



ADDENDUM NO. 3

July 30th 2012

ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

BIDS DUE – TUES. AUGUST 7th, 2012 until 2:00PM

This document consists of one (1) page plus the following documents:

- 1) Section 000100 – Table of Contents – **ADD. NO. 3**
- 2) Section 000150 – Invitation to Bid – **ADD. NO. 3**
- 3) Section 000900 – Master Subcontract Agreement – **ADD. NO. 3**
- 4) Section 000930.2.01 – Demolition and Abatement – **ADD. NO. 3**
- 5) Section 000930.5.01 – Structural Steel – **ADD. NO. 3**
- 6) Section 000930.5.02 – Metal Fabrications – **ADD. NO. 3**
- 7) Section 000930.6.01 – General Trades – **ADD. NO. 3**
- 8) Section 000930.8.01 – Windows, Glazing & Storefronts – **ADD. NO. 3**
- 9) Section 000930.8.03 – Doors, Frames and Hardware – **ADD. NO. 3**
- 10) Section 000930.23.01 – Plumbing & HVAC – **ADD. NO. 3**
- 11) Section 000930.26.01 – Electrical – **ADD. NO. 3**
- 12) Section 000930.31.01 – Site Work – **ADD. NO. 3**
- 13) **Section 000950 – Bid Forms A, B, C, D, E & F – ADD. NO. 3**
- 14) Section 000973 – Plan Holders List 7-30-12 – **ADD. NO. 3**
- 15) Section 000974 – TRC Phase 1 – School in Session Letter – **ADD. NO. 3**
- 16) Section 000982 – Fusco Responses to Pre-Bid Requests for Information (RFIs) – **ADD. NO. 3**
- 17) **Section 000993 – Antinozzi Associates – Addendum #3 – ADD. NO. 3**

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INTRODUCTORY INFORMATION

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PROCUREMENT REQUIREMENTS

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Document 000200	Bidder Request for Information Form
Document 000310	Bid Security Form AIA Document A310 - “Bid Bond”
Document 000315	Form of Surety Guaranty
Document 000320	Non-Collusion Affidavit of Prime Bidder
Document 000330	<i>Intentionally omitted</i> – ADD. NO. 2
Document 000340	<i>Intentionally omitted</i> – ADD. NO. 2
Document 000345	Equal Employment Opportunity Agreement
Document 000350-1	AA/EEO Requirements Summary
Document 000350-2	Contractor Minority Business Enterprises
Document 000350-3	Notification to Bidders – CHRO
Document 000360	Certification of Bidder Regarding Equal Employment Opportunity
Document 000370	Certificate as to Corporate Principal
Document 000412A	DAS Update (Bid) Statement
Document 000412B	Statement of Bidders Qualifications – ADD. NO. 2
Document 000845	Wage Rate Requirements CT Department of Labor Prevailing Wage Rates – ADD. NO. 1
Document 000847	Wage Certification Form

CONTRACTING REQUIREMENTS

Document 000900	Subcontract Agreement Form – ADD. NO. 3 Exhibit A Subcontract Documents – ADD. NO. 2 Exhibit B Scope of Work Exhibit C Final Lien Waiver and Release Exhibit D Partial Lien Waiver and Release Exhibit E Construction Schedule Exhibit F Rider A – Special Conditions – ADD. NO. 2 Exhibit G Insurance Requirements
Document 000910	General Conditions of the Contract
Document 000911	Administrative and Statutory Requirements
Document 000912	Connecticut State Elections Enforcement Commission
Document 000913	Department of Revenue Services – Tax Exempt Certificate

Document 000920	Performance and Payment Bond Form AIA Document A312 2010 – “Performance Bond and Payment Bond”
Document 000925	Project Schedule
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Document 000930	Exhibit B Scopes of Work:
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Bid Package #1.03	Moving & Storage
Bid Package #1.04*	Final Cleaning
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Bid Package #2.01	Demolition & Abatement – ADD. NO. 3
Bid Package #3.01*	Concrete – ADD. NO. 2
Bid Package #4.01	Masonry & Precast – ADD. NO. 2
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Bid Package #6.01	General Trades – ADD. NO. 3
Bid Package #6.02	Architectural Millwork – ADD. NO. 2
Bid Package #7.01	Roofing and Moisture Protection – ADD. NO. 2
Bid Package #8.01*	Windows, Glazing and Storefronts – ADD. NO. 3 <i>Intentionally omitted</i> - ADD. NO. 2
Bid Package #8.03*	Doors, Frames & Hardware (Furnish Only) – ADD. NO. 3
Bid Package #9.01*	Ceramic & Terrazzo Tile – ADD. NO. 2
Bid Package #9.02*	Resilient, Carpet & Wood Flooring – ADD. NO. 2
Bid Package #9.03*	Acoustical & Wood Ceilings – ADD. NO. 2
Bid Package #9.04*	Painting & Fireproofing
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Bid Package #10.03	Operable Panel Partitions
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Document 000940	Supplemental Scope of Work – ADD. NO. 2
Document 000950	Bid Forms A, B, C, D, E, F - ADD. NO. 3
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**ELI WHITNEY, CONNECTICUT TECHNICAL HIGH SCHOOL
HAMDEN, CONNECTICUT
PROJECT NO.: BI-RT-837-CMR
ADDENDUM NO. 3**

Document 000972	Pre-Bid Conference Sign-In 7-13-12 – ADD. NO. 2
Document 000973	Plan Holders List 7-30-12 – ADD. NO. 3
Document 000974	TRC - Phase I – School in Session Plan Proposal – ADD. NO. 3
Document 000980	Fusco Responses to Pre-Bid Requests for Information – ADD. NO. 1
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Document 000982	Fusco Responses to Pre-Bid Requests for Information – ADD. NO. 3
Document 000991	Antinozzi Associates Addendum #1 Dated 7-10-12 – ADD. NO. 1
Document 000992	Antinozzi Associates Addendum #2 Dated 7-24-12 – ADD. NO. 2
Document 000993	Antinozzi Associates Addendum #3 Dated 7-30-12 – ADD. NO. 3

INVITATION TO BID
For
ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

You are hereby invited to submit bid proposals for one or more of the Bid Packages listed below to construct the **Eli Whitney Connecticut Technical High School** located in **Hamden, Connecticut** all applicable laws, ordinances, rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout.

The **Eli Whitney State Technical High School** project, located at **71 Jones Road, Hamden, Connecticut** consists of new building additions and renovations throughout the high school campus totaling approximately **225,000 square feet**. The project also includes site work relating to improvements to the paving, landscaping, and athletic fields and courts.

The following are targeted Schedule of Milestones dates for all work outlined in the Contract Documents:

Documents availability:	Tuesday, June 26th, 2012
Pre-Bid Conference	Thursday, July 12th, 2012
	Friday, July 13th, 2012
Bid Submission Deadline:	Tuesday, August 7th, 2012 – ADD. NO. 2
Scope Review Period:	Thursday, August 9th – August 20th, 2012
	– ADD. NO. 2
Proposed Start Date:	August 21st, 2012
Project Completion Date:	February 2016

Bid Solicitation for this Project will be broken into two groups: “**Non-Set-Aside Bid Packages**” and “**Set-Aside Bid Packages**.” Sealed Bid Proposals will be accepted for the following:

Non-Set Aside Bid Packages: The following Bid Packages are open to all bidders. In accordance with the DAS Contractor Prequalification Program (C.G.S. 4a-100) all contractors are required to be prequalified before they can bid on contracts to perform work in excess of \$500,000. DAS Contractor Prequalification Certificate and Update (Bid) Statement must accompany such bids.

In accordance with CGS 32-9e, **Non-Set Aside Bid Package** bidders are required to utilize DAS certified S/M/W/DisBE subcontractors to fulfill their commitment of **30%** SBE participation, which includes **6.25%** MBE participation.

Bid Package #1.03 Moving & Storage
Bid Package #2.01 Demolition & Abatement

Bid Package #4.01	Masonry & Precast
Bid Package #5.01	Structural Steel
Bid Package #6.01	General Trades
Bid Package #6.02	Architectural Millwork
Bid Package #7.01	Roofing and Moisture Protection
Bid Package #10.03	Operable Panel Partitions
Bid Package #11.01	Food Service Equipment
Bid Package #21.01	Fire Suppression
Bid Package #23.01	Plumbing & HVAC
Bid Package #26.01	Electrical, Communication, Safety & Security Systems
Bid Package #31.01	Site Work

Set Aside Bid Packages*: The following Bid Packages are open to only those bidders who hold current DAS certification as S/M/W/DisBEs. In accordance with the DAS Contractor Prequalification Program (C.G.S. 4a-100) all contractors are required to be prequalified before they can bid on contracts to perform work in excess of \$500,000. DAS Contractor Prequalification Certificate and Update (Bid) Statement must accompany such bids.

Bid Package #1.01*	Site Preparation
Bid Package #1.02*	Temporary Construction Fence
Bid Package #1.04*	Final Cleaning
Bid Package #1.05*	Security Guard Services
Bid Package #3.01*	Concrete
Bid Package #5.02*	Metal Fabrications
Bid Package #8.01*	Windows, Glazing and Storefronts
	-ADD. NO. 2
Bid Package #8.03*	Doors, Frames & Hardware (Furnish Only)
Bid Package #9.01*	Ceramic & Terrazzo Tile
Bid Package #9.02*	Resilient, Carpet & Wood Flooring
Bid Package #9.03*	Acoustical & Wood Ceilings
Bid Package #9.04*	Painting & Fireproofing
Bid Package #10.01*	Signage
Bid Package #10.02*	Toilet Compartments
Bid Package #31.02*	Fences & Gates
Bid Package #31.03*	Landscaping
Bid Package #31.04*	Athletic Fields

A General Pre-Bid & CHRO Outreach Conference (All Bid Packages) shall be held at the **Project Site**, located at **71 Jones Road, Hamden, Connecticut** at **2:00PM** local time on **Thursday, July 12th, 2012**.

A Site & Demolition Specific Pre-Bid Conference (BP#1.01, BP#1.02, BP#2.01, BP#31.01, BP#31.02, BP#31.03, BP#31.04) shall be held at the **Project Site**, located at **71 Jones Road, Hamden, Connecticut** at **2:00PM** local time on **Friday, July 13th, 2012**.

All bids must be submitted in **triplicate** without exceptions, modification and/or qualifications to the bid documents and placed in a sealed envelope marked as follows:

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR
Bid Package No. _____**

Bids will be received and accepted **from 11:30 a.m. until 2:00 p.m.** local time **Tuesday, August 7th, 2012** at the **Project Site**, located at **71 Jones Road, Hamden, Connecticut**. Bids received after the time indicated above will not be considered and will be returned unopened. **Bids will be publicly opened** and read aloud at approximately 15 minutes after the Bid receipt time stated above at the **Project Site**, located at **71 Jones Road, Hamden, Connecticut**. – **ADD. NO. 3**

After the Bids have been reviewed for conformance with the bid documents, the apparent low bidder for each bid package shall be available for a Scope Review at the office of the Fusco Corporation (unless otherwise notes to be “On-Site”) on the following dates:

<u>Thursday 8/9/12</u>	Bid Package #4.01	9:00 A.M.
	Bid Package #2.01	10:30 A.M.
	Bid Package #2.01	1:30 P.M. (On-Site)
	Bid Package #1.02*	2:30 P.M. (On-Site)
	Bid Package #1.01*	3:30 P.M. (On-Site)
<u>Friday 8/10/12</u>	Bid Package #31.01	9:00 A.M.
	Bid Package #31.04*	10:30 A.M.
	Bid Package #3.01*	1:30 P.M.
	Bid Package #5.01	3:00 P.M.
<u>Monday 8/13/12</u>	Bid Package #6.01	9:00 A.M.
	Bid Package #8.03*	10:30 A.M.
	Bid Package #8.01*	1:30 P.M.
	Bid Package #7.01	3:00 P.M.
<u>Tuesday 8/14/12</u>	Bid Package #26.01	9:00 A.M.
	Bid Package #23.01	10:30 A.M.
	Bid Package #21.01	1:30 P.M.
	Bid Package #11.01	3:00 P.M.
<u>Wednesday 8/15/12</u>	Bid Package #14.01	9:00 A.M.
	Bid Package #5.02*	10:30 A.M.
	Bid Package #1.03*	1:30 P.M. (On-Site)
	Bid Package #31.03*	2:30 P.M. (On-Site)
	Bid Package #31.02*	3:30 P.M. (On-Site)

ELI WHITNEY, CONNECTICUT TECHNICAL HIGH SCHOOL
HAMDEN, CONNECTICUT
PROJECT NO.: BI-RT-837-CMR
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Thursday 8/16/12

Bid Package #6.02	9:00 A.M.
Bid Package #12.01	10:30 A.M.
Bid Package #9.03*	1:30 P.M.
Bid Package #10.01*	3:00 P.M.

Friday 8/17/12

Bid Package #9.01*	9:00 A.M.
Bid Package #9.02*	10:30 A.M.
Bid Package #9.04*	1:30 P.M.
Bid Package #10.02*	3:00 P.M.

Monday 8/20/12

Bid Package #10.03	10:30 A.M.
Bid Package #1.04*	2:30 P.M. (On-Site)
Bid Package #1.05*	3:30 P.M. (On-Site)

-ADD. NO. 2

If applicable any Bidder may elect to submit a Bid Proposal combining a number of Bid Packages if the amount of the Bid Proposal offers the Owner a cost reduction. This combined Bid Packaged "Offer" will be valid only if the Bidder submits an individual offer for each package involved. Bidders may offer this combined package proposal by submitting it on his or her business letterhead, as an added page to each Bid Form.

Each Bidder shall provide a Bid Bond for each Bid Package executed by an acceptable Surety company or companies authorized to do business in the State of Connecticut having a Best rating of A- or higher, in an amount equal to (10%) of the total Bid. Bids which fail to contain a Bid Bond Security as stated above may be rejected as non-responsive.

Contract Documents: have been prepared by: **Antinozzi Associates, 271 Fairfield Avenue, Bridgeport, Connecticut** and shall be on file and available at the locations listed below on or about **Tuesday, June 26th, 2012**:

Fusco Corporation
Long Wharf Maritime Center
555 Long Wharf Drive, Suite 14
New Haven, CT 06511
(203) 777-7451

McGraw Hill Construction-Dodge
101 Corporate Place
Rocky Hill, CT.
(860)-529-7309

Joseph Merritt & Company
60 Hamilton Street
New Haven, CT 06511
(203) 562-9885

CProjects.com – **ADD. NO. 1**
1257 Southford Road
Southbury, CT. 06488
(203)-262-6248

The New Haven Contractors Alliance
5 Science Park
New Haven, CT 06511 - **ADD. NO. 1**

The Minority Construction Council of CT
20 Sargent Street
Hartford, CT 06112 - **ADD. NO. 1**

City Hall Annex
999 Broad Street 1st Floor
Bridgeport, CT - **ADD. NO. 1**

Contract documents may be obtained by submitting a written request directly to **Joseph Merritt & Company, 60 Hamilton Street, New Haven, Connecticut 06511, Phone (203) 562-9885 with a Copy to Mr. Joseph Castellano (Director of Purchasing and Contracts for the Fusco Corporation, 555 Long Wharf Drive, Suite 14, New Haven, Connecticut 06511)** accompanied by a Non-refundable payment of **\$300.00**. Payments shall be made via check payable to the **Joseph Merritt & Company**.

Upon receipt of your request and payment, the printer listed above shall prepare a complete set of documents. Arrangements for the pickup of documents shall be made directly through the printer. Documents shall be mailed only at the request and cost of the contractor.

Partial sets or additional sets of Contract Documents are also available for a non-refundable direct purchase from the **Joseph Merritt & Company, 60 Hamilton Street, New Haven, Connecticut 06511, Phone (203) 562-9885**. Any/all addenda/addendums will be issued only to bidders who have requested and purchased a full set of documents and are thereby registered with the Construction Manager. Partial set purchasers are referred to McGraw Hill Construction-Dodge or CProjects.com for updates and/or addenda. – **ADD NO. 1**

Attention is called to the following:

- 1.) **Instructions to Bidders**: Except as may be set forth in this Invitation to Bid, Fusco Corporation 'Instructions to Bidders' and AIA Document A701 Instruction to Bidders must be followed in all respects.
- 2.) **Prevailing Wages**: No less than the State of Connecticut Department of Labor prevailing minimum salaries and wages as listed in the Project Manual shall be paid on this project. Certified payrolls shall be required and submitted weekly on the form provided in the Project Manual. Additionally the Contractor shall submit Monthly Employment Utilization Reports to the Construction Manager concurrent with the Applications and Certifications for Payment.
- 3.) **Department of Administrative Services (DAS)**: This Subcontractor and all of its sub-contractors with contract amounts of \$500,000 or more must be DAS Certified.
- 4.) **Equal Employment Opportunity/Non-Discrimination**: Attention of bidders is called to the applicable State and Federal requirements for ensuring that employees and applicants for employment are not discriminated against because of race, color, religious creed, age, marital status, sexual preference, national origin, ancestry, sex, mental retardation or physical disability. The Contractor agrees and warrants that in the contract such contractor will not discriminate or permit discrimination against any person or group or persons on the ground of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are employed without regard to their sexual orientation. The Fusco Corporation does not discriminate on the basis of sex, race, age, physical disability, religion, or national origin. The Fusco Corporation is an Affirmative Action/Equal Opportunity Employer.

- 5.) **Performance and Payment Bonds:** The successful bidder will be required to furnish a one hundred percent (100%) Performance and Payment Bond and a one hundred percent (100%) Labor and Material Bond each in the full amount of the contract price on **AIA Document 312 as modified**, which will name the Fusco Corporation as Obligee.
- 6.) **Bid withdrawals:** All bids will be considered valid for a period of ninety (90) days. No bidder may withdraw their bid during that period. The successful bidder will be selected within ninety (90) days of Bid Opening.
- 7.) **Taxes:** Bidders shall not include Federal Excise Taxes or State of Connecticut Sales Taxes on which Public Schools are exempt.
- 8.) **Right to reject:** The Fusco Corporation and Owner reserve the right to reject any and all bids or to waive any informalities, irregularities, or technical defects in the Bids. Fusco Corporation may make any investigations as they deem necessary to determine the ability of Bidder to perform the work, and Bidders shall furnish the Fusco Corporation all such information and data for this purpose as the Fusco Corporation may require. Fusco Corporation reserves the right to reject any or all bids, without stating reasons therefore, and to waive any informality, irregularity or defect in the bids and to make awards in the best interest of the Owner consistent with applicable competitive bidding statutes, laws and legal standards.
- 9.) **Subcontract Agreement:** The successful bidder shall be required to sign the Fusco Corporation 'Subcontract Agreement' contained within the bidding documents, **without exceptions modifications and/or qualifications.**
- 10.) **“Standard Specifications”** is defined as the State of Connecticut Department of Transportation Standard Specification for Roads.
- 11.) **Bid Documents:** The following documents shall also be submitted (in triplicate) along with the Bid Proposal and completed in their entirety: - **ADD. NO. 2**
 1. Document 000950: Bid Forms A through F
 2. Document 000310: Bid Bond and Form of Surety
 3. Document 000315: Form of Surety Guarantee
 4. Document 000320: Non-Collusion Affidavit of Prime Bidder
 5. Document 000350-2: Contractor’s Minority Business Enterprises - CHRO
 6. Document 000350-3: Notification to Bidders – CHRO
 7. Document 000360: Certification of Bidder Regarding EEO
 8. Document 000370: Certificate as to Corporate Principal
 9. Document 000412A: Department of Administrative Services (DAS) “Contractor Prequalification Certificate and Update Statement
 10. Document 000412B: Statement of Bidders Qualifications
 11. Document 000847: Contractors Wage Certification Form
 12. S/M/W/DisBE Certificate from the State of Connecticut for Set-Aside Bid Packages.

#2630 -

SUBCONTRACT AGREEMENT

This Subcontract Agreement (“Subcontract”) dated as of _____ between

The Fusco Corporation
555 Long Wharf Drive
New Haven, Connecticut 06511
(hereinafter called the “General Contractor”)

and

(hereinafter called the “Subcontractor”)

WITNESSETH:

1. Scope of Work

(a) The General Contractor has entered into a contract (“Principal Contract”) with **State of Connecticut** (“Owner”) for the construction of **Eli Whitney Connecticut Technical High School, Hamden, Connecticut Project No. BI-RT-837-CMR** (“Project”) according to the Principal Contract Documents which include, without limitation, the Principal Contract, and all general, supplementary and special conditions thereto, the plans and specifications prepared by **Antinozzi Associates** (“Architect”) and its consultants, any addenda, notices, instruction forms or modifications thereto, and any other provisions or documents forming or by reference made a part of the Principal Contract. Subcontractor agrees to furnish, and be responsible for the provision of, all supervision, labor, materials, supplies, equipment, hoisting, scaffolding, tools, appliances, etc., necessary to complete a portion of the Project as described herein. All work is to be performed in strict compliance with the Subcontract Documents, which include the Principal Contract Documents, this Subcontract and the other documents listed on **Exhibit A**. The Principal Contract is specifically incorporated herein and made a part hereof by reference. In case of a conflict between this Subcontract and the Principal Contract as incorporated herein, the terms of this Subcontract shall control.

(b) Subcontractor’s work is as set forth in **Exhibit B** and includes, without limitation, the installation of any temporary facilities in its scope of work required in the construction of the Project and the furnishing of all required information for shop drawings, as-built drawings, samples, tests, third-party inspections, installation, supervision by factory-trained experts, offsite inspections, etc., and other requirements of the Owner concerning quality control within the Subcontractor’s scope of work (“Work”).

(c) In the performance of this Subcontract, the Subcontractor shall be bound to the General Contractor in the same manner, to the same extent, and with the same force and effect that the General Contractor is bound to the Owner by all the terms, provisions, general conditions, and special conditions of the Principal Contract Documents, except as may be expressly modified by this Subcontract. Subcontractor has carefully examined, or has been afforded the opportunity to do so, and fully understands all the Subcontract Documents, including the Principal Contract Documents as incorporated therein and confirms that they are sufficiently complete and detailed for the Subcontractor to perform the Work intended thereby whether shown, described, or reasonably inferred as necessary for the completion of the Work.

(d) Subcontractor acknowledges that the drawings and specifications may not be fully developed and the Subcontractor agrees to perform all Work which may not be specifically mentioned in these Subcontract Documents, but which is required to make the Work complete, functional, and operational as determined by the General Contractor and Owner.

(e) Subcontractor represents that it has examined the Subcontract Documents and is familiar with them and has or will, immediately upon discovery, call to the attention of the General Contractor any errors or omissions contained therein and discovered by Subcontractor. Subcontractor agrees that it is responsible for coordination of the Work with the adjacent and prior work and the fitting of the Work to such work. Subcontractor agrees to furnish and install all materials per requirements of applicable Federal, State and local codes.

(f) Subcontractor represents that it is fully qualified to perform this Subcontract, and acknowledges that, prior to the execution of this Subcontract, it has (a) by its own independent investigation ascertained (i) the Work required by this Subcontract, (ii) the conditions involved in performing the Work, and (iii) the obligations of this Subcontract and the Principal Contract Documents incorporated herein; and (b) verified all information furnished by General Contractor or others satisfying itself as to the correctness and accuracy of that information. Any failure by Subcontractor to independently investigate and become fully informed will neither relieve Subcontractor from its responsibilities hereunder nor be the basis of any claim. The Subcontractor shall have no claims in connection with any concealed or unconcealed condition which does not differ materially from those conditions discovered, or which reasonably should have been discovered by Subcontractor's prior inspections, tests and reviews which Subcontractor performed or which Subcontractor had the opportunity to perform in connection with the Project.

(g) Subcontractor warrants its Work to General Contractor on the same terms, and for the same period, as General Contractor warrants the Work to Owner under the Principal Contract Documents. In addition, Subcontractor warrants that all materials, equipment and workmanship shall be sufficient for the purpose intended, merchantable, of good quality, and free from defects.

(h) Subcontractor shall obtain and pay for all permits, licenses, and certificates of inspection necessary for the prosecution and completion of the Work. Subcontractor shall be duly licensed to operate under the law of the applicable jurisdiction.

2. Payment -

(a) General Contractor agrees to pay Subcontractor, subject to additions and deductions by written change order, the total sum of

for the Work covered by this Subcontract (“Subcontract Price”).

(b) Prior to the start of the Work, Subcontractor shall submit, for the General Contractor’s approval, a breakdown of the Subcontract Price on General Contractor’s standard schedule of values which shall include a separate value for labor and material for each part of the Work **in accordance with the Owner’s General Conditions Article 27**. In addition, and as a condition precedent to any payment hereunder, the Subcontractor shall, at the time it submits its first application for payment, furnish to the General Contractor, a certified list of all sub-subcontractors, suppliers and/or materialmen that the Subcontractor intends on using to perform all its obligations hereunder. As necessary, the Subcontractor shall update said list as additional sub-subcontractors, suppliers and/or materialmen are utilized.

(c) Progress payments will be made on a monthly basis following General Contractor’s receipt of payment by Owner on Subcontractor’s applications for payment submitted not later than the 25th of the month. Failure to comply will delay Subcontractor’s payment until the following billing date. Within thirty (30) days of General Contractor’s receipt of payment by the Owner in which payment allowance has been made by the Owner for Work performed and/or materials delivered by the Subcontractor, the General Contractor will pay to the Subcontractor **Ninety Two and a Half Percent (92.5%)** of the value of said Work and/or materials as accepted by the General Contractor and Owner, but this payment shall in no event exceed the payment that the General Contractor actually receives from the Owner for said Subcontract Work.

(d) Commencing with the second application for payments, partial lien waivers and releases in the form as attached as **Exhibit D** as executed by Subcontractor and its sub-subcontractors and suppliers covering all labor and materials furnished through the immediately preceding pay period, shall be submitted by Subcontractor with each application for progress payment. In addition to the requirements for payment in the Principal Contract Documents, as requested by the General Contractor, the Subcontractor may be required to furnish with any payment application an affidavit stating that all obligations directly or indirectly related to any payment have been paid. The Subcontractor shall also furnish to the General Contractor, if so requested, all information concerning materials, supplies and equipment to be purchased in connection with the Work to be performed under the Subcontract, including copies of all purchase orders, bills of lading, shipping documents, receipts, sub-subcontracts of the Subcontractor or any payroll or payroll-related information of the Subcontractor with respect to the Work covered by this Subcontract.

