recover from the Owner payment for all work executed

and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

21. Construction Schedule

Immediately after execution and delivery of the contract, the Contractor shall deliver to the Town an estimated construction progress schedule and bar chart both electronically and in a form satisfactory to the Town showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the monetary values associated with each segment or subdivision of work. Said proposed schedule shall not be official until accepted and approved by the Owner. Contractor shall update this construction schedule monthly or as required by the Owner such that his work can be coordinated with the other contractual work proceeding in this area. Such schedule must provide for the coordination of work with other work being done in the Storrs Center area.

22. Payment To Contractor (Also see Sections 35 & 36)

The Town shall make monthly payments to the Contractor on the basis of a duly certified and approved estimate of the work performed under the contract. Final payment shall be made after the final completion and acceptance of all work covered by the contract.

The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have to be paid, discharged, or waived. If the Contractor fails to do so, then the Owner may, after having served written notice on said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon full payment to the Contractor shall be made in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety.

In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner, shall be considered as payment made under the contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for any such payment made in good faith.

23. Acceptance of Payment as Release

The acceptance by the Contractor of payment shall be and shall operate as a release of the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work. No payment, however, final or otherwise, shall operate to release

the Contractor or his Sureties from any obligation under this contract or the performance bond.

24. Contractor's Insurance

The Contractor shall procure and maintain insurance against claims for injuries or losses to persons or property that are alleged to have arisen in connection with activities of the Contractor and any agents, representatives, subcontractors or employees. Insurance companies must be licensed by the State of Connecticut or otherwise acceptable to the Town. The cost of such insurance, including required endorsements or amendments, shall be the sole responsibility of the Contractor. Full disclosure of any non-standard exclusions is required for all required coverages.

The coverage indicated below at *not less than* the specified limits are required for this project (agreement):

A. Comprehensive General Liability coverage naming the TOWN OF MANSFIELD as additional insured, written on an occurrence basis: $1,000,000 per occurrence, $2,000,000 aggregate

B. Automobile Liability coverage, including coverage for hired or borrowed autos: $1,000,000 per accident-combined single limit

C. Workers' Compensation Coverage, (as per Connecticut law and custom) and employer's liability coverage $100,000 (each accident) / $500,000 (Disease, each employee) / $100,000 (Disease, policy limit) limits or "Certificate of Solvency" issued by Connecticut Workers' Compensation Commission for self-insurers.

D. Umbrella/Excess Liability: The contractor will maintain coverage applying over the underlying Commercial General Liability/Automobile Liability, Pollution Liability (where applicable), and Employer Liability section of the Workers' Compensation coverage. Minimum limits: $2,000,000 per occurrence/$2,000,000 annual aggregate. The Town of Mansfield shall have the sole discretion in increasing or reducing the Umbrella/Excess Liability coverage requirements depending on the scope and/or size of the work to be performed by Contractor/Bidder.

Commercial General Liability, Commercial Auto Liability, and Umbrella/Excess Liability coverage shall be written on a Primary, Non-Contributory Basis.

The required insurance form shall be certified by a duly authorized representative of the insurer(s) and incorporated into and made a part of this agreement. Properly executed certificates signifying adequate coverage in effect for the duration of the contract with renewal certificates issued not less than 30 days prior to expiration of a policy period, must be submitted with the bid on file with the Town prior to commencement of this project (agreement).

Insurance as required by the Town of Mansfield shall be furnished by the Contractor to the Town. The Town of Mansfield shall be listed as "additional insured" by name on all insurance certifications except Worker's Compensation & Employers Liability. Failure of the Contractor

to maintain all required insurance in accordance with the Contract shall constitute a material breach of the Contract and shall subject the Contractor the Town's withholding liquidated damages from the Contractor in the amount of five percent (5%) of the total Contract price, as it may be amended by construction orders, subject to the continued commercial availability of such coverage.

The Contractor shall not commence work under this contract until he has obtained all the insurance required above of the Information for Bidders attached hereto and such insurance has been approved by the Town. The Contractor shall furnish the Town with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of policies. Such certificates shall also contain substantially the following statements: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the Town." The Town of Mansfield shall be listed as "additional insured" by name on all such insurance certifications.