(e) All material and Work covered by partial payments shall become property of the General Contractor or, if the Principal Contract Documents so provide, the property of Owner immediately upon payment; provided that nothing shall relieve Subcontractor from the sole responsibility and liability for all Work upon which payments have been made until final acceptance thereof by General Contractor and Owner. No partial payment made under this Subcontract shall be considered an acceptance of the Work in whole or in part.

(f) Final payment, including retainage, will be made ten (10) days after receipt of final payment by General Contractor from the Owner provided that Subcontractor has furnished General Contractor with (i) an executed Final Release and Waiver of Lien, in a form as set forth on **Exhibit C** and acceptable to General Contractor and Owner from Subcontractor, and all persons or entities furnishing labor and/or materials in the performance of the Subcontract, (ii) any warranties required by the Subcontract Documents furnished by a manufacturer and any warranties or guarantees, instruction manuals and spare parts, information for as-built drawings and technical information required by the Owner in the above referenced documents in form satisfactory to the Owner, (iii) other documents or instruments as General Contractor may reasonably require or which are required by the Subcontract Documents, and (iv) Subcontractor has otherwise completed his Work in a manner satisfactory to the General Contractor, Architect and Owner. Acceptance of final payment by the Subcontractor shall be a complete waiver of any and all claims of any nature against the General Contractor and its surety, if any, the Owner, and the Architect.

(g) Subcontractor expressly agrees that payment by the Owner to the General Contractor for any Work performed by the Subcontractor is an express condition precedent to any payment by the General Contractor to the Subcontractor and that the General Contractor is under no obligation to make any payment to Subcontractor until and unless the General Contractor has been paid by the Owner for the Work in question. Payment by Owner is also an express condition precedent to the liability of any surety on any payment bond furnished on behalf of General Contractor as principal. Subcontractor agrees to share the risk with General Contractor of non-payment by Owner for whatever reason. At its sole and absolute discretion, General Contractor may assign its payment rights against Owner to Subcontractor to prosecute at Subcontractor's sole expense.

(h) At any point up until five (5) years after final payment is made hereunder, the General Contractor, at its sole discretion, is hereby authorized to audit the Subcontractor's books and records with regard to all costs incurred by the Subcontractor in performing Work covered by this Subcontract. Subcontractor shall cooperate with General Contractor in arranging for such an audit. The Subcontractor shall maintain, at its own expense, all such books and records relating to the Project for a period of five (5) years after final payment.

(i) The General Contractor at its discretion may make payment by joint check, or otherwise, directly to any sub-subcontractor, materialmen, supplier or person or firm furnishing labor, equipment or materials to the Subcontractor with respect to the Work covered by the Subcontract and any such payments shall be applied against the aggregate sum payable to the Subcontractor hereunder, and, at the option of the General Contractor, may be deducted from the next sums payable to the Subcontractor.

(j) General Contractor may withhold from any payment to the Subcontractor, including final payment, such amount as General Contractor, in its sole discretion, deems reasonably necessary to protect itself against any action or potential liability or damage directly or indirectly relating to the Subcontract arising from, or alleged to arise from, any act or omission of Subcontractor, its sub-subcontractors, suppliers, or employees or anyone else for whom the Subcontractor is legally liable, regardless of whether or not the Owner has actually withheld payment from the General Contractor.

(k) The General Contractor shall be entitled to set off any monies due and owing to by General Contractor to Subcontractor under this Subcontract by any other sum alleged to be owed by Subcontractor to General Contractor by reason of any backcharge or payment to any third party under any other contract or agreement with General Contractor, or on account of any reason whatsoever.

(l) Subcontractor shall ensure that all sub-subcontractors, employees and suppliers, at all times, are paid all amounts due in connection with the performance of the Subcontract. The Subcontractor shall pay any amounts to its sub-subcontractors, whether for labor performed or materials furnished, within seven (7) days after the Subcontractor receives payment from the General Contractor, which encompasses labor or material furnished by such sub-subcontractor. Subcontractor shall not submit an application to General Contractor for any monies, on account of its sub-subcontractors, employees or suppliers, including retainages that Subcontractor does not immediately intend to pass on to its sub-subcontractors, employees and suppliers. Subcontractor shall not use any payment received by Subcontractor from General Contractor for any purpose other than to satisfy indebtedness incurred in the performance of this Subcontract; such payments from General Contractor being deemed to be trust funds solely for the payment of such sub-subcontractors, suppliers and vendors. General Contractor shall have the right, at any time, to contact the Subcontractor's sub-subcontractors and suppliers for the purpose of verifying that Subcontractor's payment obligations are being met. In the event General Contractor has reason to believe that Subcontractor is not fulfilling its payment obligations, General Contractor may take any steps necessary to ensure that progress payments are utilized to pay such obligations, including, but not limited to, the right to withhold out of subsequent progress payments, a reasonable amount to protect the General Contractor from any and all claims, loss or damages, including attorneys' fees, arising out of any claim or lien until Subcontractor submits evidence satisfactory to Contractor that all previous amount owed in connection with the performance of this Subcontract or any other contractual arrangements between the parties have been paid. All materials for which a requisition has been approved shall not be removed from the Project site without General Contractor's written permission.

3. Schedule; Time; Coordination; Remedial Plans -

(a) Subcontractor will proceed with the Work in a prompt and diligent manner in accordance with the Project Schedule attached hereto as **Exhibit E**, as amended from time to time by General Contractor. TIME IS OF THE ESSENCE OF THIS SUBCONTRACT. Subcontractor shall be entitled to additional compensation for compliance with schedule adjustments only to the extent, if any, that General Contractor receives reimbursement from the Owner.

(b) Subcontractor will furnish a detailed construction schedule of the Work, including Submittals, etc., for General Contractor's review and approval which will comply with all scheduling requirements of paragraph 3(a) and the Principal Contract Documents. Subcontractor is to coordinate all Work on the jobsite with General Contractor's Project Superintendent and Project Manager, follow any instructions they may give concerning scheduling of Work and report to them, upon request, the status of Subcontractor's equipment or materials to be furnished to the Project. Subcontractor is to coordinate its Work with the work of the General Contractor, other subcontractors, and others on the Project so as to expedite the Work without causing any delays to other trades or the Project. All Submittals shall be submitted to General Contractor in compliance with the Principal Contract as amended.

(c) Subcontractor is to assume and pay for liquidated damages, assessed by the Owner against the General Contractor and/or additional expenses incurred by the Owner or General Contractor because of delays caused by this Subcontractor. Such amounts are deductible from any amounts due to Subcontractor pursuant to the terms of this Subcontract.

(d) Subcontractor shall at all times supply necessary materials and equipment and a sufficient number of skilled workers to perform the Work with diligence and in strict accordance with General Contractor's scheduling requirements. In the event that General Contractor determines that the Subcontractor has fallen behind the schedule at any time, upon written notice, Subcontractor shall promptly submit a remedial plan of action in a form which is satisfactory to General Contractor. When a satisfactory remedial plan is not proposed and promptly implemented in the opinion of the General Contractor, then the General Contractor, at its sole discretion, may either (i) require the Subcontractor to expedite material and equipment deliveries and/or increase its work force, construction plant and equipment, the number of hours of work, number of shifts or any combination of the aforementioned, without any additional cost to the General Contractor or (ii) supplement the Subcontractor's forces with additional workers and/or purchase necessary materials and equipment from suppliers of its choice and deduct the cost of same from payments due Subcontractor. The exercise of either of the General Contractor's aforementioned options shall be in addition to any and all rights or remedies of the General Contractor set forth in this Agreement.

(e) Notwithstanding anything to the contrary in the Principal Contract Documents, if the Subcontractor is delayed or disrupted in the commencement, prosecution, or completion of the Work, without fault on its part or on the part of any entity for which it is responsible, as a direct result of any breach, negligence, or wrongful act of the Owner, General Contractor, or Architect, or by changes ordered in the Work, or by other causes which were unforeseeable, unanticipated and beyond the control of the Subcontractor, then, to the extent the Subcontractor demonstrates actual impact to the critical path of its scheduled Work, and expressly conditioned upon an extension of time being given to the General Contractor by the Owner under the terms of the Principal Contract Documents, the Subcontractor shall be entitled to an equitable extension of the Project Schedule. In addition, Subcontractor's entitlement to such equitable extension is expressly contingent upon written notice given by the Subcontractor to the General Contractor within five (5) days of when the Subcontractor is aware, or should have become aware, of the occurrence or facts giving rise to such delay or disruption. Within thirty (30) days of receipt of a written request by General Contractor, Subcontractor shall fully substantiate the impact of any delay or disruption, including furnishing an impact study which details specific activities allegedly affected by such delay or disruption. In no event will any time extension be given on account of delay or disruption which could have been anticipated by the Subcontractor or, in circumstances where the performance of the Work is, was, or would have been delayed, by any other cause for which the Subcontractor is not entitled to an extension. The Subcontractor's entitlement to an equitable extension of time as provided herein shall be the sole and exclusive remedy in the event of any delays, interferences, suspensions, reschedulings, changes in sequence, disruptions, or the like ("Delays") arising from or out of any act or omission of the Owner, General Contractor, or the Architect, or caused or claimed to be caused by any other reason whatsoever, whether foreseeable or unforeseeable or contemplated or unanticipated. In no event will the General Contractor be obligated or liable to Subcontractor, and the Subcontractor expressly waives any claim against General Contractor, for or on account of any damages, costs, expenses of any nature which the Subcontractor or any of its sub-subcontractors or any other person may incur as a result of any Delays, it being understood and agreed that the Subcontractor's sole remedy in such an event shall be an extension of the Project Schedule in strict accordance with the provisions of the Subcontract Documents and all at no additional cost to or compensation from the General Contractor or Owner. Furthermore, the exercise by the Owner or the General Contractor of any of its rights or remedies under the Principal Contract Documents or Subcontract Documents, respectively, including, without limitation, ordering changes in the Work, directing suspensions, rescheduling, or correcting Work, regardless of the extent or frequency of the exercise of such rights or remedies, shall not be construed as active interference with the Subcontractor's performance of the Work.

(f) If the General Contractor shall desire the Work hereunder to be performed with greater speed than is herein contracted for, the Subcontractor shall, without affecting or abridging the rights of the General Contractor set forth in any Article hereof, upon receipt of a written order from the General Contractor, employ overtime work as so directed. The actual premium cost of such overtime work as shown on the time slips checked and approved each day by the General Contractor shall be paid by the General Contractor to the Subcontractor, but no overhead, supervision costs, commission, etc. or other costs shall be charged thereon. Jobsite supervision is included.

4. Labor; Insurance -

(a) To the extent that General Contractor is a signatory to any union collective bargaining agreement(s), Subcontractor shall perform its work on this Project in strict accordance with all union rules and regulations affecting the Subcontractor's work, including, if applicable, the utilization of union labor.

(b) Should a jurisdictional dispute involve one or more of the trades, Subcontractor will avoid a work-stoppage in any form by withdrawing its workmen and resume as directed by General Contractor without delay.

(c) The Subcontractor shall comply with the insurance requirements set forth on **Exhibit G**.

5. Taxes -

(a) Subcontractor shall pay any taxes or contributions of any nature assessed or levied against Owner, General Contractor or Subcontractor by the federal government, any state or political subdivision thereof, relating to labor performed or materials or equipment furnished by Subcontractor, including any interest or penalties. Subcontractor shall defend, indemnify and hold harmless General Contractor for failure to make payment of any such taxes or contributions, which indemnity shall survive the completion or termination of this Subcontract. If this Project is subject to Connecticut Sales and Use Tax, then Subcontractor shall show any applicable Sales and/or Use Tax(es) separately on all invoices submitted for payment.

(b) If the Subcontractor is not a resident of the State of Connecticut, the law offers two procedural options:

1. You may furnish the Connecticut Department of Revenue Services (DRS) a guarantee bond for 5% of the total contract. You have 120 days from the commencement of the contract to file Form AU-766 with DRS and obtain the bond. You will then be issued a Certificate of Compliance from DRS and you must forward a copy to us.

2. If we do not receive a copy of your Certificate of Compliance prior to the issuance of any payment to you under the contract, we shall be required to withhold 5% of the contract price and to remit the amount as a deposit to DRS.

On completion of the job you must request DRS to determine if it has been over/underpaid. Under either option, you must complete and submit to DRS a Form REG-1 (Business Taxes Registration Application) and be issued a Connecticut Tax Registration Number.

You can obtain more detailed information concerning these rules in DRS Special Notice 2003 (20).

6. Changes, Claims -

(a) General Contractor may, at any time, unilaterally or by agreement with Subcontractor, and without notice to sureties, make changes including additions and deletions in the Work. Subcontractor shall immediately proceed with performance of any changed Work without delay.

(b) Subcontractor shall submit in writing to General Contractor, along with substantiating evidence deemed satisfactory by General Contractor, any claims for adjustment in the Subcontract Price, schedule or other provisions of the Subcontract claimed by Subcontractor for changes directed by Owner, or for damages for which the Owner is liable, or as a result of deficiencies or discrepancies in the Principal Contract Documents, at least five (5) business days prior to the time specified in the Principal Contract Documents, otherwise such claims are waived. Subcontractor assumes, with respect to his Work, all of the responsibility of General Contractor to the Owner under the sections of the Principal Contract concerning such changes, claims and extensions of time. General Contractor agrees to forward to the Owner any notice from Subcontractor of any change or claim and to process any change orders, claims and requests for extensions of time according to the provisions of the Principal Contract Documents so as to protect the interests of Subcontractor and others, including the General Contractor. In no event shall the General Contractor be required to pay Subcontractor for a claimed change or for a change order more than General Contractor actually receives from Owner on account of Subcontractor's Work. It is expressly acknowledged that receipt of payment by General Contractor from Owner on account of any such Subcontractor changes or claims is an express condition precedent to any obligation of General Contractor or its surety, if any, to pay Subcontractor for any such changes or claims.

(c) For changes ordered by General Contractor independent of Owner or the Principal Contract Documents, Subcontractor shall be entitled to an equitable adjustment of the Subcontract Price or Project Schedule, or both to the extent that impact can be substantiated to the General Contractor's satisfaction.

(d) Subcontractor shall provide any certification required by the Principal Contract Documents or applicable law for change orders, claims and pricing data. Subcontractor shall indemnify, defend and hold harmless General Contractor from any cost, expense, fine or liability resulting from a claim or claim certification deemed wrongful in whole or in part.

(e) Field slips signed by General Contractor's employees acknowledge only the verification of labor and materials indicated thereon and do not constitute or imply acceptance or approval of payment by General Contractor or by Owner which is to be obtained by the separate Change Order procedure referred to above.

(f) Overhead and Profit ("OH&P") shall **be in accordance with the Owner's General Conditions Article 13** for Subcontractor, all sub-subcontractors and suppliers on any Subcontractor change or claim. Subcontractor's labor rate for time and material work performed, including OH&P, shall be in accordance with Exhibit B.

7. Remedies of General Contractor -

(a) On default by the Subcontractor or on occurrence of circumstances that reasonably lead the General Contractor to anticipate the Subcontractor's inability to perform the Subcontractor's Work properly or on schedule or comply with any of the provisions of this Subcontract or meet the financial obligations that the Subcontractor will incur in the course of performance of this Subcontract in a timely manner, the General Contractor may, after seven (7) day written notice, and without prejudice to any other remedies it may have, (i) take such steps as are necessary to overcome the condition, in which case the Subcontractor shall be liable to the General Contractor for the costs thereof; (ii) terminate this Subcontract in the manner prescribed herein, and any loss resulting therefrom shall be borne by the Subcontractor; or (iii) pursue any other remedy allowed at law or equity.

(b) Without limitation to other possible grounds, the following events shall, at the option of the General Contractor, be deemed to be sufficient cause for determining the Subcontractor to be in default: filing of a petition under any of the provisions of the Federal Bankruptcy Code with respect to the Subcontractor; the commission of any act of bankruptcy as that term is used in connection with the Federal Bankruptcy Code by the Subcontractor; the appointment of a Receiver under the laws of any state with respect to the Subcontractor; the failure to discharge any lien as provided in paragraph 10 of the Subcontract; the garnishment of funds due or coming due from the General Contractor to the Subcontractor or the attachment of any property of the Subcontractor for the recovery of such property by a person holding title under a Title Retention Security Agreement used in connection with the Work to be done under this Subcontract which are not removed in seven (7) days if an attachment or in fifteen (15) days if a garnishment; imposition of a Federal or State Tax Lien; failure to provide sufficiently trained workmen or materials of the proper quality; failure to commence or carry forward Subcontractor's Work in accordance with the Project Schedule.

(c) In the event of a termination of this Subcontract for default, the General Contractor, at its option, may (i) enter on the premises and take possession of all materials and equipment of Subcontractor for the purpose of completing the Work; (ii) assume, and the Subcontractor hereby agrees to assign, any sub-subcontract or purchase orders made by the Subcontractor relating to this Project; or (iii) complete the Work by itself or through others by whatever method the General Contractor deems expedient. After a default termination, no monies shall be due and owing to Subcontractor until (i) the scope of the Work has been completed and Subcontractor has paid General Contractor for all costs that the General Contractor incurred in completing the Work (including an overhead fee of 10%) and (ii) a determination made as to the extent of damages suffered by General Contractor as a result thereof and Subcontractor has paid General Contractor any and all such damages incurred by the General Contractor.

(d) Any default termination that is subsequently deemed to be wrongful will be converted into a termination for convenience.

8. Termination for Convenience

Notwithstanding any provision herein to the contrary, this Subcontract may be terminated, in whole or in part, by the General Contractor, for its convenience and at its sole discretion, and regardless of whether the Owner has terminated the Principal Contract, upon giving at least seven (7) days written notice to the Subcontractor. In the event of such termination, the General Contractor shall pay to the Subcontractor any sums properly requisitioned and due and owing at that time (including retainage) plus the value of the Work (in accordance with the approved schedule of values) performed by the Subcontractor since the last requisition, after payment therefore by the Owner to the General Contractor, less any backcharges the General Contractor has against that Subcontractor. Such payment shall be the Subcontractor's exclusive remedy and in no event will the Subcontractor be entitled to lost profits or any other damages.

9. Subcontractor's Liability; Bonds -

(a) To the maximum extent permitted by law, the Subcontractor shall indemnify, defend and hold harmless the General Contractor, Owner, Architect, and their respective agents, consultants and employees ("Indemnitees"), from and against any and all claims, losses, costs, damages, expenses (including but not limited to defense costs and attorneys' fees, whether incurred in court, out of court, or on appeal or as part of any regulatory, administrative or bankruptcy proceeding), fines, penalties and causes of action, whether for personal or bodily injury, property damage, death, disease, damage to business, or otherwise, and any and all liabilities of any nature whatsoever, direct or consequential (collectively "Claims"), brought by or on behalf of any person or entity including, without limitation, any persons or entities affiliated with or employed by the Subcontractor relating to, arising out of, or claimed to relate to or arise out of, or occurring in connection with performance of the Subcontract or the Work; except this indemnification obligation expressly excludes Claims for bodily injury or property damage resulting from the negligence of the Indemnitees or

their agents or employees. Such indemnity shall not be in derogation or limitation of any other obligation or liability of the Subcontractor or rights of the General Contractor under

other provisions of the Subcontract Documents. The Subcontractor's indemnity obligation shall not be limited in any way by the amount or types of damages, compensation or benefits payable by or for the Subcontractor under any Worker's Compensation Act, Disability Benefit Acts, or Employee Benefit Acts. This obligation shall survive the completion of the Work or termination of the Subcontract. Independent of this indemnity obligation, the Subcontractor shall maintain contractual liability insurance to secure its indemnification obligation as set forth herein.

(b) Subcontractor hereby assumes the entire responsibility and liability for all Work, supervision, labor and materials provided hereunder, whether or not erected in place, and for all plant, scaffolding, tools, equipment, supplies and other things provided by Subcontractor until final acceptance of the entirety of the Work by General Contractor or Owner. In the event of any loss, damage or destruction thereof from any cause, Subcontractor shall be liable therefor, and shall repair, rebuild and make good said loss, damage or destruction at Subcontractor's cost, subject only to the extent that any net proceeds are payable under any builder's risk property insurance that may be maintained by Owner or General Contractor, if any.

(c) Subcontractor agrees to defend, indemnify and hold harmless General Contractor from any and all claims for bodily injury (including death) or property damage arising out of or relating to in any way the use of General Contractor's hoists, cranes, elevators or other equipment by or for the benefit of Subcontractor; except this indemnity expressly excludes claims for bodily injury or property damage resulting from the negligence of the General Contractor, its agents or employees.

(d) Subcontractor shall, furnish Payment and Performance Bonds in the full amount of the Subcontract Price, with such sureties as shall be satisfactory to General Contractor. All bond must have A.M. Best ratings of A-VII or better and be qualified to conduct business in the state of Connecticut.

10. Liens -

In the event that liens are filed by anyone in relation to the labor or material being furnished through Subcontractor, Subcontractor agrees to have the same discharged at Subcontractor's sole expense, by posting a bond or otherwise within five (5) days of notice and to otherwise indemnify, defend and hold harmless the General Contractor and Owner from and against any costs or expenses (including attorneys' fees) arising therefrom. In the event any such lien is not so discharged, General Contractor shall have the right to discharge said lien and recover from the Subcontractor all costs associated therewith, including, but not limited to, attorneys' fees and bond costs.

11. Disputes -

(a) In case of any dispute between General Contractor and Subcontractor due to any act or omission of Owner or involving the Principal Contract Documents, and except as otherwise expressly provided herein including but not limited to paragraph 3 hereof prohibiting damages for delay and disruption, Subcontractor agrees to be bound to the General Contractor to the extent that General Contractor is bound to Owner, by the terms of the Principal Contract Documents or by law, whether or not Subcontractor is a party to such proceedings. In case of such dispute, Subcontractor, at its own expense, will comply with all provisions of the Principal Contract Documents allowing reasonable time for General Contractor to analyze and forward to Owner any required communications and thereafter (i) present to Owner, in General Contractor's name, or (ii) authorize Subcontractor to present to Owner, in General Contractor's name, all of the Subcontractor's claims and answer Owner's claims involving Subcontractor's Work, when permitted to do so by the terms of the Principal Contract Documents. If such dispute is prosecuted or defended by General Contractor, Subcontractor agrees to furnish all documents therewith.

(b) With respect to any controversy between General Contractor and Subcontractor not involving Owner or the Principal Contract Documents, the General Contractor shall issue a final decision which shall be binding unless within ten (10) days of receipt of such decision, Subcontractor delivers the General Contractor a notice of its intention to appeal such decision to a court of competent jurisdiction in the State of Connecticut, if it disagrees with General Contractor's final decision.

(c) Any other provision of the Subcontract Documents to the contrary notwithstanding, including paragraph 1, no dispute or claim of any nature arising out of or relating to the Subcontract will be subject to arbitration. Subcontractor agrees it will not commence any action in law or equity against the General Contractor because of any matter whatsoever arising out of or relating to this Subcontract or Work thereof, except in a court of competent jurisdiction in the New Haven Judicial District of the State of Connecticut at New Haven. In no case shall Subcontractor, during the pendency of any dispute or claim including, but not limited to, the commencement of any such action, suspend or terminate the performance of its Work hereunder and Subcontractor shall proceed diligently with its Work.

(d) Subcontractor expressly waives its right to notice and hearing under Connecticut General Statutes §§ 52-278a through 52-278q inclusive, relative to prejudgment remedies, and agrees that General Contractor may issue a writ for prejudgment remedy (attachment, foreign attachment, garnishment, or replevin) by its attorney without securing a court order.

(e) In no event will General Contractor be liable to Subcontractor on account of consequential, special or incidental damages arising out of the Subcontract whether based on breach of contract, warranty, tort, strict liability or otherwise, including, but not limited to, loss of profits, loss of bonding capacity, business interruption or the like.

12. Safety

The Subcontractor shall perform its Work in a safe and workmanlike manner. The prevention of accidents to workers engaged in the Work or others affected by the performance of the Work is the Subcontractor's sole responsibility and Subcontractor agrees to comply with all federal, state and local laws, regulations and codes concerning safety as it shall be applicable to the Work. The Subcontractor shall also follow any safety directions from General Contractor although any direction given or action taken by the General Contractor will not relieve the Subcontractor of its responsibilities hereunder. The Subcontractor shall, at its own expense, preserve and protect from injury all property and persons which may be affected by its operations in performing the Work. Subcontractor shall, at its own expense, protect the Work and the areas where the Work is performed with such lights, barricades and warning signs as are necessary for that purpose or may be required by the General Contractor.

13. Governing Law

The laws of the State of Connecticut, without regard to conflict of law principles, shall govern the interpretation of the Subcontract.

14. Equal Employment Opportunity -

(a) Subcontractor shall not discriminate in its hiring and employment practices against any employee or applicant for employment because of his or her race, color, religion, national origin, sex, handicap or age.

(b) Subcontractor shall indemnify, defend and hold Owner and General Contractor, their agents, servants and employees, harmless from any and all, claims, demands, liabilities and lawsuits, including reasonable attorneys fees incurred thereby, resulting from or pertaining to any alleged violations by Subcontractor or any of its sub-subcontractors of any and all applicable federal, state and local discriminatory employment laws, rules and regulations in effect and applicable for the Project.

15. Special Provisions

See Rider "A" attached hereto as **Exhibit F** and made a part hereof for the special conditions or provisions included in this Subcontract.

16. Miscellaneous -

(a) This Subcontract is conditioned upon General Contractor entering into a corresponding Principal Contract with the Owner and upon receiving a "notice to proceed" from the Owner. It is further conditioned upon the Owner's approval of Subcontractor herein and of this Subcontract, if that right is reserved to the Owner in the Principal Contract. This Subcontract is conditioned upon the Owner's approval of any materials and equipment which are to be furnished by the Subcontractor in accordance with the Prime Contract Documents.

Subcontractor recognizes that approval of “or equal” materials and equipment is solely at the discretion of the General Contractor and/or appropriate consultant and Owner.

(b) The Work, or portions thereof, covered by this Subcontract may not be subcontracted without General Contractor’s written approval. Subcontractor shall be fully responsible for the acts, errors, omissions, defaults and conduct of all its sub-subcontractors, employees and suppliers. Neither this Subcontract nor the right to receive any money payable or to become payable to Subcontractor may be assigned without General Contractor’s written approval. The General Contractor reserves the right to approve the Subcontractor’s sub-subcontractors and material suppliers. Any sub-subcontracts or purchase orders entered into by the Subcontractor for any portion of the Work shall incorporate the provisions of the Subcontract to the extent relevant to the scope of such subcontract or purchase order. General Contractor shall have no obligation to recognize any assignment or sub-subcontract made in violation of this Subcontract.

(c) Subcontractor agrees to indemnify, defend and hold General Contractor harmless from any loss, cost or damage arising out of any claim of patent infringement, except with respect to any material, method, process or design expressly identified in the Principal Contract Documents furnished by Owner and in the latter case, Subcontractor agrees to notify General Contractor of any potential claims falling into such category that are known to it promptly.

(d) Amendments or modifications to this Subcontract shall not be valid unless they are in writing and signed by the party to be charged.

(e) If the Principal Contract is terminated for any reason, the Subcontract shall also be automatically terminated and rendered null and void, and General Contractor’s liability to Subcontractor shall be limited to an equitable portion of the amount actually paid to General Contractor by Owner with respect to Subcontractor’s Work.

(f) Attention is called to the provisions of the Principal Contract authorizing the Owner to omit any item of work. In the event Owner elects to omit any item of Work included in this Subcontract, any such omission shall be binding upon the Subcontractor and the determination of the Architect with respect to any deductions taken by it under the General Contractor’s Principal Contract shall be binding upon the Subcontractor. In no event shall the General Contractor’s liability to the Subcontractor exceed the amount actually paid to the General Contractor by the Owner with respect to Subcontractor’s Work, it being agreed that the receipt of payment by the Owner is a condition precedent to the General Contractor’s obligation to pay Subcontractor.

(g) Attention is called to provisions of the Principal Contract relating to inspection and testing of Work and uncovering of Work for the Owner’s Architect or engineer. Subcontractor hereby assumes all of General Contractor’s obligations to Owner thereunder with respect to Subcontractor’s Work.

(h) Subcontractor agrees to furnish to the General Contractor as-built drawings of all Work performed by Subcontractor to the extent required by the Principal Contract Documents, the General Contractor, or Owner.

(i) Subcontractor agrees that it will require its employees to park in areas designated by General Contractor if parking is provided on site.

(j) Subcontractor agrees that if shipments of materials or supplies arrive at the jobsite for the account of Subcontractor and if Subcontractor does not have adequate men or equipment available to unload such materials and supplies and place them in proper storage or deliver them to the working area, then General Contractor may do so and charge Subcontractor. In addition, the Subcontractor shall remain liable for and shall indemnify the General Contractor with respect to any bodily injury or property damage arising out of General Contractor's efforts in such respect, except to the extent of the negligence of General Contractor, its agents or employees.

(k) The partial or incomplete validity of any one or more provisions of this Subcontract shall not affect the validity or continuing force and effect of any other provision. The failure of either party to insist, in any one or more instances, upon the performance of any of the terms, covenants, or conditions of this Subcontract, or to exercise their right herein, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right as respects further performance.

(l) The Subcontract contains the entire agreement between the parties hereto with respect to the matters covered herein. No other agreement, representations, warranties, or other matters, oral or written, shall be deemed to bind the parties hereto.

(m) The Subcontractor acknowledges that it is, and will remain during the performance of its Work, an independent contractor.

(n) Cleaning work shall be the responsibility of the Subcontractor for his respective trade regardless of what the Principal Contract Documents may or may not require. Cleaning work shall be promptly accomplished at the direction of General Contractor's Project Superintendent. See **Exhibit B** for further details. When such direction is not complied with, the General Contractor will perform such work and charge all costs to the Subcontractor's account.

(o) All required reports, certificates, invoices, submittals, samples, shop drawings, etc., shall be sent to General Contractor at the addresses identified above. All notices shall be addressed to the appropriate party at the address set out herein and shall be considered as delivered when postmarked, if sent by registered or certified mail, or when received in all other cases, including facsimiles.

IN WITNESS WHEREOF, we have hereunto set our hands and seals as of the day and year first above written.

With Attachments.

- Exhibit A - Subcontract Documents
- Exhibit B - Scope of Work
- Exhibit C - Final Release & Waiver of Lien
- Exhibit D - Partial Release & Waiver of Lien
- Exhibit E - Project Schedule
- Exhibit F - Rider A - Special Conditions
- Exhibit G - Insurance Requirements

THE FUSCO CORPORATION,
GENERAL CONTRACTOR

By: _____
Joe Castellano, Director of Purchasing & Contracts

Date: _____

SUBCONTRACTOR:

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A
SUBCONTRACT DOCUMENTS

1) Project Manuals:

Entitled: “Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1” prepared by Fusco Corporation dated June 18, 2012.

Entitled: “Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3” prepared by Antinozzi Associates dated June 18, 2012.

Schedule of Drawings: Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Addenda:

Addendum No. 1 dated July 10, 2012

Addendum No. 2 dated July 24, 2012

ELI WHITNEY, CONNECTICUT TECHNICAL HIGH SCHOOL
HAMDEN, CONNECTICUT
PROJECT NO.: BI-RT-837-CMR
ADDENDUM NO. 3

**EXHIBIT B
SCOPE OF WORK**

(INCLUDING SUPPLEMENTAL SCOPE OF WORK)

EXHIBIT C
FINAL LIEN WAIVER AND RELEASE

The undersigned,
("Releasing Party") located at
having performed or furnished, or having caused to be performed or furnished, labor,
services or materials in the construction, alteration or improvement of that property of
("Owner") described as:

(the "Project" which term includes the real property on which construction is taking place)
acknowledges receipt of final payment in the amount of \$ _____ for all labor,
materials, equipment or services performed or furnished to the Project pursuant to a contract
("Subcontract") with Fusco Corporation ("General Contractor").

Travelers Casualty and Surety Company of America ("Surety") has furnished a payment
bond ("Payment Bond") on the Project.

The Releasing Party does hereby remise, release and forever discharge, for itself and its
successors, the Owner, Surety and General Contractor, and their successors, heirs, executors
and administrators, of and from all, and all manner of action and actions, cause and causes of
actions, suits, liens, debts, dues, sums of money, accounts, reckonings, bonds, bills,
specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses,
damages, judgments, extents, executions, claims and demands whatsoever, in law, in
admiralty, or in equity which against the said the Owner, Surety and General Contractor, the
Releasing Party ever had, now has, or which it or its successors, hereinafter can, shall or may
have in connection with any and all claims of any nature whatsoever arising out of or relating
to the Project.

Further, the Releasing Party certifies, under oath, and in accordance with all applicable
statutes, laws and regulations, that all laborers, subcontractors or materialmen, have been
paid in full for all materials, equipment, fees, licenses, insurances and taxes of every
description, and that there are no liens, causes for liens or claims against the Releasing Party
for such items. The Releasing Party certifies that he will indemnify and save harmless the
Owner and General Contractor from any and all manner of claims, liens, suits, losses, costs,
expenses and damages, including, but not limited to, reasonable attorneys fees, arising out of
or resulting from the Subcontract referred to above, or any work performed or material
supplied thereunder, and hereby releases forever all claim, title and interest in the Project for
the same.

Further, the Releasing Party, for value received, does hereby forever waive, relinquish and
release the Project from any and all mechanics, materialman's or like liens, and all claims of
liens it now has or may have against the project for any and all labor, equipment, services
and materials furnished to the project.

FINAL LIEN WAIVER AND RELEASE (con't)

Further, and in addition to the foregoing, the Releasing Party for value received, does hereby expressly release, waive and relinquish any and all right or claim it may now have or may hereafter have under the Payment Bond provided on the Project for any and all labor, services, materials or equipment furnished on the Project.

Further, the Releasing Party warrants that no assignment of claims for payments or rights to perfect a lien or claim against the Payment Bond or against the Project have been made, and that the undersigned has the authority to execute this Final Release and Waiver of liens and has performed the labor and services supplied the materials required of the Releasing Party. The undersigned has personal knowledge that the statements made herein are true and correct.

Dated: _____

By: _____

Title:

State of _____ County of _____

The foregoing instrument was acknowledged before me this _____ day of _____,

By _____, as _____,

Of _____, a _____ corporation on behalf of the corporation

He/She is personally known to me or has produced ___ as identification and did (did not) take an oath.

My Commission Expires _____

(Signature)

(AFFIX OFFICIAL SEAL)

Name: _____

(Legibly Printed)

Commissioner of the Superior Court/Notary Public State of _____

EXHIBIT D
PARTIAL LIEN WAIVER AND RELEASE

The undersigned _____ (“Releasing Party”) located at _____, having performed or furnished, or having caused to be performed or furnished, labor, services or materials in the construction, alteration or improvement of that property of (“Owner”) described as:

(the “Project” which term includes the real property on which construction is taking place) hereby certifies that the Releasing Party has been paid by Fusco Corporation (“General Contractor”) pursuant to a contract with the General Contractor (“Subcontract”) all the monies due it for all labor, materials or services performed on or furnished to the Project up to and including the date of _____ (date payment is made through) (referred to hereinafter as the “Release Date”).

Travelers Casualty and Surety Company of America (“Surety”) has furnished a payment bond (“Payment Bond”) for the Project.

The Releasing Party, up through and including the Release Date, does hereby remise, release and forever discharge, for itself and its successors, the Owner, Surety and General Contractor, and their successors, heirs, executors and administrators, of and from all manner of actions and actions, cause and causes of actions, suits, liens, debts, dues, sums of money, accounts, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages, judgments, extents, executions, claims and demands whatsoever in law, or in equity which the Releasing Party ever had, now has, or which it or its successors, hereafter can, shall or may have from the beginning of the world to the Release Date in connection with any and all claims of any nature whatsoever arising out of or relating to the Project.

Further, the Releasing Party certifies, under oath, and in accordance with all applicable statutes, laws and regulations, that all laborers, subcontractors or materialmen, have been paid in full up through the Release Date for all materials, equipment, fees, licenses, insurances and taxes of every description and that there are no liens, causes for liens or claims against the Releasing Party for such items. The Releasing Party certifies that it will indemnify and save harmless the Owner, Surety and General Contractor from any and all manner of claims, liens, suits, losses, costs, expenses and damages, including, but not limited to, reasonable attorneys fees arising out of or resulting from the Subcontract referred to above, or any work performed or material supplied thereunder, and hereby releases forever all claim, title and interest in the Project for the same through the Release Date.

Further, the Releasing Party for value received does hereby release, waive and discharge the Project from any and all mechanic’s liens and claims of liens, equitable or legal, or claims against the Payment Bond, which the undersigned has or may have against the Project and or Payment Bond for labor, services, materials or equipment through the Release Date. Lien rights or Payment Bond rights which the Releasing Party may acquire for labor, services, materials or equipment furnished subsequent to the Release Date are not released by this instrument.

PARTIAL LIEN WAIVER AND RELEASE (con't)

Further, the Releasing Party warrants that no assignment of claims for payments relating to the Project has been made, and that the undersigned has the authority to execute this Partial Release and Waiver has performed the labor and services supplied and the materials required of the Releasing Party to the state of completion of said improvements for which payment is being applied. The undersigned has personal knowledge that the statements made herein are true and correct.

Dated: _____

By: _____

Title:

State of _____ County of _____

The foregoing instrument was acknowledged before me this _____ day of _____,

By _____, as _____,

Of _____, a _____ corporation on behalf of the corporation

He/She is personally known to me or has produced __as identification and did (did not) take an oath.

My Commission Expires _____

(Signature)

(AFFIX OFFICIAL SEAL)

Name: _____

(Legibly Printed)

Commissioner of the Superior Court/Notary Public State of _____

ELI WHITNEY, CONNECTICUT TECHNICAL HIGH SCHOOL
HAMDEN, CONNECTICUT
PROJECT NO.: BI-RT-837-CMR
ADDENDUM NO. 3

EXHIBIT E
CONSTRUCTION SCHEDULE

EXHIBIT F

RIDER A - SPECIAL CONDITIONS

The following documents/forms, hereto attached, shall be included as part of the Contract Documents. – ADD. NO. 2

1. Document 000950: Bid Forms A through F
2. Document 000310: Bid Bond and Form of Surety
3. Document 000315: Form of Surety Guarantee
4. Document 000320: Non-Collusion Affidavit of Prime Bidder
5. Document 000350-2: Contractor's Minority Business Enterprises - CHRO
6. Document 000350-3: Notification to Bidders – CHRO
7. Document 000360: Certification of Bidder Regarding Equal Employment Opportunity
8. Document 000370: Certificate as to Corporate Principal
9. Document 000412A: Department of Administrative Services (DAS) "Contractor Prequalification Certificate and **Update Statement**
10. Document 000412B: Statement of Bidders Qualifications
11. Document 000847: Contractors Wage Certification Form
12. S/M/W/DisBE Certificate from the State of Connecticut for Set-Aside Bid Packages.

EXHIBIT G
INSURANCE REQUIREMENTS

The Subcontractor shall secure and maintain the following insurance coverages in the amounts as specified and in accordance with the terms hereof:

1. GENERAL PROVISIONS

- (a) All insurers must have A.M. Best ratings of A-VII or better and be qualified to conduct business in the state in which the Project is located.
- (b) Evidence of all the aforementioned insurance coverages must be provided by the Subcontractor to the General Contractor before the commencement of Work by the furnishing of a certificate of insurance executed by a duly authorized representative of each insurer. Subcontractor shall provide General Contractor with a copy of an insurance policy when requested by General Contractor.
- (c) All policies shall be endorsed to require at least a sixty (60) day written notice by the insurer of cancellation, non-renewal, or material changes, except for a ten (10) day notice for non-payment of premium. This notice shall be sent to General Contractor as a certificate holder.
- (d) All policies must include an express waiver of subrogation whereby the insured waives the right to subrogate against Owner, General Contractor and Architect, and their respective subsidiaries, employees, volunteers, directors and officers.
- (e) All policies must include a clause which states that the Subcontractor's policy is primary and the insurer shall not seek contribution from other insurance maintained by or available to the additional insured.
- (f) All deductibles or self-insured retentions are the responsibility of Subcontractor, including claim handling or legal expenses.
- (g) All exclusions or restrictions of coverage not found in standard policies must be clearly identified and accepted by the General Contractor.
- (h) All insurance must be effective on or before Work commences and remain in effect until final completion and acceptance of the Work, if not otherwise provided by this Subcontract.
- (i) It is responsibility of the Subcontractor to be certain that all of its sub-subcontractors and suppliers procure and maintain the same insurance required of the Subcontractor as specified herein. Subcontractor shall furnish copies of certificates of insurance evidencing coverage for each sub-subcontractor and supplier.

- (j) Failure to comply with all the insurance provisions herein shall in no way relieve the Subcontractor of its indemnification obligations as provided in the Subcontract Documents.
- (k) In addition to the insurance coverages set forth in this **Exhibit G**, Subcontractor shall also comply with any insurance requirements of the Principal Contract which are imposed upon the Subcontractor pursuant to the terms of this Subcontract.

1. **WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE**

- (a) Full statutory coverages required by law.
- (b) Employer's Liability Insurance limits of at least \$500,000 each accident for bodily injury by accident and \$500,000 each employer for bodily injury by disease.
- (c) Where applicable, U.S. Longshore and Harborworker's Compensation Act Endorsement shall be attached to the policy.

2. **COMMERCIAL GENERAL LIABILITY (CGL)**

- (a) Limits of insurance of not less than \$1,000,000 per occurrence with a \$2,000,000 annual aggregate
- (b) If the CGL coverage contains a General Aggregate limit, such General Aggregate shall apply separately to each project.
- (c) Coverage shall be written on ISO occurrence form CGL 00 01 10 01, or a substitute occurrence-based form providing equivalent coverage, and shall cover liability arising from premises, operations, independent contractors, products/completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
- (d) General Contractor, Owner, and Architect shall be included as additional insureds under the CGL using ISO Additional Insured Endorsement CG 20 11 85 or an endorsement providing equivalent coverage for these additional insureds. Insurance for additional insureds shall be as broad as the coverage provided for the named insured. It shall apply as Primary Insurance before any other insurance or self-insurance, including any deductible maintained by or provided to the additional insureds.
- (e) Subcontractor shall maintain CGL coverage for itself and all additional insureds for the duration of the Project and maintain completed operations coverage for itself and additional insureds for at least three (3) years after completion of the Work.

- (f) There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from explosion or underground property damage.

3. **AUTOMOBILE LIABILITY**

- (a) Business Auto Liability with limits of at least \$1,000,000 per accident for bodily injury and property damage.
- (b) Business Auto coverage must include coverage for liability arising out of all owned, leased, hired, and non-owned automobiles.
- (c) General Contractor, Architect, and all other parties of the General Contractor shall be included as additional insureds under the policy.

4. **COMMERCIAL UMBRELLA/EXCESS LIABILITY**

- (a) Limits must be at least \$3,000,000 providing excess coverage over the Subcontractor's CGL, Business Auto and Employer's Liability insurance coverages.
- (b) Umbrella coverage must include as additional insureds all entities that are additional insureds on the CGL.
- (c) Umbrella coverage for such additional insureds shall apply as primary before any other insurance or self-insurance, including any deductible, maintained by or provided to the additional insured, other than the CGL, Business Auto Liability, and Employer's Liability coverage maintained by the Subcontractor.
- (d) Coverage must be on an occurrence basis.

5. **PROPERTY INSURANCE**

- (a) Subcontractor shall provide property and equipment insurance for the full value of the Work, including property and equipment insurance coverage for all materials and equipment stored off-site or in transit whether or not such Work is covered under any Project property insurance, unless the General Contractor issues a specific written waiver of the requirement that the Subcontractor provide property and equipment insurance for the full value of the Work.
- (b) In addition to the foregoing, Subcontractor shall provide an equipment and installation floater in the broadest coverage form available covering Subcontractor's tools and also materials not accepted by the Owner.

6. **POLLUTION LIABILITY INSURANCE**

The Contractor shall provide pollution, lead, mold and asbestos Liability Insurance.

The policy must be specifically endorsed to include coverage for “asbestos, lead paint, and other hazardous building materials such as PCB’s, abatement operations” and have the “Pollution Exclusion” eliminated or modified so as not to apply to any bodily injury, including but not limited to asbestos, lead paint, and other hazardous building materials such as PCB’s abatement, handling, transport or disposal. General Liability coverage shall not be provided on a “claims made” basis. All policies shall be written on an occurrence basis.” Limits are as follows:

Aggregate \$2,000,000, Occurrence \$1,000,000 plus a \$5,000,000 pollution umbrella policy.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #2.01
Structure Demolition, Selective Demolition & Abatement**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to all labor, materials, equipment, tools, services, coordination, supervision, shop drawings, permits, engineering and all incidental work associated with **Structure Demolition, Selective Demolition and Abatement** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Structure Demolition, Selective Demolition and Abatement** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) BID PACKAGE #2.01 – Structure Demolition, Selective Demolition and Abatement:**
This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Structure Demolition, Selective Demolition and Abatement** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. Work shall comply will all applicable codes and authorities. The

Scope of Work shall include, but not be limited to, the General Conditions, all Division 00 and 01 Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

- 024119 Selective Demolition**
- 024216 Building Demolition**
- 026123 Removal & Disposal of PCB Contaminated Soils**
- 028100 Removal and Handling of Regulated Materials**
- 028213 Asbestos Abatement**
- 028433 Removal and Disposal of PCBs**

- Division 21 Fire Suppression (As Applicable)
- Division 22 Plumbing (As Applicable)
- Division 23 Mechanical (As Applicable)
- Division 26 Electrical (As Applicable)
- Division 27 Communications (As Applicable)
- Division 28 Electronic Safety and Security (As Applicable)
- Division 31 Earthwork (As Applicable)
- Division 33 Utilities (As Applicable)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Selective Demolition, Building demolition including but not limited to: Roof Removal as Required (Total Roof Removal and Roof Abatement by BP#7.01), Wall, Partitions; Doors and Frames; Flooring; Ceilings; Masonry; Soffits; Bulkheads; Cabinets and Casework; Shelves; Column Enclosures demolition (and the legal disposal of same); sheeting; shoring; bracing; openings for all trades as described in the Contract Documents and listed below.

The intent of the Scope of Work is for the **Structure Demolition and Abatement** bidder to remove and dispose of all materials and equipment noted on the Contract Documents, unless specifically noted to remain or be removed and/or disposed by others. Salvage of existing Face Brick is required.

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Construction Schedule:

It is understood that TIME IS OF THE ESSENCE and as such the Schedule, included with the Bid Documents along with the Construction Phasing must be maintained.

- a. Subcontractor includes all overtime required to meet the schedule and as needed as a result of this Subcontractor's failure to meet the project schedule.
- b. Subcontractor includes all mobilizations necessary to complete Work.
- c. Subcontractor will be responsible for overtime costs for Construction Manager's supervision if the Subcontractor falls behind schedule, by its own fault, and overtime is required by this Subcontractor to make up the schedule.

- d. All provisions for Schedule compliance both in the Bid Documents and as covered in Fusco's Standard Form of Contract will be strictly enforced. Further, this Contractor shall be held to all of the same Schedule constraints and penalties that have been agreed to and have been stipulated to in the agreement between Fusco Corporation and the Owner.
 - e. Subcontractor acknowledges that minor adjustments to the schedule will be required as all parties progress through project construction, and agrees to accomplish such minor adjustments at no increase in price.
- 5) **Mechanical, Electrical, Fire Suppression, Plumbing and HVAC Demolition:** This Subcontractor shall be responsible to properly dispose of all **Mechanical, Electrical, Fire Suppression, Plumbing and HVAC** installations as indicated on the Contract Documents:
- a. The Plumbing and HVAC Contractor shall cut, cap and drop the system identified to be removed.
 - b. The Fire Suppression Contractor shall cut, cap and drop the system identified to be removed.
 - c. The Electrical Contractor shall cut, cap and drop the system identified to be removed.
 - d. Removal and proper disposal of all Mechanical, Electrical, Fire Suppression, Plumbing and HVAC systems shall be by the Demolition and Abatement Contractor.
 - e. Removal and proper disposal of all fluorescent lights and ballasts (placed in a suitable container by the Electrical Contractor) shall be properly disposed by the Demolition and Abatement Contractor.
 - f. The Plumbing and HVAC Contractor shall be responsible to remove and properly dispose of the existing HVAC Rooftop Units.
 - g. The Plumbing and HVAC Contractor shall be responsible to remove and properly dispose of the existing Steam Boilers.

6) **Structure and Selective Demolition:**

In addition to the Work depicted on the Contract Documents, this Subcontractor shall be responsible to provide the following:

- a. **Pre-Demolition Photographs:** This Subcontractor shall document the existing conditions photographically of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by building demolition operations and submit prior to commencing the Work.

1. **Salvage of Owner Items:** This Subcontractor shall remove, clean and submit to Owner any items requested to be salvaged by the Owner prior to performing any demolition or abatement.

- b. **Post-Demolition Photographs:** This Subcontractor shall document the existing conditions photographically of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by building demolition operations and submit after completing the Work.
 1. **Snaking and Video of Underground Pipe:** This Subcontractor shall provide snaking and video of existing underground piping to City Structures to the Construction Manager with six (6) copies of a written report and DVD media. This shall be done before any work begins and again after the Project is Substantially Complete.

- c. **Protect Existing Door Frames and Walls:** This Subcontractor shall protect the existing door frames and wall, wherever necessary, prior to beginning the Work. Protection shall be focused on areas where damage to the existing door frames and walls is likely. This Subcontractor shall maintain and repair any damage to existing door frames and walls to the satisfaction of the Architect and Construction Manager, in their sole discretion, immediately during the performance of the Work and at the final completion of the Work as a prerequisite to closeout.

- d. **Protection of Existing Stairs:** This Subcontractor shall provide and maintain (until taken over by the General Trades Contractor, at the direction of the Construction Manager) temporary protection throughout the entire construction phases to ALL Stairs, Stair Treads, Stair Risers, Stair Landings, Railings and Guardrails.

The following Stair protection system shall be utilized:

- i. **6 mil poly (Overlap 12" and Duct Tape Joints); and**
 - ii. **¾" Plywood**
-
- e. **Temporary Shoring and Bracing:** This Subcontractor shall furnish, install, maintain and remove any shoring and/or Bracing as may be required. Shoring/Bracing plan(s) shall be designed and stamped by a Structural Engineer licensed to practice in the State of Connecticut and approved by the project engineer prior to the start of work.

 - f. **Temporary Closure Walls @ Building Demolitions:** This Subcontractor shall provide a 6" Steel Stud (12" O.C.) Insulated Wall with two layers of

$\frac{3}{4}$ " Plywood and batt insulation sealed off completely and in all respects to the weather and for the purposes of safety and security (specifically at the building doorways and hallways) where the building is to be demolished is severed from the existing occupied building to remain. Wall shall be weathertight, soundproof and secure in all respects. Walls shall adequately isolate temperature, sound, dust, odors, and fumes and meet applicable building and fire codes.