Each policy of insurance shall include a waiver of subrogation in favor of the Town of Mansfield and shall provide no less than thirty (30) days' notice to the Town in the event of a cancellation or change in conditions or amounts of coverage.

25. Assignments

The Contractor shall not assign the whole or any part of this contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

26. Subcontracting

The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement will contain such information as the Owner may require.

The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by terms of the General Conditions and

other contract documents insofar as applicable to the work of the subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.

Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

27. Department of Facilities Management Authority

The Town Director of Facilities Management or his authorized representative shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. The Director of Facilities Management shall determine the amount, quality, acceptability, and fitness of the work which is to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Director of Facilities Management estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or be specifications, the determination or decision of the Director of Facilities Management shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

The Director of Facilities Management, in consultation with the project architect where applicable, shall decide the meaning and intent of any portion of the specifications and of any plan or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this contract and other contractors performing work for the Owner shall be adjusted and determined by the Director of Facilities Management.

28. Quantities of Estimate

Whenever the estimated quantities of work to be done and materials to be furnished on a unit price basis under this contract are shown in any of the documents including the proposal, they are given for use in comparing proposals, and the right is expressly reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

29. Conflicting Conditions

See Paragraph 27.

30. Notice and Service Thereof

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is

posted, by certified or registered mail, to said Contractor at his last given address, or delivered in person to said Contractor or his authorized representative on the work.

31. Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein, and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

32. Safety and Health Regulations for Construction

In order to protect the lives and health of his employees under the contract, the Contractor shall comply with all pertinent provisions of the Contract Work Hours and Safety Standards Act, as amended, commonly known as the Construction Safety Act as pertains to health and safety standards; and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the contract.

33. Suspension of Work

Should the Owner be prevented or enjoined from proceeding with work or from authorizing its prosecution either before or after its prosecution, by reason of any litigation, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

34. Equal Opportunity Provisions

Contractor must also complete the certification of non-segregated facilities on page 61.

35. Anti-Kick Back Provisions

In accordance with the provisions of the Copeland Anti-Kick Back Act (18 U.S.C. 874) as supplemented in Department of Labor Relations (29 CFR, Part 3), the Contractor is prohibited from inducing, by any means, any person employed in the construction, completion or repair of this project, to give up any part of the compensation to which he is otherwise entitled.

CERTIFICATION OF NONSEGREGATED FACILITIES

Applicable to federally assisted construction contracts and related subcontracts exceeding $10,000 which are not exempt from the Equal Opportunity clause.

The federally assisted construction contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of this establishments, and that he does not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally assisted construction contractor certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term “segregated facilities” means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicitly directive or are in fact segregated on the basis of race, creed, color or national origin, because of habit, local custom or otherwise. The federally assisted construction contractor agrees that (except where he has obtained identical certifications from proposed contractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will rain such certification in his files.

_____ _____

Signature Date

_____

Name and Title of Signer (please type)

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

36. Application for Payment

Contractor shall utilize AIA form G702 including continuation sheets when required. For each item, provide a column for listing: Item Number; Description of work; Scheduled Value; Previous Applications; Work in Place and Stored Materials under this Application; Authorized Change Orders; Total Completed and Stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage. Application shall be typewritten. Certification shall be by signature of authorized officer. Contractor shall list each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of work. Contractor shall prepare Application for Final Payment as specified in paragraph 42 Closeout Provisions, submit three copies of each Application for Payment and an updated construction schedule with each Application for Payment monthly. When Owner requires substantiating information the Contractor shall submit data justifying dollar amounts in question. The Contractor shall provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.

37. Measurement and Payment

Each lump sum or unit price stated shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications. No separate payment will be made for cleaning up. Such clean up shall be considered incidental to the item to which it applies and shall be included in the price for that item. In all items involving excavation, the price shall include doing the entire excavation necessary for the proper installation and function of that item. Where rock is encountered, the quantity shall be considered as that for rock excavation.