- g. Temporary Roofing and Waterproofing:** This Subcontractor shall provide Temporary Roof Membrane wherever required to sealed off completely and in all respects to the weather and (specifically at the building interface) where the building to be demolished is severed from the existing building to remain. Temporary roofing shall also be provided where the existing Building Envelope is compromised as a result of the demolition and abatement. The entire building envelope including but not limited to caulking and flashings and specifically Roofing shall be weathertight in all respects.
- h. Existing Foundation:** This Subcontractor shall REMOVE the existing foundation and slab where Building Demolition is indicated on the Contract Documents. This Subcontractor shall REMOVE all pier footing where the Portable Classrooms are removed or where pier footings exist from former portable classrooms. Provide OSHA safe sloping to the satisfaction of the Construction Manager, in its sole discretion, at all underground removals. – **ADD. NO. 2**
- i. VAT, VCT, Carpet and Mastic Removal:** This Subcontractor shall remove and properly dispose of all VAT, VCT, Carpet and other flooring and Mastic as indicated on the Contract Documents. The existing slabs shall be completely clean of all mastic. The existing slabs shall be free of any abrasions, rills or damage resulting from the abatement/demolition process. In the event the slabs are damaged, in the sole discretion of the Construction Manager, this Subcontractor shall repair those areas so as to leave the slab in a condition acceptable to receive floor finishes, in the sole discretion of the Construction Manager.
- j. Encapsulant Adhesives:** This Subcontractor shall remove any and all residue left behind by encapsulant adhesives so as to leave the existing substrate in a condition to receive finishes, in the sole discretion of the Construction Manager. In the event the existing substrates are damaged, in the sole discretion of the Construction Manager, this Subcontractor shall repair those existing substrates.
- k. Ceiling Demolition:** This Subcontractor shall remove and properly dispose of all ceilings and soffits as indicated on the Contract Documents

including but not limited to: acoustical grid, acoustical grid wires, metal pans, black iron, welded metal tube ceiling support, batt insulation, light fixtures, stud framing and drywall, transfer ducts and grilles.

- l. Movable Partitions Demolition:** This Subcontractor shall remove and properly dispose of all movable partitions as indicated on the Contract Documents.
- m. Millwork and Lockers Removal and Disposal:** This Subcontractor shall remove and properly dispose of all millwork and lockers as indicated on the Contract Documents.
- n. Interior Door Removal and Disposal:** This Subcontractor shall remove and properly dispose of all interior doors as indicated on the Contract Documents.
- o. Window Treatments Removal and Disposal:** This Subcontractor shall remove and properly dispose of all window treatments as indicated on the Contract Documents.
- p. Roof Demolition & Abatement:** The Roofing Contractor (Bid Package #7) shall remove and properly dispose of the existing roofing materials.
- q. Existing Roof Drains:** This Subcontractor shall protect and leave in place all roof drains and discharge piping during the Project. In the event a roof drain is damaged it shall be replaced by this Subcontractor at no cost to the Project. In the event a roof drain must be removed in the proper execution of the Work, this Subcontractor shall replace it and include such cost in its bid as required to maintain proper roof drainage at all times. Also include furnishing, installing and removing temporary gutters and rain water downspouts as required to maintain proper drainage from the roofs at all times during construction.
 - 1.** Where Abatement of existing roof drains, pipes and leaders is required, this Subcontractor shall properly remove all hazardous pipe insulation including where pipe insulation may be concealed in an existing walls, chases and or ceilings.
- r. Existing Masonry Unit Salvage:** This Subcontractor shall salvage, clean, count, palletize, plastic wrap and store on-site at the direction of the Construction Manager the following quantities of existing face brick masonry units (in the event this Subcontractor is unable to salvage the following quantities of brick and cannot substantiate to the Construction Manager, in its sole discretion, why there is a shortage, this Subcontractor

shall purchase and provide brick to the Project at its own cost up to the required amounts) :

1. **3,000 exterior square feet of bricks – This includes the 1,000 exterior square feet of bricks referenced on sheet A-302. The percent of each type of brick that is salvaged should be roughly proportional to the brick that is removed and as directed by the Construction Manager.**

- s. **Existing Wheelchair Lift Removal and Disposal:** This Subcontractor shall be responsible to remove and properly dispose of the existing wheelchair lift including but not limited to the doors and frames, push button stations and all components complete.
- t. **Miscellaneous Items:** This Subcontractor shall be responsible to remove (including all attachment hardware while minimizing damage to existing substrate) and properly dispose of the following: tackboards, whiteboards, markerboards, water coolers (including electrical and plumbing supply/waste), signage, hose cabinets, emergency lighting, door hold opens, thermostats, fire extinguisher cabinets, area of refuge call boxes, wiremold, embedded wall anchors, coat racks, flags and holders, clock and speakers, telephone and supporting bracket, shelving and standards, surface mounted conduit and piping, miscellaneous hardware and bolts, refrigerant piping and any other item affixed to the walls not intended to remain.
- u. **Disposal of Liquids:** Include the legal disposal of any refrigerant, petroleum or any other hazardous liquid. Provide disposal of shed filled with hazardous materials.
- v. **Temporary Swing Space Classrooms:** This Subcontractor shall demolish and properly dispose of the Temporary Swing Space Classrooms constructed during the Project. Area approximately 2000 square feet.

7) **Sheeting, Shoring, Underpinning, Bracing and Open Hole Protection:**

In addition to that required by the Contract Documents, this Subcontractor is responsible to provide all Sheeting, Shoring and Underpinning as required, whether shown or not on the Contract Documents.

- a. This Subcontractor shall furnish, install, maintain and remove any shoring and/or Bracing as may be required. Shoring/Bracing plan(s) shall be designed and stamped by a Structural Engineer licensed to practice in the State of Connecticut and approved by the project engineer prior to the start of work.

- b. Any and all work in or along edges of roadways will be coordinated and scheduled with the proper authorities two weeks prior to beginning work.
- c. Protect all open excavations, access and haul roads, and staging areas as required.

8) Dumpsters, Clean-up & Waste Removal:

- a. This Subcontractor shall provide chutes, dumpsters and whatever other disposal tools are required for its Work and the work of its subcontractors. This Subcontractor is responsible for all necessary cleanup associated with the Work and Contract Documents and shall provide all necessary manpower and equipment for proper disposal. Cleaning is necessary in order to maintain a safe working and productive environment, and will be strictly enforced by the on-site Construction Management and supervisory personnel.
- d. Given this Subcontract responsibility, the Subcontractor is required to perform all necessary clean-up associated with the Work, and shall provide the necessary personnel and equipment to bring out all debris and dispose of safely and properly. All First Floor debris which cannot be disposed of in debris chutes, or debris carts must be placed directly into the appropriate dumpster. If it is determined by the Fusco onsite personnel that the Subcontractor is failing to perform the clean-up responsibilities, they will be put on notice and given a single work day to rectify this failure. If it is not rectified within that 24 hour period Fusco will upon written notice immediately perform this delinquent clean-up work and will back charge the appropriate Subcontractor for all costs incurred by Fusco in the performance of this cleanup.
- e. Subcontractor is to maintain a clean and safe work area. Housekeeping is a daily priority. The Subcontractor is responsible for daily clean up of their Work and debris. If the Subcontractor fails to clean up, all material and debris will be cleaned up by others and all costs associated will be charged to the responsible Subcontractor. In the event this Subcontractor encounters labor jurisdictional issues over this Work, this Subcontractor agrees to make whatever arrangements or provisions required to complete same and has included all associated costs.
- f. Any trucks leaving site with loads must be covered by this Subcontractor.

9) Minor Work/Provisions:

This Contractor shall carry in their base bid the **removal of 150 additional mudded insulation on pipe fittings/elbows above ceiling and behind walls/pipe chases.**

This Contractor shall carry in their base bid the **removal of 200 additional linear feet of asbestos containing pipe insulation.**

10) CLARIFICATIONS

- a.) The Structure Demolition, Selective Demolition and Abatement Subcontractor shall include:
1. The Structure Demolition, Selective Demolition and Abatement Contractor must undertake the exterior wall demolition in order to salvage the required amount of face brick. This Contractor shall be responsible for cleaning all salvaged brick, stacking them neatly on pallets, and covering them with shrink wrap. Once completed they shall be turned over to the Masonry Trade Contractor who shall be responsible for protecting them and ultimate use in closing up existing openings. In the event this Contractor is unable to satisfy the required salvage quantities, the burden shall be on this Contractor to substantiate why the required quantities were not attained, and in the sole discretion of the Construction Manager, this Contractor may be responsible to provide brick at its own cost to attain the required quantity.
 2. Remove and properly dispose of all roof penetration/perimeter flashing as ACM typical unless otherwise noted. Replace flashing that is removed by this Contractor with a temporary flashing that is weather tight and acceptable to the Construction Manager.
 3. Provide the removal of the grease interceptors including but not limited to the pumping and proper disposal of all grease, fat and solids that remain in the tanks.
 4. Provide OSHA safe sloping to the satisfaction of the Construction Manager, in its sole discretion, at all underground removals.
 5. Sheet INFO.2 – Include all sawcutting at slabs and all building sawcutting. Include all building sawcutting for mechanical, plumbing and electrical work.
 6. Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
 7. Sheet ASB-1 - Include all work indicated on this sheet except for the “Work To Be Performed By Term Contractor”.
 8. Sheet ASB-2 - Include all work indicated on this sheet except for the “Work To Be Performed By Term Contractor”. Include all the work for the note indicating ‘REMOVE ALL ACM VINYL FLOOR TILE AND MASTIC PRESENT BENEATH LOCKERS IN CORRIDOR (TYP).’
 9. Sheet PCB-1 - Include all work indicated on this sheet.
 10. Sheet PCB-2 - Include all work indicated on this sheet.

11. Sheet PCB-3 - Include all work indicated on this sheet.
12. Sheet PCB-4 - Include all work indicated on this sheet.
13. Sheet PCB-5 - Include all work indicated on this sheet.
14. Sheet PCB-6 - Include all work indicated on this sheet.
15. Sheet PCB-7 - Include all work indicated on this sheet.
16. Sheet PCB-8 - Include all work indicated on this sheet.
17. Sheet D-101 - Include all work indicated on this sheet.
18. Coordinate with other trades and remove all ACM flashings at exterior walls and other locations required for penetrations. Replace all removed flashings to ensure that all buildings remain water tight at all times during construction and after project completion.
19. Sheet D-102 - Include all work indicated on this sheet.
20. Sheet D-104 - Include all work indicated on this sheet.
21. Sheet D-105 - Include all work indicated on this sheet.
22. Sheet D-106 - Include all work indicated on this sheet except for Specific Demolition Note A7 indicating to remove the existing gymnasium court markings and Demolition Note 117 indicating to remove floor sleeve covers. Work described in Specific Demolition Note A7 and Demolition Note 117 to be completed by Carpet, Resilient & Wood Flooring Subcontractor.
23. Sheet D-107 - Include all work indicated on this sheet.
24. Sheet D-108 - Include all work indicated on this sheet.
25. Sheet D-109 – Include all work indicated on this sheet. Include all of the abatement and demolition for “D” Wing and “G” Wing (including “D” Wing roof which will be demolished and abated by this Contractor). – **ADD. NO. 2**
26. Sheet D-110 - Include all work indicated on this sheet including for the demolition of all of "D" Wing and "G" Wing.
27. Sheet D-111 - Include all work indicated on this sheet including the demolition of all of "D" Wing and "G" Wing.
28. Sheet D-112 - Include all work indicated on this sheet except for work at equipment noted to be reused. Equipment noted to be reused will be addressed by the Food Service Subcontractor. Legally capture and dispose of any refrigerant in items to be disposed of including kitchen equipment, mechanical equipment, and any other equipment in the project.
29. Structural (“S”) Drawings – Include all work in the Structural drawings as it relates to this scope of work. Include all items relating to sawcutting and demolition or removal of materials.
30. Sheet S-100 General Note 4 – Provide all shoring necessary for this scope of work.
31. Sheet S-102.2 – Include all sawcutting at slabs and all building sawcutting.
32. Sheet S-102.3 – Include all sawcutting at slabs and all building sawcutting.
33. Sheet S-103.1 – Include the demolition of the existing piles as indicated.
34. Sheet S-103.4 – Include all shoring.
35. Sheet S-220 Detail 1 – Include the demolition of the concrete keys.
36. Sheet S-220 Detail 4, 8 and 10 – Include all sawcutting at slabs and all building sawcutting.
37. Sheet S-221 Detail 12 – Include the demolition of the foundation wall.

38. Sheet S-221 Detail 15 – Include the removal of concrete slab needed to achieve specified new concrete thickness.
39. Sheet S-221 Detail 13 - Complete all interior and building saw cutting including saw cutting needed to complete the work of other trades. Include saw cutting the slab for new footings and saw cutting for all utilities.
40. Sheet S-222 Detail 28 – Include the removal of slabs on grade as indicated.
41. Sheet S-320 Detail 1 – Include concrete removal to achieve specified thickness.
42. Sheet S-320 Detail 9 - Include cutting the beam pockets in the existing walls.
43. Sheet S-321 Detail 13 – Include all demolition including the sawcutting and demolition of the gyp deck.
44. Sheet S-321 Detail 15 - Include shoring and all provisions necessary to support the parapet wall at the roof as shown.
45. Sheet S-323 Detail 38 - Include all shoring.
46. Architectural Drawings – Include all demolition and abatement indicated in the architectural drawings.
47. Sheet A-102.1 – Include removal of wood flooring and concrete as indicated.
48. Sheet A-102.2 – Include removal of wood flooring as indicated.
49. Sheet A-110.0, A-110.1 and A-110.2 – Include Roof Demolition Notes 9, 12, 16, 17, 18, 19, 22 & 23 typical and as noted.
50. Sheet F-102.2 – Include demolition of all wood flooring to be demolished including the wood flooring in the new Theory Room B111.
51. Sheet P-003.2 - Include all interior building slab sawcutting and demolition required for new and existing utilities and included for the demolition of utilities including as shown on this sheet.
52. Sheet E-103.3 - Include all slab demolition for floor boxes throughout the project including in the Lobby C102B.
53. Include all hazardous material abatement including the removal of all asbestos, lead and PCBs and all other hazardous materials.
54. Include the construction, maintenance, and removal of all barriers required to isolate the abatement areas.
55. Include all demolition and abatement required for the construction of temporary school spaces. Include demolition in Building D for the construction of two temporary classrooms which will include the removal of flooring and items attached to the floors and walls.
56. Saw cut or chip out slabs as required and indicated to achieve the specified drainage. See Sheet S102.1 as an example.
57. Include the demolition and removal of all existing items not shown to remain and as directed by the Construction Manager. This includes the demolition and removal of all remaining equipment not shown in the drawings but observed during the Pre-Bid Conference located throughout the project including in the shop spaces and garage.
58. Include Demolition of “D” Wing (listed as “D” Wing and “G” Wing on some sheets).
59. Include demolition of the garage as a separate phase as directed by the Construction Manager.
60. Protect the existing science lab teacher and student work stations as they will be removed and relocated by the General Trades Subcontractor.

61. Include demolition of any temporary construction, rooms and spaces.
62. Include demolishing the flooring and base in the elevator cab.
63. Include all sawcutting at slabs and all building sawcutting throughout the project.
64. ALL DUMPSTERS are to be provided by the General Trades Contractor except for:
 - a. BP#1.01 Site Preparation*;
 - b. BP#2.01 Demolition & Abatement*
 - c. BP#7.01 Roofing – **ADD. NO. 2**
 - d. BP#31.04 Athletic Fields*
 - e. *These excepted Trade Contractors shall deposit debris generated by their Scope of Work into their own furnished and supplied dumpsters.
65. Include the removal of walls and windows as needed for removal of existing boilers and other equipment (by others) and for installation of new boilers (by others) and installation of other equipment (by others) in the boiler room.
66. Include off-hours work as directed by the Construction Manager as required to minimize impact to the school. No extra compensation will be issued for off-hours work.
67. Provide manifests and other specified documents for abatement and removal to the Construction Manager as indicated in the specifications, all applicable codes and laws.
68. Include the demolition and lawful disposal of all in-wall/window air conditioning systems.
69. Include paying for and obtaining all permits including but not limited to asbestos disposal authorizations, asbestos abatement notifications, asbestos management plans, demolition notification forms, lead-based paint, building demolition permit, and all other permits and fees related to this scope of work.
70. Specification 024216.2.3.E.2 – After Building Demolition leave all remaining excavation (hole slopes) OSHA safe. Backfill by the Bid Package 31.01 Sitework Contractor. – **ADD. NO. 1**
71. Provide removal and proper disposal of the caulk, window and four courses of CMU below the sill typical and as noted on PCB-6. – **ADD. NO. 2**
72. Accept assignment of Document 000974 – TRC – Phase 1 – School in Session Plan Proposal dated July 25th, 2012 and include the cost in base bid. – **ADD. NO. 3**

EXCLUSIONS

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #5.01
Structural Steel & Metal Decking**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Structural Steel & Metal Decking** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Structural Steel & Metal Decking** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **Bid Package 5.01 Structural Steel & Metal Decking:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Structural Steel & Metal Decking** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the

Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

033000 Cast-In-Place Concrete (As Applicable)

051200 Structural Steel Framing

052100 Steel Joists Framing

053100 Steel Decking

055000 Metal Fabrications (As Applicable)

055100 Metal Stairs

078443 Fire Resistive Joint Systems (As Applicable)

116623 Gymnasium Equipment (As Applicable)

Division 21 Fire Suppression (As Applicable)

Division 22 Plumbing (As Applicable)

Division 23 Mechanical (As Applicable)

Division 26 Electrical (As Applicable)

Division 27 Communications (As Applicable)

Division 28 Electronic Safety and Security (As Applicable)

312000 Building Earthwork (As Applicable)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:
 - i. All Structural Steel; Metal Deck; Metal Stairs; Steel Bar Joist; Anchor Bolts; Inserts; Corrosion Protection; All Steel Galvanizing; Touch-up Painting at Field Welds. Installation of OSHA Compliant Perimeter Protection Cables at all Decks including the Roof;

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Equipment Framing:

This Contractor is responsible to furnish, install and coordinate all steel equipment framing for rooftop equipment, Roof Drains and all other steel supported equipment. In addition to the Structural Drawings, the Steel Contractor shall refer to other Drawings provided for coordination of equipment locations.

5) Stair Erection:

The Structural Steel Contractor shall erect all stairs simultaneously with structural steel erection. If stairs cannot be fabricated and installed concurrently with the steel erection

(per the construction schedule), Subcontractor is responsible to provide temporary stairs and rails with multiple move-ins until permanent stairs are in place.

6) Winter Protection:

This Subcontractor will be responsible for Winter Protection for its Work.

7) Seismic Bracing, Clips and Angles at Top of Partitions:

This Subcontractor shall provide any and all top of wall miscellaneous metal bracing to the structure typical and as noted on the Contract Documents.

8) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection guardrail cables at all decks. Include one loading leave-out bay at each floor level as requested by the Construction Manager. Removal of perimeter cable protection at all levels (except the roof) shall be by the General Trades Contractor. Removal of perimeter cables at the roof shall be by the Roofing Contractor. Structural Steel Subcontractor shall grind down steel flush at removed post locations.

9) Temporary Pads for Crane:

The Site Work Contractor shall provide **five (5) separate compacted (90% compaction)** dry pads suitable for the crane that will be used in erecting the building structural steel from outside of building foot print as located and as prescribed by the CM. These **five (5) separate compacted pads** shall be a minimum of thirty-five feet by thirty five feet. The Structural Steel Subcontractor shall include any additional pads or provisions needed for its cranes.

10) Leveling and Bearing Plates, Bolts and etc.:

The Structural Steel Contractor shall furnish all interior and exterior loose materials such as but not limited to inserts, frames, anchor bolts, bolts, bearing and leveling plates to the appropriate Contractor for installation into the appropriate assembly.

These items are required to be on site at the start of concrete operations along with a complete set of approved layout drawings and templates.

11) Survey:

The Steel Trade Contractor shall provide all other layout required to perform and complete his or her Work. The cost to replace or repair lost or damage control points shall be charged to the offending Contractor.

The Structural Steel Trade Contractor shall submit (7 full sized paper copies and 1 digital copy) a detailed As-Built Survey of all Anchor Bolts, Base Plates, embedded items, etc., by a Connecticut Licensed Land Surveyor to the Fusco Corporation/Engineer prior to any steel erection. Submission shall be in AutoCAD “.dwg” and Adobe “.pdf” formats and shall highlight any deviations. All cost regarding these submissions is to be included in the Structural Steel Trade Contractor lump sum proposal. Each Submission must be submitted within 3 days of the foundation and bearing plates completion. This survey shall be done in a timely fashion so that any discrepancies can be corrected prior to the start of steel work. Failure to notify the Construction Manager shall be construed as acceptance of the existing condition. If any anchor bolt(s) is not located in its intended position, and the Structural Trade Contractor agrees that it can remain where it is located and with the approval of the Engineers, the anchor bolt(s) can remain, but the Concrete Trade Contractor shall bear any and all costs related to any adjustment or modifications necessary to the column bearing plate(s) or structural steel member to rectify the situation. If the anchor bolt(s) need to be relocated, the Concrete Trade Contractor and the Mason Contractor shall immediately do so without delaying the installation of the structural steel and/or the project schedule.

Additionally the Structural Steel Contractor shall provide a certified (by a Connecticut Licensed Land Surveyor) survey of the plumbness of all columns as well as the elevations of all column splices for submission to the engineer. This survey must be submitted immediately upon the completion of structural steel leveling, plumbing, squaring, etc. (7 full sized paper copies and 1 digital copy in AutoCAD “.dwg” and Adobe “.pdf” formats).

12) Metal Deck:

The Structural Steel Contractor shall furnish and install a complete Metal Deck system and include all items required for a complete functioning system even if details are incomplete. The Structural Steel Contractor shall also provide for all pour stops, edge forms, cover plates, closure strips, roof sump pans, ridge plates, edge angles, and cell closures, shear connectors, framing for all openings, galvanizing and shop priming accordingly.

The Structural Steel Contractor shall install metal decking over all mechanical openings (both new and abandoned). Cutting and removal of the new metal deck at new openings shall be performed by the Trade Contractor using the opening (except for roof drain sump pans which shall be the responsibility of the Structural Steel Contractor).

13) Roof Drain Sumps:

The Structural Steel Contractor shall furnish, install and cut roof drain sumps to accommodate the roof drains.

12) Duct/Equipment, Slab Edges and other Openings:

The Steel Trade Contractor shall furnish and install all metal closures at the edges of slabs, around columns, framed openings, and as required to prevent concrete from passing through any deck or closure. Any additional closures or bulkheads required for the placement of concrete shall be constructed of wood and shall be furnished and installed by the Concrete Contractor. This shall include but not limited to mechanical/electrical box-outs, chase spaces, curbs, mechanical pads, that are shown on the contract documents. It shall be the responsibility of the Mechanical, Plumbing and Electrical Contractors to furnish and install all required floor, wall and roof sleeves.

14) Supplementary Steel and Miscellaneous Support Steel:

The Structural Steel Contractor is responsible to furnish and install any and all bent plates and angles that are indicated on the Contract documents for installation and support of surrounding construction, i.e. bent plates attached to perimeter beams, metal deck, etc., for masonry and drywall wall supports, and masonry wall bracing supports shown on the Contract Documents. This also includes any welding of deformed bars to tops of metal beams for masonry wall supports or reinforcing.

15) Welded Steel Masonry Anchors

The Structural Steel Contractor shall furnish and install all masonry anchors that are to be welded to any steel. (i.e., columns, beams, etc.) The Structural Steel Trade Contractor must weld anchors onto the structural steel and must make any accommodations to these anchors/ties and/or welds to make sure the anchor or tie projects pass the finished coat of the spray fireproofing. This must be done so that the male anchor or tie furnished and installed by the Masonry Trade Contractor does not disrupt the spray fireproofing finish coat. The Structural Steel Contractor shall be responsible for any cost associated with patching of spray fireproofing if the welded anchor is supplied on site and does not protrude past the spray fireproofing finish coat.

Additionally this Contractor shall install (weld) re-enforcing steel furnished by the Masonry Contractor required to complete the Masonry Scope of Work.

16) Lintels/Embeds:

The Structural Steel Contractor shall provide all interior and exterior loose lintels, hung lintels, angles, sill angles, steel embeds, plates, non slip stair nosings as noted on the Contract Documents for installation by others. Adhesive anchors from steel into masonry shall be installed by the Structural Steel Contractor.

The Structural Steel Contractor shall coordinate with all contractors (Glass & Glazing, General Trades, Masonry, etc.) for elevation, line, grade typical and as noted on the contract documents prior to installations.

17) Shoring/Bracing and Temporary Connections:

The Demolition and Abatement Contractor shall furnish, install, maintain and remove any shoring and/or Bracing as may be required to complete the demolition scope of work. The shoring shall be coordinated with the Structural Steel Contractor to allow for installation of structural steel. – **ADD. NO. 2**

The Structural Steel Contractor will provide all necessary bracing and temporary connections required for the structural steel scope of work. Included is minor shoring in the existing building where the work requires the Structural Steel Contractor to directly attach to existing structural steel – **ADD. NO. 2**

18) Touch Up Paint/Shop Priming

The Structural Steel Contractor shall be responsible for touch up painting of field welds. The Steel Fabricator shall be responsible for all shop priming. Additionally, the Structural Steel Contractor shall touch-up paint any damage in the field especially to the steel receiving High Performance Coatings.

19) Temporary Power:

Temporary power may not be available at the building; include any generators required to provide temporary power for the steel work operations. Regardless if the power is available or not, this Contractor is to furnish, supply and pay for all gas/diesel or generator driven equipment to erect and weld the steel and all cost associated with this is ***to be included*** in this Contractor's proposal. All electric generators shall have noise abatement features.

20) Roof/Slab Openings:

The Structural Steel Contractor is responsible to carry all slab and roof frame openings as shown on the Contract Documents, including but not limited to architectural, mechanical, electrical and structural drawings.

21) Hangers/Supports/Dunnage:

The Structural Steel Contractor shall furnish and install all supporting steel work shown on the contract documents for support of rooftop equipment and rooftop units. The Mechanical/HVAC/Plumbing Contractor shall be responsible for providing any loose dunnage required for proper installation of any rooftop equipment and rooftop mechanical units.

22) Miscellaneous Framing:

The Structural Steel Contractor shall provide all steel framing as noted on the Contract Documents to support Exterior Building Skins and Soffits.

The Structural Steel Contractor shall provide all soffit, window, Aluminum Storefront, Aluminum Curtain-wall, skylight, parapet, structural incidental and miscellaneous steel framing.

23) Anchor Bolt Templates:

The Structural Steel Contractor shall furnish 20 gauge steel anchor bolt templates (1 per each anchor bolt configuration) to the Concrete Trade Contractor prior to placing of concrete foundations with anchor bolts.