38. Submittals

Each submittal shall be made to the Owner and shall include three copies for review and distribution. Contractor shall sequentially number the transmittal forms. Resubmittals are to have an original number with an alphabetic suffix. Contractor shall identify Project, Contractor, Subcontractor or supplier, pertinent Drawing sheet and detail number(s), and specification Section number as appropriate. Contractor shall apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals shall be scheduled to expedite the Project. Contractor shall identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed work. Contractor shall revise and resubmit submittals as required, identify all changes made since previous submittal. Contractor shall distribute copies of reviewed submittals to concerned parties. Contractor shall instruct parties to promptly report any inability to comply with provisions.

39. Shop Drawings

Each Subcontractor shall submit the number of reproductions which Contractor requires, plus three copies which will be retained by Owner. After review, the Contractor will distribute in accordance with the above article on Procedures and for Record Documents described in paragraph 41 - Contract Closeout Procedures.

40. Samples

The Contractor shall submit samples, when specified in individual specification sections, to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. The Contractor shall coordinate sample submittals for interfacing work.

41. Warranty

The Contractor warrants and guarantees to the Town and the Engineer that all materials and equipment will be new unless otherwise specified, and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents and of any inspections, tests or approvals referred to in herein. All unsatisfactory Work, all faulty or defective Work and all Work not conforming to the requirements of the Contract Documents or of such inspections, tests or approvals shall be considered defective. Prompt notice of all defects shall be given to the Contractor. All defective Work, whether or not in-place, may be rejected.

42. Contract Closeout Procedures

The Contractor shall submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's inspection. The Contractor shall provide submittals to Owner that are required by governing or other authorities, and submit final Application for Payment identifying total adjusted Contract sum, previous payments and sum remaining due.

43. Project Record Documents

The Contractor shall maintain on site, one set of the following record documents; record actual revisions to the Work:

A. Contract Drawings
B. Specifications
C. Change Orders and other Modifications to the Contract

44. Cleaning Up

During its progress, the work and the adjacent areas affected thereby shall be kept clean and all rubbish, surplus materials, and unneeded construction equipment shall be removed

and all damage repaired so that the public and property owners will be inconvenienced as little as possible. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes, structures, work done under this Contract or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, drains, pipes, structures, and work, etc., shall upon completion of the work, be left in a clean and neat condition. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect and cover all organic matter and material containing organic matter in, under and around privies, houses and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition. The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required, all necessary roadway or driveway, walk and landscaping work. Suitable materials, equipment and methods shall be used for such restoration. The Contractor shall thoroughly clean all materials and equipment installed by him and his subcontractors, and on completion of the work shall deliver it undamaged and in fresh and new appearing condition

45. Public Assignment

The Contractor or Subcontractor offers and agrees to assign to the public purchasing body all right, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act, 15 U.S.C. 15 or under Chapter 624 of the General Statutes of Connecticut, arising out of the purchase of services, property or intangibles of any kind pursuant to a public purchase contract or subcontract. This assignment shall be made and become effective at the time the public purchasing body awards or accepts such contract without further acknowledgement by the parties.

SPECIAL CONDITIONS

1. General

The Contractor shall furnish all tools, labor, equipment, materials and incidentals to complete all items of work for the construction of the project as set forth on the plans and in these contract documents in a manner described in these contract documents, general conditions, special conditions, Special Provisions, and Technical Provisions.

2. Sampling, Inspection and Testing of Materials

The Town reserves the right to test any material which previously had been tested and accepted, and to reject materials in transit or at the point of delivery which do not meet requirements of the specifications, which are contaminated, or which are damaged.

3. Safety

The Contractor shall comply with all requirements of the Occupational Safety and Health Act (OSHA). See also the safety provisions of the General Conditions.

4. Enumeration of Plans

The plan sheets, Exhibit 1, are part of these contract documents.

5. Delays

The Town shall not be considered in default under this agreement or responsible for any delay resulting from threatening weather conditions, equipment accident or failure, strike or labor dispute, natural disaster, fuel shortage, material shortage, or delay due to any other circumstance beyond the control of the Town.

6. Protection of Existing Road and Facilities

Care shall be taken to insure that work does not in any way damage the existing facilities.

7. Prevailing Wage Rates

State of CT Prevailing Wage Rates will be required if the contract exceeds $100,000.