CLARIFICATIONS

a.) The Structural and Contractor shall:

- 1.) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2.) Sheet S-100 – Include all work related to structural steel indicated on this sheet including all items listed under Structural Steel Notes, Steel Joist Notes, and Steel Deck Notes. Also include the work under Concrete Masonry Note 14 and furnish and install hung steel lintels and furnish only loose lintels at locations where steel lintels are shown and where required at masonry openings. Include lintels per Lintel Notes section on this sheet. Include shop drawings and calculations for structural items. Include all connections, welding, and hardware. Provide all shoring necessary for this scope of work as indicated under General Note 4. – **ADD. NO. 2**
- 3.) Structural (“S”) Drawings – Furnish and install all metal indicated in the structural drawings except for reinforcing bar for concrete and masonry. Include all beams, columns, base plates, bent plates, lintels, roof framing, roof penetration framing, braces, connections, metal deck, deck closures and edge form, stairs, clips, angle, shims, threaded rods, headed and threaded studs, embeds, bolts, metal framing and welded studs, stiffener plates, outriggers, struts, trusses, fascia, anchor bolts, kickers etcetera.
- 4.) Sheet S-100 Structural Steel Note 11 - All exterior steel and bolting to be exposed to the weather shall be hot-dipped galvanized as noted. All steel lintels at exterior masonry walls shall be hot-dipped galvanized as noted in Lintel Note 11.
- 5.) Sheet S-301 – Include all work indicated on this sheet except for concrete and concrete reinforcing. Include headed stud shear connectors, threaded studs for nailers, metal decking, columns, beams, joists, base plates, anchor rods, braces, and all other work shown. Include steel framing and supports for roof penetrations

- at all penetrations shown and not shown in the drawings. Include all pour stops for the metal decking, landings, and stairs. Include all angle including “L” members such as L3x3 and include all tube steel such as “HSS”. Include all masonry clips.
- 6.) Sheet S-310 – Include all work indicated on this sheet except for concrete, concrete reinforcing, masonry, masonry reinforcing and guardrails. Include headed studs, angles, beams, joists, lintels, columns, metal deck, clips, supports, kickers, stiffeners, bent plate and all other work. Include the installation and welding of deformed bar anchors provided by others.
 - 7.) Sheet S-311 - Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, and concrete reinforcing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others.
 - 8.) Sheet S-312 - Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, and concrete reinforcing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others.
 - 9.) Sheet S-313 - Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, and concrete reinforcing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others.
 - 10.) Sheet S-320 – Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, concrete reinforcing, demolition and metal stud framing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others.
 - 11.) Sheet S-321 – Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, concrete reinforcing, demolition and metal stud framing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others. Include all metal angle including all L3x3x throughout the project.
 - 12.) Sheet S-321 – Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, concrete reinforcing, demolition and metal stud framing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others. Include all metal angle including all L3x3x throughout the project.
 - 13.) Sheet S-322 – Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, concrete reinforcing, demolition and metal stud framing. Include welding and installing all deformed bar anchors and weldable rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others. Include all metal angle including all L3x3x throughout the project.
 - 14.) Sheet S-323 – Include all work indicated on this sheet except for masonry, masonry reinforcing, concrete, concrete reinforcing, demolition and metal stud framing. Include welding and installing all deformed bar anchors and weldable

rebar at all locations including as shown on this sheet as examples. Deformed bar anchors will be provided by others. Include all metal angle including all L3x3x throughout the project.

- 15.) Sheet M-102.3 - Include framing for all roof penetrations including for mechanical, plumbing, electrical, and all other penetrations as shown on sheet M-102.3 as an example and as noted on S-100 General Note .
- 16.) Sheet M-201 – Include dunnage for cooling towers as indicated.
- 17.) Include lintels for all openings, doors, windows, ducts and other penetrations added to existing walls or specified for new walls.
- 18.) Include all adhesive anchors, drilling, doweling and epoxying, for steel attaching to concrete or masonry.
- 19.) Include shop drawings and calculations prepared by and stamped by a qualified Professional Engineer as indicated in specification section 051200, 055100 and other locations throughout the contract documents.
- 20.) Include all welding to structural steel and all welding of reinforcing steel throughout the project.
- 21.) Include cranes as required to erect all steel and include required permits for crane operation/service and transport.
- 22.) Subcontractor shall repair any damaged areas due to field welding or general handling of structural steel. Any touch up or repairs of damaged steel work requiring field welding, shall be repaired by a certified welder of the Subcontractor.
- 23.) Any metal that is exposed for final finish must be of high architectural grade quality with true members and welds ground smooth. Burrs are not acceptable.
- 24.) Submit all shop drawings and submittals for “E”, “B” and “C” Wing within 20 calendar days of receiving a notice to proceed.
- 25.) All exterior steel shall be galvanized. Galvanize all steel lintels, shelf angle, bearing and leveling plates, exterior trim as indicated in the specifications.
- 26.) Include all top of wall miscellaneous metal bracing to the structure including all seismic bracing, clips, angles and all other components complete.
- 27.) Include beams and all structural steel for supporting operable partitions.
- 28.) Include the abatement of all lead paint on steel as applicable for this scope of work. Assume that all paint on steel is lead unless verified otherwise.
- 29.) Furnish loose lintels above masonry openings typical and as noted on 9/S401. – **ADD. NO. 2**
- 30.) Furnish 2'-0" x 5'-0" x 1/2" Plate (with holes punched, coordinate with General Trades for hole locations/requirement) to General Trades Contractor typical and as noted on Dwg. A/A-549. – **ADD. NO. 2**
- 31.) Provide 3x4x1/4 and 6x8x1/2 Slotted Steel Angles typical and as noted on 1/A-510, 2/A-510, and 3/A-510. – **ADD. NO. 3**
- 32.) Provide 3x5x1/4 Angle Clip at the top of the wall (including those not labeled) typical and as noted on 1/A-512. – **ADD. NO. 3**

EXCLUSIONS:

1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #5.02
Metal Fabrications**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Metal Fabrications** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Metal Fabrications** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **Bid Package 5.02* - Metal Fabrications:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Metal Fabrications** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification

Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

033000	Cast-In-Place Concrete (As Applicable)
051200	Structural Steel Framing (As Applicable)
052100	Steel Joists Framing (As Applicable)
053100	Steel Decking (As Applicable)
055000	Metal Fabrications
055100	Metal Stairs (As Applicable)
055213	Pipe and Tube Railings
083323	Overhead Coiling Doors (As Applicable)
083326	Overhead Coiling Grilles (As Applicable)
Division 21	Fire Suppression (As Applicable)
Division 22	Plumbing (As Applicable)
Division 23	Mechanical (As Applicable)
Division 26	Electrical (As Applicable)
Division 27	Communications (As Applicable)
Division 28	Electronic Safety and Security (As Applicable)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:
 - i. Metal Fabrications; Bollards; Removable Bollards; Shop Drawings and Closeout Documents.

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Steel Ladders:

- a. This Subcontractor shall be responsible for furnishing and installing ALL steel ladders (Interior and Exterior) with associated clips as indicated on the Drawings and Specifications.
- b. This subcontractor shall coordinate all embeds and connecting plates to concrete/masonry with the appropriate subcontractor and any other trades associated with this Work.

5) Site and Building Stair and Guard Rails:

- a. This Subcontractor shall be responsible for furnishing and installing ALL stair rails (Interior and Exterior), and associated mounting hardware, including all coring into concrete/masonry stairs, walls or slabs. Where required at existing stair guardrails, this Subcontractor shall remove existing balusters and rails as indicated on the Contract Documents. – **ADD NO. 2**

- b. This subcontractor shall coordinate all embeds and connecting plates to concrete/masonry with the appropriate subcontractor and any other trades associated with this Work.
- c. This Subcontractor shall provide touch-up painting on all field welds satisfactory to the Architect and Construction Manager.

6) Stair Railing Erection:

This Contractor shall install stair railings as the Structural Steel Contractor erects stairs simultaneously with structural steel erection. If the Metal Fabrications Subcontractor is not able to install the stair guardrails and handrails after the steel installation of the stairs it is responsible to install temporary guardrails and handrails at the steel stair installation and remove prior to the installation of the permanent guardrails and handrails.

7) Winter Protection:

This Subcontractor will be responsible for Winter Protection for its Work.

8) Survey:

The Metal Fabrications Subcontractor shall provide all layout required to perform and complete his or her Work. The cost to replace or repair lost or damage control points shall be the charged to the offending Contractor.

9) Touch Up Paint/Shop Priming

The Metal Fabrications Subcontractor shall be responsible for touch up painting of field welds. The Metal Fabrications Subcontractor shall be responsible for all shop priming. Additionally, the Metal Fabrications Subcontractor shall touch-up paint any damage in the field especially to the steel receiving High Performance Coatings.

10) Temporary Power:

Temporary power may not be available at the building;, include any generators required to provide temporary power for the steel work operations. Regardless if the power is available or not, this Contractor is to furnish, supply and pay for all gas/diesel or generator driven equipment to erect and weld the steel. Any and all cost associated with this is *to be included* in this Contractor's proposal. All electric generators shall have noise abatement features.

CLARIFICATIONS

- a.) The Subcontractor shall include:

- 1.) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2.) Sheet C-3 - Include all guardrails, hand rail, all other site railings and vehicular gates and bollards and removable bollards. Layout and install all site items in concrete footings provided by Sitework Subcontractor and install all required bracing and embeds. Include all coordination. All site metal under this scope must be galvanized and shop primed unless specifically noted otherwise.
- 3.) Sheet C-16 Detail 2, 3, 4 and 5 - Furnish and install all guardrails, railings, hand rails, vehicle access gates and bollards in these details. Layout and install all site items in concrete footings provided by Sitework Subcontractor and install all required bracing and embeds. Include all coordination. All site metal under this scope must be galvanized and shop primed unless specifically noted otherwise. Include reflective tape at gates. Provide shop drawings for vehicle access gates and footings designed and signed by a qualified professional engineer.
- 4.) Sheet S-310 Detail 3 and 4 – Include guardrail system. Include all welding, sleeves, inserts and other work required for attachment.
- 5.) Sheet S-322 – Include guardrail system. Include all welding, sleeves, inserts and other work required for attachment.
- 6.) Sheet A-803.2 Detail C26 – Furnish and install steel channel to surround art.
- 7.) Sheet ES-101 Detail 6 & 6a – Include bollards at transformer utility pads.
- 8.) Include all guardrails and handrails and associated backing, sleeves and supports.
- 9.) Include prime painting and/or galvanizing as required.
- 10.) Include all access ladders and ladder safety doors and rails. All exterior access ladders and related items shall be galvanized as indicated in the specifications.
- 11.) Any metal that is exposed for final finish must be of high architectural grade quality with true members and welds ground smooth. Burrs are not acceptable.
- 12.) Include all welding required for the metal include in this scope.
- 13.) Include all adhesive anchors, drilling, doweling and epoxying, for items in this scope attaching to concrete or masonry.
- 14.) Include any calculations and shop drawings prepared and stamped by a qualified professional engineer required for this scope of work.
- 15.) Include all metal supports and backing for toilet compartment and dressing compartment overhead braces.
- 16.) Include all bollards and removable bollards.
- 17.) Provide removal of existing balusters / existing stair rail components typical and as noted 1&2/A603. – **ADD. NO. 2**
- 18.) Provide “new mesh screens (typ.) weld to existing” and “new mesh screens” typical and as noted on 1 & 2/A603. – **ADD. NO. 3**

EXCLUSIONS:

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #6.01
General Trades**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **General Trades** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **General Trades** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #6.01 – General Trades:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **General Trades** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification

Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: “Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1” prepared by Fusco Corporation dated June 18, 2012.

Entitled: “Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3” prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated “(As Applicable)”. In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

024119 Selective Demolition (As Applicable)

054000 Cold-Formed Metal Framing

061053 Miscellaneous Carpentry

061800 Structural Glue-Laminated Timber

062013 Exterior Finish Carpentry

072100 Building Insulation

074243 Aluminum Composite Systems

074423 Ceramic Tile Cladding – ADD. NO. 1

078413 Through-Penetration Firestop Systems (As Applicable)

078443 Fire Resistive Joint Systems

079200 Joint Sealants (As Applicable)

079500 Architectural Joint Systems

081119 Steel Doors and Frames (Install Only)

081416 Flush Wood Doors (Install Only)

083323 Overhead Coiling Doors – ADD. NO. 2

083326 Overhead Coiling Grilles – ADD. NO. 2

083000 Special Doors (Install Only)

083113 Access Doors and Frames (As Applicable)

083116 Floor Door Access

083459 Custom Steel Vault Doors and Frames

083473 Acoustically Rated Doors (Install Only)

087100	Door Hardware (As Applicable - Install Only)
087112	Acoustically Gasketed Doors (Install Only)
089000	Louvers and Vents
092116	Gypsum Board Assemblies
092123	Gypsum Board Shaft-Wall Assemblies
092400	Portland Cement Plaster
093013	Ceramic Tile (As Applicable)
095100	Acoustical Panel Ceilings (As Applicable)
095426	Suspended Wood Ceilings Systems (As Applicable)
098413	Acoustical Panels
100000	Specialties
101100	Visual Display Surfaces
101200	Display Cases
102100	Cubicles
102213	Wire Mesh Partitions
104400	Fire-Protection Specialties
105113	Metal Lockers
111300	Loading Dock Equipment
115213	Projection Screens
116143	Stage Curtains
116623	Gymnasium Equipment
116643	Gymnasium Scoreboards
122400	Window Shades
125716	Trade Equipment
144200	Wheelchair Lifts
Division 21	Fire Suppression (As Applicable)
Division 22	Plumbing (As Applicable)
Division 23	Mechanical (As Applicable)
Division 26	Electrical (As Applicable)
Division 27	Communications (As Applicable)
Division 28	Electronic Safety and Security (As Applicable)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Miscellaneous Carpentry; Cold Formed Metal Framing; Framing Accessories; Gypsum Sheathing; Glass-Fiber Blanket Insulation; Gypsum Board; Glass-Matt Water-Resistant Board; Gypsum Board Accessories; Gypsum Board Shaft Walls; Gypsum Board Assemblies; Drywall Partitions; Cementitious Backer Board as Tile Substrate; Drywall Ceiling and Soffits and other Gypsum and Light Gage Framing; Non-Structural Metal Framing; Wood Framing; Stage Wood Floor Infills; Wood Wall Base; Rough Carpentry; Safety (O.S.H.A. Protection); Blocking; Furring, Grounds; Backboards; Acoustical and other Sealants/Caulking; Fire-Resistive Joint System; Firestopping; Joint Sealants; Expansion Joint Cover Assemblies Louvers and Vents and installation of Steel Doors and Frames; installation of Flush Wood Doors; Access Doors and Frames; Door Hardware; Acoustical Ceilings; Signage; Cubicles;; Fire-Protection Cabinets; Fire Extinguishers; Projection Screens; Library Equipment; Gymnasium Equipment; Stage Curtains; Studio Curtains; Welding Curtain Systems; Selective Structure Demolition; DAFS Systems; Visual Display Boards; Temporary Work; Wheelchair Lifts; Coordination with project schedule and other trades; Submittals, Samples, Product Data;

Acoustical Wall Panel Systems; Coordination with project schedule and other trades; Submittals, Samples, Product Data - **ADD. NO. 2**

Overhead Coiling Doors; Overhead Coiling Grilles; Coordination with project schedule and other trades; Submittals, Samples, Product Data - **ADD. NO. 2**

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Building Insulation:

- a. The General Trades Contractor shall furnish and install Building Thermal And Acoustical Insulation as required to complete its Scope of Work as noted on the Contract Documents except for the below grade rigid building insulation at the foundation walls and footings completed by the Sitework Subcontractor. Include acoustical insulation at the new walls and ceilings of all toilet rooms even if it is not shown in the drawings.
- b. Provide and install all insulation at all buildings required to complete project. This includes but is not limited to thermal and acoustical insulation as specified at:
 - i. Exterior walls
 - ii. Interior walls
 - iii. Voids at doors and windows
 - iv. Ceiling and Floor Insulation
- c. Provide all mineral wool, sound attenuation fiberglass batts and thermal insulation.

5) Sheet Metal and Fabric Flashings

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Masonry Subcontractor.

- a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
- b. The Roofing Contractor shall furnish and install all Prefinished ZINC Cap, ZINC Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
- c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
- d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
- e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.

- f. The Roofing Contractor shall provide all flashings and reglets and accessories into existing masonry as noted on the Contract Documents. This shall include cutting and patching of all reglets into existing masonry necessary to provide a complete system.
- g. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
- h. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.
- i. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.
- j. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

6) Layout/Survey:

The General Trades Contractor shall provide layout/surveys for his or her own Scope of Work.

The General Trades Contractor shall provide Horizontal and Vertical Control Lines. This information shall be provided by a Connecticut Licensed Surveyor who shall install permanent offset points and bench marks that will allow for the reproduction of lines and grades by other Trades. This Contractor shall include per floor and per building wing the following: 4 bench marks and 4 offsets at locations directed by the Construction Manager.

7) Perimeter Cable Protection:

The Structural Steel Contractor shall install and maintain OSHA-compliant perimeter protection cables and supporting steel at all decks, where required by OSHA. Removal of perimeter cable protection and supporting steel at all levels (except the roof) shall be by the General Trades Contractor. Removal of perimeter cables at the roof shall be by the Roofing Contractor.

8) Seismic Framing at Top of Partitions:

This Subcontractor shall provide seismic framing and kickers at top of wall typical and as noted on the Contract Documents.

9) Light Gage Framing, Wood Framing, Gypsum Partitions and Gypsum Ceilings

The General Trades Contractor shall furnish and install Stud Framing, Gyp Board Sheathing, and/or 3/4" Pressure Treated Plywood, Batt and/or Semi-Rigid Insulation, Clips, firestopping and any and all accessories required to complete the substrate for all Trades as noted on the Contract Documents.

Subcontractor shall furnish and install all rough carpentry as required. This includes but is not limited to furnishing and installing all framed walls, framed ceilings, framed soffits, framed roofs and framed floors, framing at doors and windows and access doors, framing at fire extinguisher cabinets and hatches and all other openings, plywood, hangers, clips, hold-downs, straps, wood posts, wood beams, shop fabricated structural wood, sawn-timber beams, glue laminated timber (glu-lams), wood I-joists, PSLs, blocking, bracing, bridging, nailers, furring, cants, anchorage, fasteners, shims, roof sheathing, soffit sheathing, wall sheathing, and floor sheathing, parapet walls, backing, furring, soffit framing, roof rafters, building paper, all sheathing, wood fascia, partition framing etcetera at all buildings.

The General Trade Contractor shall furnish and install **ALL INTERIOR AND EXTERIOR WOOD AND METAL BLOCKING AND BACKING**, including but not limited to, general wood blocking, all roofing blocking and nailers required to form Fascias, Parapets, Rakes, Expansion Joints, etc., as shown on the drawings. This includes furnishing and installing any required anchors, bolts, screws, nails, anchor bolts. Etc. This Contractor is responsible for any approved method to furnish and install anchors for attaching wood to metal or concrete masonry units. This Contractor is responsible for all wood nailers to receive Pre-Manufactured HVAC Curbs at the roof. Additionally, this Contractor shall furnish to the Masonry Contractor any Anchor Bolts that will be installed in Masonry units for the purpose of anchoring any wood products. Include all blocking and backing required to support all items attaching to walls or ceilings throughout the project.

Provide all Firestopping/Safing/Fire/Smoke Sealants including at head and base of walls and at edge of slabs and decks as required to achieve required fire ratings; work includes filling voids & caulking as required. Provide all insulation and sealants to meet code, project documents and applicable requirements.

Include all interior and exterior building caulking and sealants unless specifically noted to be included in another scope. Furnish and install all caulking at dis-similar surfaces/conditions/transitions. Furnish and install all caulking including, but not limited to, caulking at louvers and vents, rails, serving windows, lockers, operable partitions, signage, miscellaneous metal, non-masonry expansion joint covers, overflow drain openings, etcetera per plans and specifications. Include backer rod as required.

Additionally the General Trades Contractor shall furnish and install all Drywall Partitions, Insulation, Clips and/or accessories as required to complete Drywall Partitions

types as noted on the Contract Documents including, Smoke, Fire, Acoustical, Architectural and other Sealant and Safing as noted. Fire Safing at Metal Deck/Steel intersection shall be completed by the General Trades Subcontractor. Neoprene Gasket between Drywall Partitions and Exterior Wall Systems shall be provided by the General Trades Subcontractor.

Subcontractor is responsible for all items, including, but not limited to all wall/partition anchors, bolts (including anchor & track bolts), clips, plates, metal stud framing, drywall, taping and finishing. Furnish, install and finish all gypsum board assemblies including screws, metal trim, resilient channels, sealants and joint-treatment materials. Subcontractor is responsible for all connections of metal stud systems to building steel. Finish drywall to levels indicated on plans and specifications. Include fire taping of all sheetrock. Provide fire caulk to structure as needed. Furnish and install air tight drywall ceiling plenums for mechanical systems. Furnish and install all gypsum board beam and column wraps and associated sealants/fire caulking. Include sheetrock at fire-extinguisher cabinets for fire-ratings. All installed sheetrock, cement board, etcetera must be plumb, line and free of warped planes. Subcontractor is responsible to ensure smooth walls and may use felt/furring strips if necessary to maintain level surfaces. Subcontractor is required to construct walls in compliance with the rating requirements specified or implied on the bid documents. Prepare all surfaces to be finished, include cleaning and sanding. Finished wall shall be flat. Protect floors and other adjoining surfaces from taping mud droppings and spillage of materials. Remove all drips from any finish surface. Furnish and install cement backer board at all tile and FRP areas. Include any required waterproofing behind the cement backer board. Provide all labor, material and equipment to furnish and install the exterior wall framing & sheathing systems including metal studs, track, runner tracks, metal channels, tie wire, pins and fasteners, backing plates, and compression or isolation strips, densglass sheathing, complete per plans and specifications. Provide all labor, material and equipment to furnish and install all metal stud and drywall systems on the interior of building. Include all rated head of wall conditions. Furnish and install cold rolled channel, angle, king studs, header boxes, notch backing and flat strap backing. Furnish and install ceiling suspensions systems for gypsum board ceilings including metal channels, all wire, fasteners, clips, and stiffeners complete per plans and specifications. Furnish and install rated stair cores. Include the installation of top track at all floors prior to any fireproofing of the structural steel. Include all block-out framing, rocking and finishing at locations of mechanical, electrical, toilet accessories and other equipment or items which penetrate metal framed walls and soffits. These items may not be found in the A drawings – refer to entire set of drawings for quantity and locations of penetrations. Frame, drywall and tape around smoke and fire/smoke dampers as required by the product specifications. Furnish and install all high impact gypsum. Also include all abuse resistant gypsum board. Furnish and install all fire rated enclosure systems around all light fixtures recessed in fire rated ceilings. Include all caulking for a complete fire rated system. Furnish and install a gypsum board system or a pre-manufactured enclosure system.

10) Winter Conditions and Temporary Heat:

The General Trades Contractor shall provide all necessary Winter Conditions and Temporary Heat for his or her work (Interior and Exterior) in accordance with **ACI 530.1-02 / ASCE 6-02 / TMS 602-02** for the duration of the project. Also see the Contract Documents which contains additional requirements for both Cold and Hot Weather conditions.

11) Snow, Ice and Water Removal

The General Trades Contractor shall be responsible for all snow, ice and water removal from **Interior of the Building** and staging provided by the General Trades Contractor and as directed by the Construction Manager for the duration of the Project. Snow, ice and water removal shall be required on a daily basis as directed by the Construction Manager at its sole discretion. This Contractor shall be responsible to provide whatever means necessary to remove snow, ice and water from the interior of the building including but not limited to pumping, piping and vacuuming.

12) Sound Attenuation at Mechanical Curbs:

The General Trades Contractor shall furnish and install all materials and equipment to construct Sound Attenuation Assemblies. This includes, but is not limited to, any framing, sheetrock, insulation, etc.

13) Hollow Metal Doors, Hollow Metal Door Frames (INSTALL ONLY):

The General Trade Contractor shall Receive, Handle, Distribute, Set, Protect, Install and Adjust *all* Steel/Hollow Metal Doors, Borrowed Lights, Vision Panels, Hardware, including access doors and panels, including access doors and panels furnished by others. Hollow metal frames contained within Masonry Partitions and Concrete Partitions (if required-openings/forming by Concrete Contractor) shall be set and plumbed by the General Trades Contractor who will work with the Mason/Concrete Contractor to ensure that the frames are blocked with CMU's and grouted properly.

The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trade Contractor, from damage during grouting operations performed by the Masonry Contractor.

- a. The General Trades Contractor shall make provisions to protect Hollow Metal Frames and Hardware mounting holes, installed by the General Trades Contractor, from damage during grouting operations.
- b. The General Trades Contractor shall prepare all frames to accept all hardware and technology.

14) Wood Doors (INSTALL ONLY):

The General Trade Contractor shall install all Wood Doors.

15) Acoustically Rated Doors (INSTALL ONLY):

The General Trade Contractor shall Receive, Handle, Distribute, Set, Install Adjust and Protect Sound Control Doors.

16) Finish Hardware (INSTALL ONLY):

The General Trade Contractor shall Receive, set, install, adjust and protect all Finish Hardware for this Scope of Work.

Additionally the General Trade Contractor shall also be responsible for the following:

- a.) Complete coordination between all hardware, doors, and frames
- b.) Install all doors, wood and hollow metal, pre-machined and pre-fit for glass lites, louvers, hardware, etc.
- c.) Install all electrified hardware for this Scope or Work including but not limited to electric locks, electric strikes, key cards/readers, electric operators/openers, transformers and any and all necessary accessories as noted on the Contract Documents.
- d.) Coordinate with the Hardware Contractor (BP#8.03) and meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.
- e.) Install and later remove at the direction of the Construction Manager temporary construction cores for all locksets.
- f.) This Contractor shall install all construction cores and permanent cores in each lockset. The Owner will not be doing ANY of this work.
- g.) This Contractor is responsible for coordinating the Master Key System with the owner including as many meetings as necessary to accomplish this coordination.
- h.) This Contractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.
- i.) This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on doors as noted on the Contract Documents.
- j.) This Contractor shall coordinate the Hollow Metal Frames and Doors to receive the Electrical Contractor's Door Contacts (contacts installed by Electrical Contractor).
- k.) Subcontractor responsible for all shims, sealants and/or backer rods required for door frame installation.
- l.) Install door opening assemblies including associated exit devices, closers, and gaskets complete.
- m.) Include unloading, inventorying, storing, protection, distribution, and installation of all doors, frames and finish hardware. General Trades Subcontractor is responsible for any theft, damage, or other loss to items once items are delivered to the project site.

- n.) Include all adjusting and balancing of doors for proper operation. Include the adjusting and balancing of doors and closers and comply with all applicable codes. Subcontractor shall perform the adjusting and balancing when directed by the Construction Manager in writing to minimize repeat visits and shall submit a report identifying any doors or closers that are not balanced as specified and the reason why.
- o.) Install thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

17) Blocking & Backing:

- a. The General Trades Contractor shall coordinate the Blocking requirements for the Work of the Window, Glazing and Storefront Trades Contractor.
- b. Any Blocking indicated on the Contract Documents or as required by the window and storefront manufacturer and the Window, Glazing and Storefront Contractor shall be furnished and installed by the General Trades Contractor.
- c. The blocking coordination responsibility amongst this Contractor and General Trades Contractor shall be ongoing for the duration of the project.
- d. The Window, Glazing and Storefront Contractor shall provide all Clip Angles, Steel Angles, Furring Channels, Miscellaneous Metal Framing and Shims to complete installation of the Windows and Storefronts before and after the General Trades Contractor has provided coordinated Blocking.

The General Trade Contractor shall furnish and install ALL WOOD AND METAL BLOCKING AND BACKING required by the Contract Documents. Wood Blocking shall include, but not be limited to, plywood blocking, furring, dimensional lumber and any and all wood required by the contract documents indicated for the purpose of blocking for any and all trades. The General Trades Contractor shall prepare a blocking location plan and conduct all required meetings in the presence of the Construction Manager. The blocking location plan shall be signed off by all trades requiring blocking (including the Architect for FF&E). Metal backing or blocking can only be used in lieu of specified wood backing or blocking if approved in writing by the Architect and Construction Manager.

18) Plywood Sheathing:

The General Trade Contractor shall provide all plywood sheathing throughout the project except for the following:

- a. The Roofing Subcontractor shall provide plywood sheathing where: (1) plywood sheathing is directly fastened to the Roof and or Canopy Metal Deck; and (2) plywood sheathing is directly fastened to roofing insulation.

19) Backboards:

The General Trade Contractor shall provide all Electrical/Mechanical/Communication and other Backboards and as described in the Specification and as shown on the Contract Drawings. This Contractor shall provide **thirty (30) additional four foot x eight foot ¾” plywood backboards** in addition to what is required by the Contract Documents. All plywood for backboards shall be fire rated plywood and labels shall not be covered.

20) Architectural Louvers, Grilles and Vents

This Contractor shall provide and install **ALL** Architectural Louvers/Grilles/Vents.

All “Architectural Louvers and Grilles” (as indicated on the architectural drawings) shall be provided by the General Trades Contractor. All “Mechanical Louvers and Grilles” (as indicated on the mechanical drawings) shall be the responsibility of the Plumbing and HVAC Contractor. – **ADD. NO. 2**

The Plumbing and HVAC Contractor shall be responsible for all final connections to the Architectural Louvers provided by the General Trades Contractor.

The General Trades Subcontractor shall block out areas behind louvers not needed for the free air requirements as indicated for louvers included in this scope.

21) Substrates:

The General Trade Contractor shall prepare drywall substrate so that they meet or exceed the requirements of the specification for the final finishes. The Substrate shall meet or exceed flatness, Levelness and/or surface texture required.

22) Inspections:

The General Trade Contractor shall be responsible for properly coordinating and scheduling all inspections with the Construction Manager including but not limited to framing, insulation and other inspection that may be required in the execution of his or her Scope of work by the Authority having Jurisdiction.

23) Expansion Joints:

Except for expansion joints located on the roof, the General Trade Contractor shall furnish and install all **interior and exterior** floor, wall and ceiling expansion joint assemblies as shown on the contract documents. – **ADD. NO. 2**

24) Saddles, Thresholds and Sills (INSTALL ONLY):

The General Trades Contractor shall install all saddles, thresholds and sills that are a component of your assembly.

25) Proper Manpower Management:

The General Trades Contractor shall have figured in their bid price multiple crews to perform the work of this bid package but not limited to; work both interior and exterior framing simultaneously in addition to separate crews for other work such as, but not limited to; installing gypsum, interior/exterior wall panels, taping and ceiling installation to meet the project schedule.

26) Floor Recesses:

The Concrete Contractor, General Trade Contractor and Flooring Contractor shall coordinate all recess in any concrete slab as required for floor finishes.

27) Temporary Entrance Doors and Exterior Openings:

This Contractor shall be responsible for enclosing the entire building with temporary protection, as described herein, during its demolition process:

- At **ALL exterior door** (ie. Aluminum, Hollow Metal, etc.) locations this Contractor shall include in his or her bid proposal the cost to provide and eventually remove and dispose temporary [exterior grade wood doors] with heavy duty locks and keys, all other necessary hardware, partition walls at these locations only, and closers. Temporary enclosures shall be free of drafts utilizing a method acceptable to the Construction Manager.
- At **ALL exterior punched openings** (ie. Window, Curtainwall, Storefront, Louvers, Coiling Doors, Roof Openings) this Contractor shall provide and eventually remove and dispose closing in of using weather/wind-tight enclosures [2x4 wood-framed heavy-duty-reinforced-clear-plastic barriers] acceptable to the Construction Manager. Temporary enclosures shall be free of drafts utilizing a method acceptable to the Construction Manager.
- At **ALL open facades** (ie. Building B & C Shop Wings, Openings Created as a Result of Structure Demolition, etc), the Contractor shall provide and eventually remove and dispose closing in of using weather/wind-tight enclosures [2x6 wood-framed heavy-duty-reinforced-clear-plastic barriers] acceptable to the Construction Manager.

This Contractor shall be responsible for security of the building with temporary doors, chains, locks, etc. Any associated cost shall be included in their base bid (distribution of 10 Sets of keys free of charge as directed by the Construction Manager.) Provide and

eventually remove and dispose temporary doors with permanent door rating and lockset to mechanical room, electrical rooms, electrical closets, elevator machine room, switch-gear room(s), as directed by the CM. All temporary doors shall have closers and locks on them.

This Contractor shall provide and eventually remove and dispose Six (6) access locations (at upper levels) for access of temporary works into the building by others and for general access to load the upper floors as work progresses.

This Contractor shall be responsible on a daily basis to secure all access points to the building at the direction of the Construction Manager.

28) Temporary Heating and Cooling:

The patching of holes in partitions made as required for Temporary Heating and Cooling is to be patched by the General Trades Contractor for drywall and the Masonry Contractor for masonry.

29) Temporary Power:

The patching of holes in partitions made for Temporary Power shall be provided by the General Trades Contractor for drywall and the Masonry Contractor for masonry

30) Construction Ventilation:

The General Trades Contractor shall be responsible for providing Six (6) Five Foot (5') diameter hi-speed, heavy duty portable fans for the duration of the Project. This includes setting up, locating, moving as needed, plugging or wiring as needed and maintaining at all times during this duration.

31) Architectural Joint Systems:

The General Trade Contractor shall furnish and install all Architectural Joint Systems Assemblies and expansion joints that are to be incorporated into this Scope of Work.

32) Minor Work/Provisions:

The General Trades Contractor shall carry in their base bid **240 hours of carpentry hours with small tools to perform additional minor work directed by the Construction Manager.**

The General Trades Contractor shall carry in their base bid **240 hours of laborer hours with small tools to perform additional minor work directed by the Construction Manager.**

The General Trades Subcontractor shall provide **2 hr fire separation walls with a total one-sided area of 7,200 total square feet and 5 pairs of double doors and panic hardware at locations to be specified by the Construction Manager.** General Trades Subcontractor shall also include code compliant temporary exit signage at these door locations. Include removal of these items and patching the adjacent surfaces as directed by the Construction Manager.

33) Man Lifts:

The General Trades Contractor shall allow use of its man lifts by the Construction Manager and others for inspection purposes and as directed by the Construction Manager. Provide training and any necessary safety equipment.

34) Fire Extinguishers and Cabinets:

The General Trades Contractor shall provide all Fire Extinguisher Cabinets and Permanent Fire Extinguishers as noted on the Contract Documents.

35) Overhead Doors and Coiling Grilles: - ADD. NO. 2

The General Trades Contractor shall provide all Overhead Doors and Coiling Grilles as noted on the Contract Documents. – **ADD. NO. 2**

1. Provide all labor, materials, tools, equipment and services necessary to furnish and install all overhead coiling doors and grilles including the service doors, coiling grilles, and coiling serving doors/windows with stainless steel counter top sill system. – **ADD. NO. 2**
2. Include complete motorized systems for service doors. Include furnishing and installing all controls, switching, and all low voltage wiring. Electrical Subcontractor will provide line voltage. – **ADD. NO. 2**
3. Include fire-activated hold opens if applicable. – **ADD. NO. 2**
4. Furnish and install all frames, trim, locks and hardware. Key all locks to match the locks of the other doors as directed by the Construction Manager. Include compatible lock cores, cylinders and keyway systems. – **ADD. NO. 2**
5. Provide samples and shop drawings as indicated. – **ADD. NO. 2**

CLARIFICATIONS

a.) The General Trades Contractor shall:

- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2) Sheet C-19 Notes For Irrigation 2 – Include backboard for irrigation controller.
- 3) Sheet D-105 – Include new hatch and cover for concrete structure project north of existing Culinary Kitchen and coordinate with Cast In Place Concrete Subcontractor.
- 4) Structural (“S”) Drawings – Furnish and install all metal stud framing work in the structural drawings and throughout the rest of the drawings.
- 5) Sheet S-100 – Include all of the work described under the Cold Formed Metal Framing Notes. Provide all shoring necessary for this scope of work as indicated under General Note 4.
- 6) Sheet S-220 Detail 5 – Include all of the metal stud framing shown.
- 7) Sheet S-301 Detail 2 – Include all wood nailers to receive Pre-Manufactured Curbs.
- 8) Sheet S-320 – Include all of the metal stud framing shown throughout this project and on this sheet. Include all clips that connect to metal studs and include all drilling, doweling and epoxying for metal stud attachment.
- 9) Sheet S-321 - Include all of the metal stud framing shown throughout this project and on this sheet. Include all clips that connect to metal studs and include all drilling, doweling and epoxying for metal stud attachment.
- 10) Sheet S-322 - Include all of the metal stud framing shown throughout this project and on this sheet. Include all clips that connect to metal studs and include all drilling, doweling and epoxying for metal stud attachment. Include all plywood sheathing and nailers.
- 11) Sheet A-101.1 Typical – Complete all work described under Construction Note 12 relating to the elevator system.
- 12) Sheet A-101.3 – Furnish and install all goggle cabinets throughout the project including the goggle cabinets in the science classroom labs.
- 13) Sheet A-102.2 – Furnish and install floor hatch in Carpentry B-108.
- 14) Sheet A-103.2 – Include all replacement/repair work at the existing bleachers. Move the bleachers as required to facilitate the replacement/repair of the existing bleachers.
- 15) Sheet A-110.0 – Provide Note 14. – **ADD. NO. 2**
- 16) Sheet A-110.1 & A110.2 – Patch and infill all Tectum, gypsum, concrete and steel roof decks typical and as noted. Include all metal studs, sheathing and insulation assemblies at existing louver vents. – **ADD. NO. 2**
- 17) Sheet A-549 Detail 2 – Include maple glulam media center entrance system. Include stamped shop drawings as indicated. Provide adequate space for concealed light fixtures and wiring. – **ADD. NO. 2**
- 18) Sheet EQ-101 – Install all general related equipment indicated to be owner furnished and contractor installed. Install the following items:
 - a. Shop Equipment Schedule – Automotive Production Shop
 - i. Item 14 – Welding Bench
 - ii. Item 19 – Metal Shelving
 - iii. Item 29 – Work Bench
 - iv. Item 32 – Welding Bench
 - v. Item 33 – Drill Press
 - vi. Item 34 – Pedestal Grinder

- 19) Sheet EQ-101 – Furnish and install all general related equipment and work indicated to be contractor furnished and contractor installed. Furnish and install the following items:
- a. Shop Equipment Schedule – Automotive Production Shop
 - i. Item 23 – Welding Curtain
 - ii. Item 27 – Flammable Storage Cabinet
 - iii. Item 28 – Tool Storage Cabinet With Doors
 - iv. Item 35 – Germicidal Goggle Cabinet
- 20) Sheet EQ-102 – Install all general related equipment indicated to be owner furnished and contractor installed. Install the following items:
- a. Shop Equipment Schedule – Electrical
 - i. Item 6 – Storage & Tool Cabinet – **ADD. NO. 1**
 - ii. Item 11 – Drill Press
 - iii. Item 12 – Grinder
 - b. Shop Equipment Schedule – Carpentry
 - i. Item 32 – Tool Storage Cabinet Or Industrial Shelving – **ADD. NO. 1**
- 21) Sheet EQ-102 – Furnish and install all general related equipment indicated to be contractor furnished and contractor installed. Furnish and install the following items:
- a. Shop Equipment Schedule – Electrical
 - i. Item 15 – Flammable Storage Cabinet
 - ii. Item 18 – Germicidal Goggle Cabinet
 - b. Shop Equipment Schedule – Carpentry
 - i. Item 30 – Flammable Storage Cabinet
 - ii. Item 33 – Germicidal Goggle Cabinet
- 22) Sheet EQ-103 – Furnish and install all general related equipment indicated to be contractor furnished and contractor installed. Furnish and install the following items:
- a. Shop Equipment Schedule – Plumbing
 - i. Item 6 – Welding Curtain
 - ii. Item 20 – Flammable Storage Cabinet
 - iii. Item 30 – Germicidal Goggle Cabinet
 - b. Shop Equipment Schedule – Graphics
 - i. Item 15 – Flammable Storage Cabinet
- 23) Sheet EQ-103 – Install all general related equipment indicated to be contractor furnished and contractor installed. Install the following items:
- a. Shop Equipment Schedule – Plumbing
 - i. Item 9 – Welding Bench
 - ii. Item 11 – Work Bench
 - iii. Item 12 – Tool Storage Cabinet
 - iv. Item 16 – Work Bench
 - v. Item 17 – Drill Press
 - vi. Item 18 – Pedestal Grinder
 - vii. Item 19 – Plasma Cutter
- 24) Sheet EQ-106 – Furnish and install all general related equipment indicated to be contractor furnished and contractor installed. Furnish and install the following items:
- a. Shop Equipment Schedule – Manufacturing

- i. Item 40 – Germicidal Goggle Cabinet
 - ii. Item 42 – Flammable Storage Cabinet
 - b. Shop Equipment Schedule – Cosmetology
 - i. Item 5 – Flammable Storage Cabinet
 - ii. Item 8 – Pedicure Station
- 25) Sheet F-003 – Include patching at temporary FDC location as required for this scope of work.
- 26) Sheet E-001 Note 37 - Furnish and install plywood in all electrical and data rooms and as noted.
- 27) Patch existing plaster work in all A Wing locations including as shown in detail 1/A502.
- 28) Include temporary protection at C Wing where culinary area is demolished. Also include it where roof gets removed and replaced at C Wing.
- 29) All doors, windows, walls, and other assemblies must comply with specified STC ratings including the ratings indicated on drawing INFO.1
- 30) Include blocking for smart boards and other owner furnished and installed equipment.
- 31) Remove and reinstall stairs for access in kitchen tunnel per sheet P003.1.
- 32) Include the careful removal of the existing science lab teacher and student work stations including the chemical resistant tops and casework below and relocate to the two temporary lab spaces as directed by the Construction Manager. Demolish and remove the lab stations when the temporary labs are no longer needed as directed by the Construction Manager.
- 33) Provide all labor, materials, tools, equipment and services necessary to furnish and install all stage curtain systems and studio curtain systems. Include the track, pulleys, blocks, cable, supports, curtain, clamps, brackets, fasteners and all accessories. Ensure curtain is installed level and plumb and operation of curtain is satisfactory to the Construction Manager. Submit shop drawings for approval. Include owner training for the system.
- 34) Provide new sleeve cover to match existing typical for all 3 volleyball courts typical and as noted on Dwg. A103.2. – **ADD. NO. 2**
- 35) Furnish and install wood soffits and tongue and groove including soffit vents and screens.
- 36) Include any calculations and shop drawings prepared and stamped by a qualified professional engineer required for this scope of work. Include professional engineering for specification section 054000, 074213, 089000, 116623 and all other sections as it relates to this scope of work.
- 37) Provide all access doors and panels shown in the drawings and required for this scope of work. Install all access doors and panels for this scope of work and install all access doors and panels provided by other trades. The Construction Manager shall select the manufacturer of the access doors and panels from a manufacturer listed in the specifications for all trades to use, so a single manufacturer is used throughout the project.
- 38) The acoustical rated doors shall be installed by factory-trained or approved representatives or contractors as indicated in the specifications.
- 39) Furnish and install all back mounted acoustical panels.

- 40) Furnish and install all sanitizing eyewear cabinets, goggle cabinets, fire blankets and cabinets, flammable liquids storage cabinets, corrosive material storage cabinets, and “Knox Box” units.
- 41) Furnish and install all visual display surfaces including the markerboards and tackboards.
- 42) Furnish and install all display cases.
- 43) Furnish and install all cubicle curtains, tracks and curtain carriers.
- 44) Furnish and install all wire mesh partitions.
- 45) Furnish and install all portable fire extinguisher systems including fire extinguishers, cabinets, and mounting brackets.
- 46) Furnish and install all loading dock equipment.
- 47) Furnish and install all projection screens including motorized projection screens. Provide key operated switches and all accessories for the motorized projection screens and coordinate with Electrical Subcontractor for wiring. Include training on how to operate and maintain the system on two separate days as directed by the Construction Manager
- 48) Furnish and install stage curtains and valance and studio curtain systems. Include shop drawings for stage curtains and valance. Include training on how to operate and maintain the system on two separate days as directed by the Construction Manager.
- 49) Furnish and install all gymnasium equipment including basketball equipment and wall mounted safety pads. Furnish and install motors for basketball goal systems and furnish all switches for installation by the Electrical Subcontractor.
- 50) Furnish and install all gymnasium scoreboard systems. Include training on how to operate and maintain the system on two separate days as directed by the Construction Manager.
- 51) Coordinate the installation of all recessed door contacts and card readers with the owner’s security consultant and the Construction Manager before proceeding with the work. Refer to the SEC drawings.
- 52) Include all floor door access. Furnish and install.
- 53) Furnish and install all welding curtains and support rods and welding tables.
- 54) Install all owner furnished tool storage cabinets.
- 55) ALL DUMPSTERS are to be provided by the General Trades Contractor except for:
 - a. BP#1.01 Site Preparation*;
 - b. BP#2.01 Demolition & Abatement*;
 - c. BP#7.01 Roofing* – **ADD. NO. 2**
 - d. BP#31.04 Athletic Fields*;

*These excepted Trade Contractors shall deposit debris generated by their Scope of Work into their own furnished and supplied dumpsters.
- 56) Furnish and install all window shades and window coverings.
- 57) Furnish and install new volleyball sleeve covers noted in the drawings.
- 58) Subcontractor shall furnish and install all lockers as required including all associated hardware, sealants, base, hooks, shelves, numerals, sloping tops, panels and trim accessories. Furnish shop drawings for approval prior to fabrication. Installation to be neat and level. Provide touch-up paint as extra material. Furnish and install benches and pedestals at lockers.
- 59) Provide layout of locker bases for the Concrete Subcontractor.

- 60) Ceramic tile cladding described in specification section 074423 to be completed by bid package 6.01 General Trades. – **ADD NO. 1**
- 61) Provide Wood Framed Structure in Electrical Shop B114 typical and as noted on 5/A514. – **ADD. NO. 2**
- 62) Provide batt insulation typical and as noted on 31&32/A-110.7. – **ADD. NO. 2**
- 63) Install 2'-0" x 5'-0" x 1/2" Plate (coordinate with Structural Steel Contractor for hole locations/requirement) typical and as noted on Dwg. A/A-549. – **ADD. NO. 2**
- 64) Provide exterior 1x6 T-G Cedar ceiling/soffits typical and as noted on Dwg. 1/A203.3. – **ADD. NO. 2**
- 65) Provide wire mesh partitions per keyed construction note #9. – **ADD. NO. 2**
- 66) Provide "New Wire Mesh Partition with 7'-0" High Wire Mesh Door" typical and as noted on Dwg. 1/A603. – **ADD. NO. 3**
- 67) Provide installation of frames at and including FRP Doors typical and as noted on the Door Schedules. – **ADD. NO. 3**

Wheelchair Lift Clarifications

- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2) Sheet A-103.2 – Re-wire existing wheelchair lift near stage to make lift operate without the use of keys and plug existing keyholes as indicated.
- 3) Sheet A-101.2 – Furnish and install a complete wheelchair lift system in Building A as indicated.
- 4) Provide all labor, materials, tools, equipment and services necessary to furnish and install complete wheel chair lift systems.
- 5) Furnish and install wheel chair lift interiors.
- 6) Furnish and install flooring for lifts.
- 7) Include all costs and coordination associated with the inspection and permits of the wheel chair lifts.
- 8) Furnish all inserts and embeds required for installation.
- 9) All lift interior and exterior dimension are to be in accordance with the plans, specifications and applicable codes.
- 10) Furnish and install life/safety and accessibility signage at wheelchair lift per plan and specifications.
- 11) Include all required programming, balancing and adjusting.
- 12) Furnish and install lift sills and grouting of sills.
- 13) Provide OSHA compliant removable temporary barriers during installation of lift.
- 14) Include operation and maintenance manual per the specifications.
- 15) Include all electrical terminations for the electrical power provided by the Electrical Subcontractor.
- 16) Include all samples, shop drawings, and other submittals required per the specifications. All submittals must be submitted to Construction Manager within 60 calendar days after issuance of the contract or notice to proceed.
- 17) Include all inspections and permits required.

- 18) Include a two year warranty period and 1 year full maintenance service beginning from the date of substantial completion as indicated in the specifications. Check the operation of the lift with the Owner's personnel present before the warranty period is over but no earlier than 1 month before the end of the warranty period and address any warranty issues.
- 19) Include owner training to maintain and use the lift on two separate occasions as directed by the Construction Manager.

Overhead Doors and Coiling Grilles Clarifications

- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work. – **ADD. NO. 2**

EXCLUSIONS:

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

ALLOWANCE NO. 1 – TEMPORARY COVERED WALKWAYS - \$20,000

Provide safe covered temporary egress paths as directed by the Construction Manager.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #8.01
Windows, Glazing & Storefronts**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Windows, Glazing & Storefronts** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Windows, Glazing & Storefronts** as required, shown, described and specified under this Bid Package, and all related scope and services required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #8.01* – Windows, Glazing & Storefronts:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Windows, Glazing & Storefronts** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s)

and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

074213 Metal Wall Panels

078443 Fire Resistive Joint Systems (As Applicable)

079200 Joint Sealants (As Applicable)

084113 Aluminum-Framed Entrances & Storefronts

084400 Glazed Aluminum Curtain Walls

085113 Aluminum Windows

085119 Steel Windows

085673 Sound Retardant Windows

087100 Door Hardware (As Applicable)

088000 Glazing

Division 21 Fire Suppression (As Applicable)

Division 22 Plumbing (As Applicable)

Division 23 Mechanical (As Applicable)

Division 26 Electrical (As Applicable)

Division 27 Communications (As Applicable)

Division 28 Electronic Safety and Security (As Applicable)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Metal Wall Panels; All Aluminum Frames; All Aluminum-Framed Entrances, All Storefronts and Accessories; Glazed Aluminum Curtain Walls and Accessories; Aluminum Windows; Steel Windows; Sound Retardant Windows; Aluminum Trim; Aluminum In-Fills at Column Lines and at Steel Columns; Glazing; Special Function Glazing; Fire-Rated Glazing; Safety Glazing; Fasteners and Accessories; Float Mirrors; Aluminum Thresholds/Saddles/Sills; Firestopping and Safing; Flashings; Aluminum Closure Pieces; Insulation within its Scope of Work; Screens; Caulking and Sealants and backer rod (in and out); Stays; Glazing Compounds; Setting blocks; Shims; Gaskets; Glass Channels; Tracks; Aluminum Caps; Flashings; Closures; Coping; Weep Screeds; Sill Stools; Angles; Clips; Support Members; Furring; Brackets; Seismic Bracing; Glazing Tape; Mullions; Panning; Expanders; Sill Anchorage; and all other accessories required. – **ADD. NO. 2**

Include shop drawings and structural analysis data signed and sealed by a qualified professional engineer as indicated in the specifications. Verify all dimensions in the field prior to fabrication or installation.

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Firestopping and Fire Safing:

This Contractor shall furnish and install Firestopping and Fire Safing as required to complete the Windows, Glazing and Storefront Contractor's Scope of work and as indicated in the Contract Documents.

5) Shimming:

This Contractor shall coordinate the shimming to assure proper installation. All shimming, whether it is wood, plastic or any other material is to be furnished and installed by the Aluminum Windows, Storefronts, Metal Wall Panel Assemblies & Curtain Wall Contractor.

6) Window and Storefront Blocking:

- a. This Contractor shall coordinate the Blocking requirements for its Work with the General Trades Contractor.
- b. Any Blocking indicated on the Contract Documents or as required by the manufacturer and Window, Glazing and Storefront Contractor shall be furnished and installed by the General Trades Contractor.
- c. The blocking coordination responsibility amongst this Contractor and General Trades Contractor shall be ongoing for the duration of the project.
- d. This Contractor shall provide all Clip Angles, Steel Angles, Furring Channels, Miscellaneous Metal Framing and Shims to complete installation of the Work before and after the General Trades Contractor has provided coordinated Blocking.

7) Sealants and Caulking:

This Contractor shall provide all sealants and caulking as required to complete his or her scope of work.