8. Hurricane Protection

Should hurricane warnings be issued, the Contractor shall take every precaution to minimize danger to persons, to the work and to adjacent property. These precautions shall include removing all loose materials, tools, and equipment from exposed locations, and removing all scaffolding and other temporary work.

9. Protection against High Water and Storm

The contractor shall take all precautions to prevent damage to work or equipment by high water or by storms. The Owner may prohibit the carrying out of work at any time when in his judgment high waters or storm conditions are unfavorable or unsuitable or at any time regardless of the weather when proper precautions are not being taken to safeguard previously constructed work or work in progress.

10. Lights, Barriers, Watchmen and Indemnity

The Contractor shall erect and maintain such barriers, lighting, warning lights, danger warning signals, and signs that will prevent accidents during the construction work and protect the work and insure the safety of personnel and the public at all times and places; the Contractor shall indemnify and protect the Owner and the Engineer in every respect from injury or damage whatsoever caused by any act of neglect by the Contractor or his subcontractors or their servants or agents, including any claim arising out of failure to erect and maintain sufficient railing or fence as required by Section 13A-111 Connecticut General Statutes from claims of defect in violation of 13A-149 Connecticut General Statutes.

11. Night Work

Night work shall be permitted provided the lighting, safety and other facilities which are deemed necessary shall be provided by the Contractor. Compensation for this work shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid, and no extra compensation will be paid by the Owner. Night work on Thursdays, Fridays, Saturdays, or holidays shall not be permitted.

12. Shoring

If shoring is required to safely excavate or work within an excavated area, according to OSHA regulations, the cost of the shoring materials, erection and removal shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid, and no extra compensation will be paid by the owner.

13. Working Hours

Hours of Work shall be arranged in advance with the Town prior to the commencement of work.

14. Time of Completion

Bidder must agree to commence work within 10 days of the execution of this contract, and to fully complete all work prior to September 1, 2021 completion date for that project.

15. Private Property/Construction of Adjoining Buildings

Attention is drawn to the fact that some of this work will take place adjacent to other building construction on private property. The greatest care shall be taken to avoid any trespass onto said private property without the express written permission of the owner. Any inadvertent damage to private property caused by the contractor shall be repaired to the satisfaction of the owner and shall be reported immediately to the Town of Mansfield Engineering representative.

16. Notice to Contractor - Permits/Permit Applications

The Contractor is hereby notified that all permit and permit applications contained herein shall be made a part of this contract. In the absence of the permit, the application shall be binding. If at the time the permit is received its contents differ from that which is outlined in the application, the permit shall govern. Should the permit be received after the receipt of bids and the permit requirements significantly changes the character of the work, adjustment will be made to the contract in accordance with the appropriate articles in Section 1.04, Form 816. The requirements and conditions set forth in the permit and permit application shall be binding on the Contractor just as any other specification.

17. Job Coordination Meetings

Job coordination meetings will be conducted during the project and a responsible representative of the contractor will be required to attend each meeting. The representative must be knowledgeable about contractor's work including knowledge of the design, status of materials and deliveries, and have the authority to make schedule commitments.

18. Phasing

There is no phasing for this project.

NOTICE TO CONTRACTOR: UTILITY SPECIFICATIONS

The contractor is hereby notified that all utility specifications contained elsewhere herein shall be made a part of this contract, and that the contractor shall be bound to comply with all requirements of such specifications. The requirements and conditions set forth in the subject specifications shall be binding on the contractor just as any other specification would be.

NOTICE TO CONTRACTOR: CONTRACTOR TRAINING REQUIREMENT FOR 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

In accordance with Connecticut General Statute 31-53b and Public Act No. 08-83, the Contractor is required to furnish proof that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53, has completed a course of at least ten hours in duration in construction safety and health approved by the Federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

Proof of compliance with the provisions of the statute shall consist of a student course completion card issued by the federal Occupational Safety and Health Administration, or other such proof as deemed appropriate by the Commissioner of the Connecticut Department of Labor, dated no earlier than five years prior to the commencement of the project. Each employer shall affix a copy of the construction safety course completion card for each applicable employee to the first certified payroll submitted to the Department of Transportation on which the employee's name first appears.