- a. This Contractor shall provide the appropriate Backer Rod, Joint Sealant/Caulking at all exterior and interior Windows, Curtain Walls, Entrances and others surfaces contiguous to your Scope of Work, as described and noted on the Contract Documents.
- b. The Intent of this Joint Sealant/Caulking Scope of Work is for this Contractor is to provide a complete and weather tight system in all respects.

8) Window Flashing and Sheet Metal:

This Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with its Work; such as but not limited to: Flashings required to be installed after roofing work and prior to Window or Panel installations; Prefinished Aluminum Flashing at transitions and the like.

- a. This Contractor shall provide all Flashings and Sheet Metal that is contiguous with his or her work, such as but not limited to: Flashings required to be installed prior to window or Panel installations, Prefinished Aluminum Flashing.

- b. Prefinished Aluminum Flashings, Counter Flashings, Sill Closure Pieces and other Sheet Metal contiguous with the Window systems shall be provided by this Contractor.
- c. This Contractor shall provide all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.
- d. This Contractor shall provide all Flashings and Sheet Metal above the receiver (reglet) and install the receiver (reglet) provided by others.

9) Sheet Metal and Fabric Flashings:

The Roofing Contractor shall furnish and install all Sheet Metal Flashings, Metal Copings, Trim and Roof Accessories as described in the Contract Documents and furnish all exposed Metal through Wall Flashings, including metal reglets for installation by the Mason Contractor.

- a. Any concealed and exposed (partially into **NEW** masonry) flashings and any metal flashing requiring a fabricated bend shall be supplied by the Roofing Contractor and installed by the Masonry Contractor at Cavity Walls, Unit Masonry Steel Lintels, Relieving Angle and other areas in contact with Masonry as indicated on the Contract Documents.
- b. The Roofing Contractor shall furnish and install all Prefinished ZINC Cap, ZINC Fascia and/or Prefinished Aluminum Flashings, Counter Flashings, Copings, Metal Gravel Stops and other Sheet Metal contiguous with the Roofing system.
- c. The Roofing Contractor shall furnish to the Masonry Contractor, for installation into the Mason's **NEW** work, all other Metal Flashing and Metal Thru Wall Flashings as noted in the Contract Documents.
- d. Membrane Flashings contiguous to the Mason's work shall be provided and installed by the Mason Contractor.
- e. The Windows, Glazing and Storefronts Contractor shall furnish and install all Flashings and Sheet Metal that is contiguous with his or her work; such as but not limited to: Flashings required to be installed prior to window or Panel installations.
- f. The Roofing Contractor shall provide all flashings and reglets and accessories into existing masonry as noted on the Contract Documents. This shall include cutting and patching of all reglets into existing masonry necessary to provide a complete system.
- g. The Roofing Contractor shall supply to the Masonry Contractor all flashings and reglets and accessories into new masonry and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the Masonry Contractor.
- h. The Roofing Contractor shall supply to the Window Contractor all flashings and reglets and accessories into Window System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar.

The Roofing Contractor shall supply the receiver (reglet) to the Window Contractor.

- i. The Roofing Contractor shall supply to the General Trades Contractor all flashings and reglets and accessories into DAFS System and necessary to accept Roofing Contractor's cap flashing that goes over Roofing Contractor's termination bar. The Roofing Contractor shall supply the receiver (reglet) to the General Contractor.
- j. All metal drip flashings shall be furnished by the Roofing Contractor and installed by the Masonry Contractor.

9) Saddles, Thresholds and Sills:

This Contractor shall provide all saddles, thresholds and sills that are a component of your assembly. Subcontractor to ensure all exterior thresholds slope away from the buildings.

10) Anchorage:

This Contractor shall furnish and install all appropriate anchorage systems for his or her Scope of Work.

This Contractor shall furnish and install any additional structural members necessary for the installation of all items in this bid package that are not shown on the contract documents.

This Contractor shall provide and include all necessary attachments (clips, angle, reinforcement, hardware, shims, aluminum shapes, fasteners, or anything that is industry standard to this work, etc.) as required, whether or not shown on Contract Documents, to properly erect and install this work.

11) Glass and Glazing:

This Contractor shall furnish and install all Glass and Glazing for but not limited to Hollow Metal Doors, Sidelights, Borrowed Lights and Wood Doors and Mirrors in addition to the Metal Windows, Curtainwall and Aluminum Entrances.

This Contractor shall provide all safety laminated and fire rated glass shown on the Contract Documents.

12) Finish Hardware:

This Subcontractor shall Furnish and Install all Finish Hardware required for this Scope of Work.

For clarification, this Contractor shall also install factory electrified hardware for this Scope or Work including but not limited to electric locks, electric strikes, operators,

transformers and any and all necessary accessories as noted on the Contract Documents, including but not limited to all necessary prep work for security, technology, operators, etc., for this bid package and any other bid package.

The Electrical Trade Contractor shall furnish to the Doors, Frames and Hardware Contractor, General Trades Contractor and Window & Curtainwall Trade Contractor complete information, layout requirements and templates or actual samples of the door contacts as it relates the Security System.

This Contractor shall receive this information and have all doors and frames **factory** prepared in order to receive this material. The installation of the actual door contact shall be by the Electrical Contractor.

This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on its doors as noted on the Contract Documents.

13) Insulation:

This Contractor shall furnish and install all Insulation as noted on the Contract Drawings associated with the Aluminum Doors, Windows, Storefront, and Curtainwall.

This Contractor shall furnish and install all rigid insulation shown at header and sill conditions between Storefront / Curtainwall and Masonry as noted on the Contract Documents.

14) Aluminum Closure Pieces, Break metal and Miscellaneous Items:

This Contractor shall provide all Channels, Closure Pieces, Break metal, Anchors, Angle Clips, Sills, and Soffits associated with your Work as specified by the Contract Documents.

This Contractor shall provide all support clips that anchor your Work to Structural Steel or other contiguous substrate.

15) Weatherstripping:

This Contractor shall provide all Weatherstripping for your Scope of Work.

16) Finish Hardware:

This Contractor shall furnish, set, install, adjust and protect all Finish Hardware for this Scope of Work.

Additionally this Contractor shall also be responsible for the following:

- a.) Complete coordination between all hardware, doors, and frames

- b.) Install all pre-machined and pre-fit for glass lites, louvers, hardware, etc.
- c.) Install all electrified hardware for this Scope or Work including but not limited to electric locks, electric strikes, key cards, transformers and any and all necessary accessories as noted on the Contract Documents.
- d.) Coordinate with the Hardware Contractor (BP#8.03) and meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.
- e.) Install and later remove at the direction of the Construction Manager temporary construction cores for all locksets for items under this scope.
- f.) This Contractor shall install all construction cores and permanent cores in each lockset for items under this scope. The Owner will not be doing ANY of this work.
- g.) This Contractor is responsible for coordinating the Master Key System with the owner including as many meetings as necessary to accomplish this coordination.
- h.) This Contractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.
- i.) This Contractor shall install the magnetic door hold open contact plate (furnished by the Electrical Contractor) on it doors as noted on the Contract Documents.
- j.) This Contractor shall coordinate the Aluminum Doors to receive the Electrical Contractor's Door Contacts (contacts installed by Electrical Contractor).
- k.) Subcontractor responsible for all shims, sealants and/or backer rods required for door frame installation.
- l.) Install door opening assemblies including associated exit devices, closers, and gaskets complete.
- m.) Include unloading, inventorying, distribution, and installation of all finish hardware.
- n.) Include all adjusting and balancing of doors for proper operation. Include the adjusting and balancing of doors and closers and comply with all applicable codes. Subcontractor shall perform the adjusting and balancing when directed by the Construction Manager in writing to minimize repeat visits and shall submit a report identifying any doors or closers that are not balanced as specified and the reason why.
- o.) Install thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

17) Insulation/Expansion:

This Contractor shall furnish and install any insulation and expansion assemblies that are shown within the Contract Documents for your Scope of Work.

CLARIFICATIONS

- a.) The Windows, Glazing and Storefronts Contractor shall:
- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
 - 2) Subcontractor to protect exterior glass from damage immediately after installation.
 - 3) All glass to be turned over without smudges, markings, stains, stickers or space pads. Leave all work clean of all fabrication and installation materials including caulking and sealant.
 - 4) Include final adjustments of all doors for smooth and proper operation and tight fit, and in compliance with ADA requirements and all applicable codes.
 - 5) Include all welding required for this scope.
 - 6) Include the field testing of a qualified independent testing agency to test sound retardant windows as indicated in the specifications.
 - 7) Include all independent testing specified for this scope of work.
 - 8) Provide 074213 Metal Wall Panels noted as “Pre-Finished Corrugated Aluminum Panels”, “Pre-Finished Aluminum Panels”, “Pre-Finished Corrugated Metal Panels”, typical and as noted A303, A303.1 as clarified by Antinozzi Addendum No. 3 Volume 2 of 3 Architectural Item #7. – **ADD. NO. 3**
 - 9) Provide “8” Metal Studs with 7/8” Furring Channels- Spacing of Studs and Furring Channels by Panel System Contractor – Track Top and Bottom” typical and as noted on Dwg. 1/A536, 2&3/A537, 5/A31, 3&4/A530. – **ADD. NO. 3**
 - 10) Provide “3-5/8” Metal Studs – Cont Sheet Mtl Angle on Each Stud – Attachment Clips as required by Panel System Contractor – Spacing of Studs, Angles & Clips by Panel System Contractor – Cont Track Top & Bottom & Cont Wood Blocking attached to bottom track” typical and as noted 35/A529. – **ADD. NO. 3**
 - 11) Provide “6in Metal Studs at 16” o.c.”, “Cont. Metal Sub-Girt by Panel Mfg.” typical and as noted on Dwg. 10/A522. – **ADD. NO. 3**
 - 12) Provide “10in Metal Studs – Cont Sheet Mtl Angle on Each Stud – Attachment Clips as required by Panel System Contractor – Spacing of Studs, Angles & Clips by Panel System Contractor – Cont Track Top and Bottom – Continuous Wd Blkg attached to bot. track”, “Cont. Metal Sub-Girt by Panel Mfg” typical and as noted on Dwg. 5/A521, 8/A522. – **ADD. NO. 3**
 - 13) Provide Metal Studs (not noted but detailed) and “cont. metal sub-girt by panel mfg.” typical and as noted on 7/A521. – **ADD. NO. 3**

EXCLUSIONS:

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #8.03
Doors, Frames and Hardware (Furnish Only)**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include materials associated with **Doors, Frames and Hardware (Furnish Only)** as described in the Contract Documents and as outlined below.

It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional execution to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #8.03 – Doors, Frames and Hardware (Furnish Only):** This Subcontractor is responsible to furnish the **Doors, Frames and Hardware (Furnish Only)** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: “Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1” prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

- 081119 Steel Doors and Frames (Furnish Only)**
- 081416 Flush Wood Doors (Furnish Only)**
- 083000 Special Doors (Furnish Only)**
- 083473 Acoustically Rated Doors (Furnish Only)**
- 087100 Door Hardware (As Applicable - Furnish Only)
- 087112 Acoustically Gasketed Doors (Furnish Only)**

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Steel Doors and Frames; Flush Wood Doors; Special Doors; Acoustically Rated Doors; Door Hardware; Frames at FRP Doors; Coordination with project schedule and other trades; Submittals, Samples, Product Data – **ADD. NO. 3**

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be

considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Finish Hardware (FURNISH ONLY):

This Contractor shall furnish all Finish Hardware except for the aluminum door hardware.

Include the furnishing of all door hardware indicated in specification section 087100 except for the items indicated to be furnished by security contractor or electrical contractor, or for aluminum doors.

Additionally this Contractor shall also be responsible for the following:

- a.) Complete coordination between all hardware, doors, and frames
- b.) Furnish all doors, wood and hollow metal, pre-machined and pre-fit for glass lites, louvers, hardware, etc.
- c.) Furnish all electrified hardware including but not limited to electric locks, electric strikes, key cards/readers, transformers and any and all necessary accessories as noted on the Contract Documents.
- d.) Furnish lockable metal heavy duty key cabinet of sufficient size to hold all key sets plus expansion for an additional 50%. This Contractor will meet with the Owner to set up the cabinet in an initial meeting and then turnover the key cabinet at a follow-up meeting.
- e.) Furnish at the direction of the Construction Manager temporary construction cores for all locksets.
- f.) This Contractor shall furnish all construction cores and permanent cores in each lockset. The Owner will not be doing ANY of this work. Include all cores and keying for ALL building locks including for hardware at aluminum, wood, FRP, steel and hollow metal doors.
- g.) This Contractor is responsible for coordinating the Master Key System with the Owner including as many meetings as necessary to accomplish this coordination.
- h.) This Contractor will return to the Project (6) months after the date of Substantial Completion to examine, re-adjust, consult, replace hardware items, and prepare a detailed written report to the Owner.
- i.) This Contractor shall coordinate the magnetic door hold open contact plate (furnished by the Electrical Contractor) with its doors as noted on the Contract Documents.
- j.) This Contractor shall prepare the Hollow Metal Frames and Doors to receive the Electrical Contractor's Door Contacts (contacts installed by Electrical Contractor).
- k.) Subcontractor responsible for all shims, sealants and/or backer rods required for door frame installation.

- l.) Furnish door opening assemblies including associated exit devices, closers, and gaskets complete.
- m.) Furnish unloading, inventorying, distribution, and coordination of all doors, frames and finish hardware.
- n.) Coordinate all adjusting and balancing of doors for proper operation. Include the adjusting and balancing of doors and closers and comply with all applicable codes. Subcontractor shall coordinate the adjusting and balancing when directed by the Construction Manager in writing to minimize repeat visits and shall submit a report identifying any doors or closers that are not balanced as specified and the reason why.
- o.) Furnish thresholds, seals, smoke seals, fasteners, door stops, door hold-opens, finish hardware, kickplates, gasketing and weather stripping, sweeps, astragals and door silencers complete.

5) Saddles, Thresholds and Sills (FURNISH ONLY):

This Subcontractor shall furnish all saddles, thresholds and sills that are a component of its assembly.

6) Electrified Hardware:

The Electrical Trade Contractor shall furnish to the Doors, Frames and Hardware Contractor, General Trades Contractor and Window & Curtainwall Trade Contractor complete information, layout requirements and templates or actual samples of the door contacts as it relates the Security System.

This Contractor shall receive this information and have all doors and frames factory prepared in order to receive this material. The installation of the actual door contact shall be by the Electrical Contractor.

7) Factory Trained Personnel:

Doors, Frames & Hardware Subcontractor shall provide factory-training to the General Trades subcontractor for the installation of the acoustically rated doors.

In addition, the Doors, Frames & Hardware Subcontractor shall provide factory trained supervision personnel during the initial frame installation, at regular periods during the door installation, and at the final inspection and the manufacturer shall issue a letter of compliance certifying the completion of a successful installation as indicated in the specifications.

CLARIFICATIONS

- a.) This Contractor shall:

- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2) Provide frames at FRP Doors typical and as noted on the Door Schedules. – **ADD. NO. 3**

EXCLUSIONS:

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #23.01
Plumbing & HVAC**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Plumbing & HVAC** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Plumbing & HVAC** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **BID PACKAGE #23.01 – Plumbing & HVAC:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Plumbing & HVAC** and related work as described in the Specifications, Drawings, Site

Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

078413 Through-Penetration Firestop Systems (As Applicable)
079200 Joint Sealants (As Applicable)

083113 Access Doors and Frames (As Applicable)

114000 Food Service Equipment (As Applicable)
123553 Wood Laboratory Casework And Furnishings (As Applicable)
123570 Healthcare Casework (As Applicable)

Division 21 Fire Suppression (As Applicable)

Division 22 Plumbing
Division 23 Mechanical

230500 Demolitions And Removals (As Applicable)

Division 26 Electrical (As Applicable)
Division 27 Communications (As Applicable)
Division 28 Electronic Safety and Security (As Applicable)
Division 31 Earthwork (As Applicable)
Division 32 Exterior Improvements (As Applicable)

328000 Irrigation System (As Applicable)

Division 33 Utilities (As Applicable)

Commissioning (note included in 019100, DIV 1)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Plumbing and Mechanical Demolition throughout existing buildings and tunnels;

All Service from five feet outside building into the building unless otherwise noted in the Clarifications Section of this Scope of Work; Plumbing; Heating, Ventilating and Air Conditioning; Supply Connections to equipment of other trades and/or furnished by Owner; Connections to Food Service Equipment and components; Kiln Fume Hoods (including all service connections); Power and Control Wiring beyond the Main Disconnect; Grilles, Registers and Diffusers; Automatic Temperature Control Systems; Installation of equipment furnished by Owner; Access Doors, Motors, Variable Frequency Drives (VFDs), Starters and Disconnects; Hangers, Anchors, Pipe and Duct supports; Cleaning, Lubrication, Testing, Balancing and Adjusting; Coordination Drawings; Record Drawings; Operating and Maintenance Manuals; Instructions; Tests on: all system under your Scope of Work; Commissioning; Coordination with project schedule and other trades; Submittals, Samples, Product Data and etc.

Radiant Panels; Interior and Exterior and including under slab Gas Piping Systems; Condensate Piping; Heating Systems; Cooling Systems; HVAC Piping (HWS+HWR+CWS+CWR); HVAC Pumps; Chemical Water Treatment; Complete Heating Boilers and Accessories; Refrigeration Piping; Air Handling Units; Packaged Air Conditioning Units; Thermal Heat Transfer Units; Fans; Ductwork; Sound Attenuators; Air terminal Units; Air Outlets and inlets; HVAC Control System; Testing, Adjusting, Balancing; Vibration Isolation; Insulation; Pipe and Pipe fittings; Radon Piping; Chemical Water Treatment; Hydronic Piping (excluding excavation and backfill); Motors and Starters; Venting System; Gas Systems; Gas Piping; Accessories and all final connections; Connections and Support systems for Equipment furnished by others; Hanger and Supports; Valves; Pipes; Drains; Vibration Control; Pumps and Controls; Coordination

Drawings; Core Boring; Firestopping and Through-Penetration Firestop Systems and Joint Sealants for your scope of work; Mechanical Connections to Equipment provided by others. Mock-ups; Submittals; Product Data and Samples and Etc; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing; Adjusting; and Balancing; Commissioning; support of Commissioning Agent. The Plumbing and HVAC Contractor shall provide starters and disconnects for fans; pumps; motors; equipment and etc.; provided under your scope of work; unless specifically noted to be furnished by others. Interconnecting wiring (including controls) shall be the responsibility of the Plumbing and HVAC Contractor, as noted on the Contract Documents.

All Plumbing Work; Sanitary Piping Systems; Venting Systems; Waste Systems; Domestic Water Piping; Piping Systems; Storm Piping Systems; Trap Primers and Cleanouts; Water Hammer Arrestors; Plumbing Fixtures and Accessories; Plumbing Equipment; Domestic Water Heater Equipment and Accessories; Vibration Isolation; Insulation; Pipe and Pipe fittings; Motors and Starters; Storm and Roof Drainage Systems; Temporary Roof Drains; Domestic Hot and Cold Water Systems; Fire Service Water Service; Connections and Support systems for Equipment furnished by others; Hangers and Supports; Insulation; Valves; Pipes; Drains; Water Heating Equipment; Vibration Control; Pumps and Controls; Hose Bibbs and Wall Hydrants; Miscellaneous Plumbing Specialties; Coordination Drawings; Core Boring; Down Spout Nozzles; Firestopping and Through-Penetration Firestop Systems and Joint Sealants for your scope of work; Mechanical Connections to Equipment provided by others. Mock-ups; Submittals; Product Data and Samples and Etc; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning

The Plumbing Contractor shall provide starters and disconnects for fans; pumps; motors; equipment and etc.; provided under your scope of work; unless specifically noted to be furnished by others. Interconnecting wiring (including controls) shall be the responsibility of the Plumbing Contractor, as noted on the Contract Documents.

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased

specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Plumbing and HVAC Demolition: This Subcontractor shall be responsible to remove and properly dispose of all **Plumbing and HVAC** installations as indicated on the Contract Documents. This Subcontractor shall also be required to cap all existing utilities services at the interface of the building to be demolished and the existing building interface. It is the intent of the Contract Documents that this subcontractor coordinate systems, so that, they remain active during the construction and renovation of this phased project. This includes temporary measures and expansion of existing systems required for occupancy in occupied areas of the building. Include all temporary work required including but not limited to all cutting, capping, rerouting, adding new and interconnecting piping, ducting, control wiring, devices, and equipment to maintain all existing mechanical and plumbing services. Existing systems shall not be demolished until new systems are running for existing buildings to remain. All parts of existing systems not to be part of the permanent systems shall be demolished.

- a. This Subcontractor shall identify and mark Plumbing and HVAC systems to be demolished as per the Contract Documents and in accordance with the Phasing Plan (Document 000926).
- b. This Subcontractor shall cut, cap and drop the system identified to be removed.
 - i. Systems shall be cut into manageable pieces not greater than ten (10') feet in length. – **ADD. NO. 2**
- c. Removal and proper disposal shall be by the Demolition and Abatement Contractor (Bid Package 2.01).
- d. This Subcontractor shall be responsible to remove and properly dispose of the existing HVAC Rooftop Units.
- e. This Subcontractor shall be responsible to remove and properly dispose of the existing Steam Boilers.

5) Electrical Connections for Equipment:

- a. The Electrical Contractor shall provide single source line voltage to all equipment provided within this project for all trades unless specifically noted otherwise.
- b. Starters, variable frequency drives (VFDs), Disconnects Low Voltage and Control Wiring including control voltage transformers shall be provided by the Plumbing and HVAC Contractor for all of your equipment, unless specifically noted to be provided by the Electrical Contractor.
- c. The Electrical Contractor shall provide line voltage to only those the Temperature Control Panels indicated or shown on the Contract Documents.
- d. Power for additional Temperature Panels provided by the Plumbing and HVAC Contractor shall be the responsibility of the Plumbing and HVAC Contractor.

- e. Failure to notify the Fusco Corporation of any discrepancies shall be construed as acceptance of the condition.

6) Seismic Bracing:

- a. This Subcontractor shall furnish and install all seismic bracing as required and indicated in the Contract Documents.
- b. This Subcontractor shall furnish and install all flexible joint assemblies associated with any mechanical restraint collars as indicated in the Contract Documents.

7) Temporary and Permanent Heating and Cooling:

- a. The Plumbing and HVAC Contractor shall utilize both Temporary and Permanent Cooling and Heating Equipment for Temporary Cooling and Heating subject to the approval of the Construction Manager, in its sole discretion. Subcontractor to provide all temporary heating and cooling as required and specified below.
- b. All Temporary Heating and Cooling requirements are per the Project Schedule and Phasing Plan (Document 000926).
- c. The Plumbing and HVAC Contractor shall provide a compatible **temporary low pressure steam boiler** to run the existing steam heating systems for all areas not under construction as indicated in the phasing plan. The temporary boiler must have sufficient capacity (200 Horsepower minimum) to service the areas not under construction. Include all rental, transport, start-up, adjustment, service, temporary piping, inspection, permitting, controls and connection costs with the existing system and temporary utilities for a complete functioning system. It is critical that the temporary boiler system be reliable and Subcontractor must have all necessary service agreements, replacement parts on hand and service technicians available to repair any issues within eight (8) hours. A replacement temporary boiler must be delivered and connected within eight (8) hours of the temporary boiler going off-line if repairs can't be made. A temporary boiler of sufficient capacity must be operating during the winter heating season (October 1 to May 1). Include gas piping of sufficient capacity for the temporary boiler.
- d. The Plumbing and HVAC Contractor shall provide all labor and materials to connect temporary ductwork and all of its components and necessary accessories, including but not limited to hangers, insulation, dampers, vents, from the **exterior located temporary construction heating units (as described in the Allowance under this Bid Package)** with risers to all floors. The temporary ductwork shall be extended down hallways and into individual rooms to maintain distribution of the required minimum temperature. The system shall be fully functional to the approval of the Construction Manager, in its sole discretion. Sufficient

temperature for temporary heating shall be a minimum ambient temperature of 55 degrees Fahrenheit.

- e. The Plumbing and HVAC Contractor shall provide Cooling / Humidity Control with **New Permanent Cooling System** during the summer cooling season (May 1 thru October 1). Sufficient temperature for temporary cooling shall be a maximum ambient temperature of 78 degrees Fahrenheit and a maximum relative humidity of 50 percent.
- f. The Plumbing and HVAC Contractor shall provide **all temporary control wiring** for its temporary heating and cooling systems. At a minimum, thermostat controls shall be provided in a quantity (one per floor per unit) and location (remote from Units), as approved by the Construction Manager, to accommodate an evenly distribution of temporary heating and cooling.
- g. All necessary Equipment, Temperature Controls, Plumbing, Safety Controls that may be required shall be installed and operational prior to requesting approval to utilize the permanent heating or cooling system.
- h. The Plumbing and HVAC Contractor shall provide **temporary filters at all return ducts as required** and at the sole discretion of the Construction Manager, changed at weekly intervals, so as not to allow the migration of construction dirt and dust.
- i. When the **Permanent Cooling System** is utilized for Temporary Cooling, the Plumbing and HVAC Contractor shall be responsible for the maintenance, repair, refurbishing and extension of all required warranties of the HVAC Equipment (including temporary connections).
- j. **Power Consumption** cost (**Usage Only**) to operate the **Permanent Cooling System** shall be by others.
- k. **Fuel Consumption** cost (**Usage Only**) to operate the Temporary and **Permanent Heating System** shall be by others.
- l. The Plumbing and HVAC Contractor shall take adequate precautions to prevent any Damage from occurring to the **Permanent Heating and Cooling Equipment** while providing Temporary Heating and Cooling.
- m. All system filters for liquid or air shall be routinely replaced as required by maintenance intervals, written in the O & M Manuals.
- n. All permanent Plumbing and HVAC Systems and Components utilized for Temporary Heating and Cooling shall be **completely serviced, vacuumed, cleaned and turned over in "As New" condition** prior to acceptance by Owner.

- o. All Plumbing and HVAC Equipment and Filters used for Temporary Cooling shall have the **Warranties and Guarantees Extended** so that their full term as specified is available to the Owner from the date of Substantial Completion of each Phase as required by the Contract Documents.
- p. The Electrical Contractor shall provide all power wiring necessary to accommodate the above Temporary and Permanent Heating and Cooling requirements.