Any employee required to complete a construction safety and health course as required that has not completed the course, shall have a maximum of fourteen (14) days to complete the course. If the employee has not been brought into compliance, they shall be removed from the project until such time as they have completed the required training.

This section does not apply to employees of public service companies, as defined in section 16-1 of the 2008 supplement to the General Statutes, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

The internet website for the federal Occupational Safety and Health Training Institute is http://www.osha.gov/fso/ote/training/edcenters.

Additional information regarding this statute can be found at the Connecticut Department of Labor website, http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm.

Any costs associated with this notice shall be included in the general cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall not be grounds for claims as outlined in Section 1.11 – "Claims".

NOTICE TO CONTRACTOR: NON-DISCRIMINATION

The following subsections are set forth here as required by section 4a-60 of the Connecticut General Statutes and specifically apply to this contract: Non-Discrimination

(a) For purposes of this Section, the following terms are defined as follows:

i. "Commission" means the Commission on Human Rights and Opportunities;

ii. "Contract" and "contract" include any extension or modification of the Contract or contract;

iii. "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;

iv. "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose.

v. "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;

vi. "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;

vii. "marital status" means being single, married as recognized by the State of Connecticut, widowed, separated or divorced;

viii. "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;

ix. "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and

x. "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and "contract" do not include a contract where each contractor is (1) a political subdivision of the state, including, but not limited to, a municipality, (2) a quasi-public agency, as defined in Conn. Gen. Stat. Section 1-120, (3) any other state, including but not limited to any federally recognized Indian tribal governments, as defined in Conn. Gen. Stat. Section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in the immediately preceding enumerated items (1), (2), (3), (4) or (5).

(b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor 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, ancestry, sex, gender identity or expression, mental retardation, mental disability 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 the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

(c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

(d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.

(e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance

with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

(f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.

(g)(1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.

(h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

NOTICE TO CONTRACTOR: EXECUTIVE ORDERS

The Agreement is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Agreement as if they had been fully set forth herein. At the contractor's request, TOWN shall provide a copy of these orders to the contractor. The Agreement may also be subject to Executive Order No. 7C of Governor M. Jodi Rell, promulgated July 13, 2006, concerning contracting reforms and Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services, in accordance with their respective terms and conditions.

NOTICE TO CONTRACTOR: STATE ELECTION ENFORCEMENT COMMISSION (SEEC) CAMPAIGN CONTRIBUTION BAN

This Agreement is subject to the provisions of the State Election Enforcement Commission (SEEC) Campaign Contribution Ban. For all State Contracts as defined in P.A. 07-1 having a value in a calendar year of $50,000 or more or a combination or series of such agreements or contracts having a value of $100,000 or more, the authorized signatory to this Agreement expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice. See SEEC Form (below):

CONNECTICUT STATE ELECTIONS ENFORCEMENT COMMISSION
Rev. 1/11

NOTICE TO EXECUTIVE BRANCH STATE CONTRACTORS AND PROSPECTIVE STATE CONTRACTORS OF CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

This notice is provided under the authority of Connecticut General Statutes §9-612(g)(2), as amended by P.A. 10-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined later).

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No *state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor*, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes TOWN committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall knowingly solicit contributions from the state contractor's or prospective state contractor's employees or from a subcontractor or principals of the subcontractor on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of

Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties—Up to $2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to $2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties—Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than $5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov/seec. Click on the link to “Lobbyist/Contractor Limitations.”

DEFINITIONS

"State contractor" means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. "State contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Prospective state contractor" means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. "Prospective state contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Principal of a state contractor or prospective state contractor" means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization**,** (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract,* (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

"State contract" means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or

Agreement of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. “State contract” does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

“State contract solicitation” means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

“Managerial or discretionary responsibilities with respect to a state contract” means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

“Dependent child” means a child residing in an individual’s household who may legally be claimed as a dependent on the federal income tax of such individual.

“Solicit” means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory
committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

“Subcontractor” means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. “Subcontractor” does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business

entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

Date: _____
Town: Mansfield
6FR Part 31.