8) Fire Alarm Systems:

The Plumbing and HVAC Contractor shall provide any and all coordination that may be required with the Electrical Contractor as it relates to the Fire Alarm System. This shall include but not be limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests and etc as indicated on the Contract Documents

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

9) Underground Ducts and Utilities

The Site Contractor and/or Utility Company shall provide water, storm and sanitary service from point of origin to within 5' of the building line. The Site Contractor shall also provide Trenching, Bedding, Backfilling, Concrete Anchors, Thrust Blocks and Encasement as required for your work and the work of other trades.

The Plumbing and HVAC Contractor shall be responsible for connections to each service within your Scope of Work provided by the Site Contractor and/or Utility Co. to complete the installation. Inserts, sleeve and the like required to enter/penetrate Foundation Wall and/or slabs shall be provided and sealed/Waterproofed by the Plumbing and HVAC Contractor

10) Radon Pit Removal Systems:

The Site Contractor shall be responsible for Excavation, Bedding, Backfill, ¾" Pressure Treated Plywood and/or metal deck as indicated in the drawings, Crushed Stone, Concrete Block and accessories for the Radon Removal Systems as detailed on the Contract Documents. The Plumbing and HVAC Contractor will supply and install the Radon Removal Systems in its entirety and all piping including polyurethane sealants typical at all penetrations. The Concrete Contractor will supply and install the vapor barrier.

The Plumbing and HVAC Contractor shall confirm the operation of the Radon Removal Systems after installation as noted on the Contract Documents. The Plumbing and

HVAC Contractor shall be responsible for providing a licensed certified radon testing company to certify all Radon Removal Systems as noted on the Contract Documents.

11) Service Connections:

The Plumbing and HVAC Contractor shall be responsible for all final connections, including, shut off valves, disconnects and etc. for all Equipment, (furnished by others) as it relates to your scope of work, including but not limited to: Millwork and Casework Services, Kitchen Equipment, Owner Supplied Equipment, and etc.

The Plumbing and HVAC Contractor shall coordinate with the appropriated Contractor to assure that all services are complete in all respects. Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the connection locations.

The Plumbing and HVAC Contractor shall provide all HVAC, and associated Controls Work required for the Food Service Equipment as noted on the Contract Documents. The Food Service Equipment Contractor shall furnish and install the Exhaust Hoods as noted on the Contract Documents. The Plumbing and HVAC Contractor shall include mechanical final connection for Exhaust Hoods, Kitchen Hood Exhaust ductwork and install Kitchen Hood Exhaust Fans, and required Automatic Temperature Controls per the Contract Documents.

The Plumbing and HVAC and Electrical Contractors shall each be responsible for final connections and control wiring as required for the food service equipment and as noted on the Contract Documents.

12) Wall-Hung Lavatories and Toilets:

The Plumbing and HVAC Contractor shall coordinate with the Masonry and General Trades Contractor for installation of any wall anchors required during masonry or drywall wall construction for support of wall-hung lavatory systems and toilets. The Plumbing and HVAC Contractor will be responsible for furnishing and installing all necessary wall anchors or carries in strict accordance with the manufacturer's specification for their wall-hung lavatory systems.

13) Food Service Drawing Coordination:

The Food Service Equipment Contractor is solely responsible for providing accurate information on shop drawings accurately laid out for electrical, plumbing, and HVAC coordination and all connections required for each piece of kitchen equipment supplied under this bid package. The Food Service Equipment Contractor shall take the lead for the kitchen equipment and the Plumbing and HVAC and Electrical Contractors coordination efforts. Any costs incurred by other trades to modify installed electrical or

mechanical rough-ins due to incorrect information supplied by The Plumbing and HVAC shall be at this Contractor's cost.

The detailed shop drawings shall include a detailed point to point shop drawing which shall be accompanied by a digital copy in AutoCAD and shall be used for all Contractor coordination. A coordination meeting shall take place between the Food Service Contractor and the MEP Contractors plus or minus 3 to 4 weeks prior to the placement of the concrete slab in the kitchen areas to confirm the exact quantity and location of all under-slab rough in that is required to be installed by the MEP Contractors as it relates to the Food Service Equipment. The Food Service Contractor shall be responsible to inspect and confirm the final locations of ALL under slab roughing as installed by the MEP Contractors within 1 or 2 days of the slab placement.

14) Casework:

The Millwork Contractor shall coordinate and be responsible for all locations of rough-ins for the Casework. The Millwork Contractor shall submit detailed shop drawings within 45 days of award that include a detailed point to point location of all MEP rough-ins. These shop drawings shall be accompanied with a digital copy in AutoCAD and shall be used for all Contractor coordination. These drawings will be used by the Plumbing and HVAC and Electrical Contractors to locate penetrations/sleeves that will be core bored by them (Plumbing and HVAC and Electrical Contractors) for this work. All cost associated with core boring shall be included in this bid proposal.

The Plumbing and Mechanical Trade Contractor shall furnish and set all faucets and sinks with tail pieces. The Plumbing and HVAC Contractors shall make all appropriate final connections to these items.

15) Equipment:

The Electrical Contractor shall provide line voltage to all equipment provided within this project for all trades unless specifically noted otherwise. Starters and disconnects shall be provided by the Contractor that is providing the motorized equipment unless specifically noted to be provided by others.

The Plumbing and HVAC Contractor will coordinate and shall furnish all starters and disconnects switches for all Plumbing, HVAC, and ATC equipment and as specified and scheduled on the Plumbing and HVAC Drawings. Installation of such will be by the Electrical Contractor.

16) Balancing Systems:

The Plumbing and HVAC Balancing Subcontractor shall provide extended service on balancing for one-hundred and eighty (180) days beyond full building occupancy during which time any resetting, readjusting or rebalancing shall be performed to any terminal, fan or zone to correct comfort conditions or to confirm information submitted in the

balancing report. The Balancing Contractor shall provide technicians as needed to assist the mechanical engineers in making any test that he or she may require during this time.

The Plumbing and HVAC balancing Contractor must have at least three years experience in testing, adjusting and balancing (TAB) procedures for equivalent sized projects. The personnel conducting the air system TAB must be certified by Associated Air Balancing Council (AABC). All instruments must have documented calibration traceable to the bureau of standards.

17) Kitchen Equipment Exhaust Ventilator:

The Food Service Equipment Subcontractor shall provide the Kitchen Equipment Exhaust Ventilator.

The Plumbing and HVAC Contractor shall make all final connections to the Exhaust Ventilator. The Plumbing and HVAC Contractor shall provide any and all accessories required, including but not limited to access doors, as noted on the Contract Documents or as required by the applicable inspector.

18) Kitchen Equipment Fire Suppression System:

The Food Service Equipment Contractor shall furnish Gas Valve(s) to the Plumbing and HVAC Contractor for installation, and coordinate all the necessary requirements for a fully functioning system. – **ADD. NO. 2**

19) Plumbing and HVAC for Food Service Equipment:

The Plumbing and HVAC Contractor shall be responsible for all Plumbing and Mechanical connections to the Food Service Equipment.

The Plumbing and HVAC Contractor shall install faucets and sinks which are provided by the Food Service Equipment Contractor.

20) Residential Appliances:

The General Trades Contractor shall provide, deliver and set appliances to the required locations; the Plumbing and HVAC and Electrical Contractors shall connect the appliance to their respective utilities in accordance with the Contract Documents or the requirements of the Residential Appliance. The General Trades Subcontractor shall be responsible for leveling and adjusting its final resting location.

21) Gas Connections and Pressure Regulators:

The Plumbing and HVAC Contractor shall install *all* interior and exterior gas piping and shall be responsible for the gas pressure required for all equipment. The Plumbing and

HVAC Contractor shall also be responsible for furnishing and installing all gas pressure regulators, shut off valves and meter whether or not shown on the Contract Documents required for correct operation of all equipment and to be coordinated and compliant with the gas company.

22) Grease Interceptor:

The Site Contractor shall be responsible to furnish and install the Grease Interceptor as shown on the Contract Documents and shall include any necessary openings for, but not limited to, intake piping, exiting (downstream) piping, above access holes, etc. The Plumbing Trade Contractor shall be responsible for furnishing and installing all sanitary piping from the building into the grease interceptor including the heat trace wiring. The Site Contractor shall install all sanitary piping from the downstream side of the Grease Interceptor and any manhole covers, manhole frames, manhole risers, vent lines, etc.

23) Freezer/Cooler:

The Food Service Equipment Contractor shall coordinate with the Plumbing and HVAC and Electrical Contractors for work that they are shown as being responsible for on the Kitchen Drawings with respect to the freezer and the cooler. The plumbing Contractor shall install the floor grate drain as furnished by the Food Service Equipment Contractor. The Plumbing and HVAC Contractor shall install exhaust vent units as furnished by the Food Service Equipment Contractor.

The Food Service Equipment Contractor shall cut and seal all holes in the Coolers and Freezers, but not limited to, sprinkler piping and heads, etc. This shall be coordinated with the Fire Protection Contractor for locations.

24) Ductwork and Terminal Air Equipment:

The Plumbing and HVAC Contractor shall cover all open ends of ductwork and terminal air equipment with air tight seals on a daily basis and shall be maintained until such time as the system is completed and the Construction Manager and the Mechanical Engineer indicates that these seals can be removed. This includes from when the material is delivered to the site to final installation. This Contractor is required to perform air leakage testing per SMACNA requirements and/or per the contract document. If air seals are broken prior to installation, the Construction Manager may require the piece to be HAND Cleaned, resealed, retested.

As indicated in the Project Specification, the Plumbing and Mechanical Trade Contractor shall be responsible for **Cleaning ALL of the Ductwork and HVAC Units** before the Phase and the Project is turned over to the Owner.

25) Louvers and Grilles

This Contractor shall provide and install **ALL** Mechanical Louvers/Grilles/Vents. – **ADD. NO. 2**

All “Architectural Louvers and Grilles” (as indicated on the architectural drawings) shall be provided by the General Trades Contractor. All “Mechanical Louvers and Grilles” (as indicated on the mechanical drawings) shall be the responsibility of the Plumbing and HVAC Contractor. – **ADD. NO. 2**

The Plumbing and HVAC Contractor shall be responsible for all final connections to the Architectural Louvers provided by the General Trades Contractor.

26) Condensate Piping

The Plumbing and HVAC Contractor is responsible for **ALL** condensate drain piping (including insulation) and related pumps and accessories.

27) Temporary Roof Drain Systems, Pans, Metal Deck openings

The Plumbing and HVAC Contractor shall provide temporary roof drains SYSTEM for the proposed roof drains.

The Plumbing and HVAC Contractor shall provide temporarily running and maintaining the roof drains/roof leaders to the exterior of the building to locations as directed by the Construction Manager.

The Plumbing and HVAC Contractor shall provide and be responsible for cutting holes in all roof drain pans and cutting and removal of metal decking for all of their openings.

28) Ductwork and Pipe Testing

The Plumbing and HVAC Contractor shall include all cost associated with duct work and pipe leakage testing, balancing, hydrostatic testing, flushing to industry cleanliness specifications, and chemical pretreatment and all other industry standard testing related to this bid package.

The Plumbing and HVAC Contractor shall be responsible for glycol fill (if specified) of the hydronic system and maintenance of the specified glycol concentration until the system concentration has completely stabilized and is turned over to the Owner. Any needed Replacement glycol shall not be from the Owner’s Attic Stock.

29) New Ductwork Penetrations in Existing Walls: The Plumbing and Mechanical Trade Contractor shall be responsible for laying all new ductwork penetrations that are required to be installed into existing masonry walls. It shall be the responsibility of the Mason Trade Contractor to cut out the masonry in order for the Plumbing and Mechanical Trade Contractor to be able to install their ductwork. The Mason Trade Contractor shall furnish

and install any masonry lintels that may be required to support the existing masonry openings.

30) Under Slab Plumbing

This Subcontractor shall complete ALL under slab plumbing three (3) days prior to the scheduled slab on grade pour time being of the essence.

This Subcontractor shall expedite material submittals for all underslab piping and accessories to complete this Work.

This Subcontractor shall utilize sufficient manpower to complete this Work.

31) Building Management System

Furnish and install the complete building management controls system for the mechanical systems.

32) Heat Trace:

The Mechanical Contractor will furnish and install all electric heat trace cable systems indicated on the Contract Documents and the Electrical Contractor will provide all of the power wiring to these heating cables.

33) Minor Work/Provisions:

This Subcontractor shall carry in their base bid an additional **120 hours of plumber/HVAC time with small tools and materials to perform minor work as directed by the Construction Manager in addition to all other work indicated in this scope.**

CLARIFICATIONS

a.) The Plumbing and HVAC Subcontractor shall include:

1. Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
2. Sheet C-2 – Provide all plumbing and mechanical demolition throughout existing buildings and tunnels.
3. Sheet C-19 - Include all work inside the building and within 5 feet of the outside of the building except for the electrical connection and controllers. Stub the piping to 5 feet outside of the building terminating in an accessible box. Include water supply line, gate valve, backflow preventer assembly and all items within 5 feet of the outside of the building.

4. Sheet C-19 - Include the cost of furnishing and installing a booster pump system and verify the water pressure prior to ordering equipment or proceeding with the work and review with Construction Manager. If a booster pump is not required provide a credit for the booster pump system. Coordinate with Athletic Fields & Courts Subcontractor.
5. Sheet ASB-1 – Include re-insulating all piping to remain throughout the project including in the areas enclosed by the “WORK TO BE PERFORMED BY TERM CONTRACTOR” symbol and areas not enclosed by this symbol. Also include re-insulating existing pipe that will be used during the project but not to remain as part of a permanent system.
6. Sheet ASB-2 – Include re-insulating all piping to remain throughout the project including in the areas enclosed by the “WORK TO BE PERFORMED BY TERM CONTRACTOR” symbol and areas not enclosed by this symbol. Also include re-insulating existing pipe that will be used during the project but not to remain as part of a permanent system.
7. Sheet D-101, 102, 103, 105, 106 and 107 Specific Demolition Note A2 – Include all work for this note related to the plumbing and HVAC systems. Include reinstallation and all work needed to maintain systems during construction at all areas. Include attachment and support for all items. Include all safe-off required for demolition.
8. Sheet D-112 - Safe-off all mechanical connections for the food service and kitchen equipment.
9. Sheet EV-101 - Include all work required for the active soil depressurization radon systems except for the supply of power, vapor barrier, and concrete. Include the CMU, piping, fans, and all other work.
10. Structural (“S”) Drawings – Include all work in the Structural drawings as it relates to this scope of work.
11. Sheet S-301 Detail 2 – Include fastening of Pre-Manufactured Curb to PT Blocking.
12. Sheet S-301 Detail 2 – Include all mechanical curbs for mechanical and plumbing work.
13. Sheet EQ-101 – Furnish and install all plumbing and mechanical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all plumbing and mechanical utilities for all equipment. Furnish and install the following items:
 - a. Shop Equipment Schedule – Automotive Production Shop
 - i. Item 9 – Air Compressors
 - ii. Item 9a – Air Line Dryers
 - iii. Item 12 – Waste Oil Containment System – Complete all work within 5’ of the building. Tank will be furnished and installed by Site Work Subcontractor.
 - iv. Item 16 – Pull Down Air Lines
 - v. Item 20 – Exhaust Removal System
 - vi. Item Between 34 and 35 – Air Station
14. Sheet EQ-102 – Furnish and install all plumbing and mechanical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all plumbing and mechanical utilities for all equipment. Furnish and install the following items:
 - a. Shop Equipment Schedule – Carpentry
 - i. Item 10 – Air Compressors

- ii. Item 27 – Dust Collector
15. Sheet EQ-103 – Furnish and install all plumbing and mechanical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all plumbing and mechanical utilities for all equipment. Furnish and install the following items:
- a. Shop Equipment Schedule – Plumbing
 - i. Item 3 – Oil Tank – Complete all work within 5’ of the building. Tank will be furnished and installed by Site Work Subcontractor.
 - ii. Item 10 – Concentric Vent Kit
 - iii. Item 13 – Hot And Cold Water Shut Off Valve
 - iv. Item 14 – Sanitary Valve W/ Backflow Preventor
 - v. Item 15 – Emergency Shut-Off Switches
 - vi. Item 22 – All Fuel Flue
 - vii. Item 24 – Natural Gas
 - viii. Item 25 – LP Gas
 - ix. Item 26 - #2 Fuel Oil
 - x. Item 27 – Cold Water Main Stub-In
 - xi. Item 29 – Sanitary
 - xii. Item 32 – Exhaust Hood
 - xiii. Item 33 – Vent
16. Sheet EQ-103 – Install all plumbing and mechanical related equipment and work indicated to be owner furnished and contractor installed. Install the following items:
- a. Shop Equipment Schedule – Plumbing
 - i. ~~Item 5 – Hung Lavatory~~ – **ADD. NO. 1**
 - ii. ~~Item 8 – Hung Urinals~~ – **ADD NO. 1**
 - iii. Item 28 – Water Heater
17. Sheet EQ-106 – Furnish and install all plumbing and mechanical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all plumbing and mechanical utilities for all equipment. Furnish and install the following items:
- a. Shop Equipment Schedule – Manufacturing
 - i. Item 28A – Snorkle Exhausts
 - ii. Item 30 – Compressor
 - iii. Item 43 – Exhaust Hood
18. Sheet EQ-101, EQ-102, EQ-103 and EQ-106 – Furnish and install all Utilities including but not limited to air, gas, hot water, and cold water. Include all connections to equipment. – **ADD. NO. 1**
19. Sheet MR-101.1, 101.2, 102.1, 103.1, & 103.2 – Include all work on these sheets. Include the demolition of all mechanical systems shown and systems not needed to remain as indicated. Verify all demolition with the Construction Manager.
20. Sheet M-201 – Include the demolition of all mechanical systems shown and systems not needed to remain as indicated. Verify all demolition with the Construction Manager. Include all patching at exterior walls and the roof needed to keep the building water tight at demolished pipes, ducts, equipment, and other items.

21. Sheet PR-100, 101, 102, 103, 104, 105, 106 and 107 – Include all work on these sheets. Include the demolition of all plumbing systems shown and systems not needed to remain as indicated. Verify all demolition with the Construction Manager.
22. Sheet PR-102 – Include all work on this sheet. Demolish and remove the gas meter assembly and all piping and related items within 5’ of the exterior of the building.
23. Sheet P-102.1 - Install all regulators furnished by the owner at compressed air outlets throughout the project.
24. Sheet M-201 Detail 3 – Include supplemental steel as required to support piping and duct.
25. Sheet ER-100 – Include all plumbing demolition including the plumbing and gas demolition in B-wing shown.
26. Include the demolition of all mechanical and plumbing items that are not required for the permanent systems including items shown in the drawings and items not shown in the drawings but located on the site. Include the demolition of all above ceiling and roof plumbing and mechanical not indicated to remain as part of the permanent system.
27. Include commissioning and balancing at the end of each phase and a final round of commissioning and balancing at the completion of the project.
28. Sheet M-303 Detail 8 - Include all ductwork insulation, exterior jacketing, ductwork supports and galvanizing of supports as specified.
29. Sheet M102.2 Detail 1 - Include dust collector support framing system and coordinate foundation location with Sitework Contractor.
30. Sheet E-001 Note 13 and 14 - Provide all control wiring.
31. Cut and cap all items as required and complete all work needed to keep temporary systems running. Include all plumbing and HVAC cutting, capping, and making safe as required.
32. Provide all penetrations and cores required to complete Subcontractor's Work. Include patching, fire caulking, acoustical caulking, and architectural caulking as required.
33. Include grease tank/oil tank piping and plumbing connections.
34. Include the maintenance and repair of all new and existing plumbing and HVAC systems until the entire phase is complete.
35. Include providing temporary water and air to the 2 teacher stations in the temporary science labs as indicated in the phasing documents and directed by the Construction Manager.
36. Include shop drawings and calculations prepared and stamped by a qualified professional engineer as specified for this scope of work. Include shop drawings and calculations for seismic restraints.
37. Include all Plumbing and HVAC work for the food service equipment including service rough-ins, shut-off valves, piping, support brackets, vents, adapters, traps, tailpieces and final connections. Install fixtures specified to be provided by the Food Service Subcontractor but installed by the Plumbing and HVAC Subcontractor.
38. Include all sleeves for plumbing and HVAC work including the locations shown in the structural drawings.
39. Provide all access doors and panels required for this scope of work to be installed by others.
40. Include all plumbing and HVAC work at the laboratory casework including service rough ins, shut-off valves, internal piping, support brackets, final connections, hubs, vents adapters, traps, tailpieces, ducts, fans, exhaust stacks and all other mechanical items.

41. Furnish and install all welding hoods and systems. – **ADD. NO. 2**
42. Included all welding at mechanical items. Include welding at roof sleeves and for mechanical support systems.
43. Include all galvanizing of mechanical items and supports.
44. Include all insulation at piping and ductwork.
45. Include all mechanical curbs.
46. Furnish and install expansion joints for piping, ducting, and other equipment at all locations showing or requiring expansion joints.
47. Furnish and install all exhaust removal systems. Refer to the Automotive Production Shop Equipment schedule item 20 and the rest of the EQ sheets.
48. Furnish and install all connections for temporary boiler(s) required for heating. Include all modifications necessary to the existing steam system to provide heat to all existing spaces prior to the completion of the new heating systems.
49. Include all put back and reinstallation of mechanical and plumbing systems at abatement areas.
50. Complete all plumbing connections for laboratory casework stations and sinks and for healthcare stations and sinks.
51. Include all eye wash, shower, and eye wash/shower combination fixtures.
52. Include all air compressors.
53. Include all work indicated in specification section 230500 including Part 1, 1.01 item 3 indicating to remove all equipment, piping, supports, etc. And infrastructure not being reused including items shown in the drawings and existing items in the field not shown on the drawings.
54. Review all specified equipment for the project and provide a letter to the Construction Manager indicating if all existing and new equipment will function properly with the plumbing and mechanical utilities specified in the construction documents 30 calendar days prior to completing related work.
55. Video For Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction Manager.
56. Create weather-tight conditions around all mechanical piping, ducts and equipment to prevent moisture and mold related problems.
57. Sheet C4 / Specification 220000 – Provide piping as specified to tanks from within 5ft of the building. – **ADD. NO. 2**
58. Provide a complete Class I dust collection system consisting of dust collector, ductwork, blast gates, connections to equipment and floor sweeps and refer to Section 237000 for dust collector requirements typical and as noted in Specification Section 233000 Part 2.10. – **ADD. NO. 2**

59. Provide Notes 2, 3, 4, 7, 8, 9, 10 for Electric & Gas Shut Off Detail typical and as noted on 1 & 2/E-704. Plumbing & HVAC Contractor to provide all equipment noted. – **ADD. NO. 3**
60. Provide all equipment noted (disregard “by others” note in Specification 220000) typical and as noted on 3/E103.1Ka. – **ADD. NO. 3**

EXCLUSIONS

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor’s Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

ALLOWANCE NO.1 - TEMPORARY HEATING UNITS - \$120,000

Provide and completely coordinate the delivery, setup, gas connection (including all communications with the local gas supplier), startup, maintenance, operation and dismantling (including all necessary disconnection communications with local gas supplier) and removal of Temporary Heating Units & Exterior Supply and Return Ductwork – with the most stringent OSHA regulation is included in the base bid.

ELI WHITNEY, CONNECTICUT TECHNICAL HIGH SCHOOL
HAMDEN, CONNECTICUT
PROJECT NO.: BI-RT-837-CMR
ADDENDUM NO. 3

BID PACKAGE #23.01 PLUMBING & HVAC
000930.23.01- 20

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #26.01
Electrical**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Electrical, Communications, Safety and Security Systems** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Electrical, Communications, Safety and Security Systems** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) BID PACKAGE #26.01 - Electrical, Communications, Safety and Security Systems:**
This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Electrical, Communications, Safety and Security Systems** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General

Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manuals:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manuals:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

078413 Through-Penetration Firestop Systems (As Applicable)
079200 Joint Sealants (As Applicable)

083113 Access Doors and Frames (As Applicable)
087100 Door Hardware (As Applicable)

114000 Food Service Equipment (As Applicable)
123553 Wood Laboratory Casework And Furnishings (As Applicable)

Division 21 Fire Suppression (As Applicable)
Division 22 Plumbing (As Applicable)
Division 23 Mechanical (As Applicable)

230500 Demolitions And Removals (As Applicable)

Division 26 Electrical
Division 27 Communications
Division 28 Electronic Safety and Security

Division 31 Earthwork (As Applicable)
Division 32 Exterior Improvements (As Applicable)

328000 Irrigation System (As Applicable)

Division 33 Utilities (As Applicable)

Commissioning (note included in 019100, DIV 1)

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

All Electrical Demolition throughout existing buildings and tunnels;

Electrical; Communications; Electronic Safety and Security Division; Temporary Light and Power; Core Boring; Firestopping and Through-Penetration Firestop Systems for your scope of work; Site Electric and Site Communication; Site Lighting including furnishing of Anchor Bolts for installation by others; Electric Disconnects for equipment, (unless specifically noted otherwise shall be provided by Electrical Contractor); Line Voltage for all equipment as noted in the Contract Documents including but not limited to Fans, Pumps, Projection Screens, Display Cases, Operable Window Treatment, Kitchen Equipment, Appliances, Gymnasium Equipment, Kiln Exhaust Fan, Elevator, Owner Supplied Equipment, Boilers, Heating/Cooling and Air Handling Units, Overhead Doors; Elevator Recall System; Commissioning; Motor Controllers/Starters shall be provided by the contractor or equipment motor supplier furnishing the equipment (unless specifically noted to be provided by the Electrical Contractor); Excavation; Concrete Encasement Bedding and Backfill for Site Electric and Site Lighting shall be by Site Contractor.

All Electrical; Wiring Devices; Pre-Fabricated Electrical and Tele/Communications Raceway Systems and all associated Accessories; Electric Power and Communication Transmission Service from Utility to Building; Site Lighting; Basic Electrical Materials and Methods; Service and Distribution, Service Entrance; Switchboards; Disconnect Switches; Secondary Grounding; Transformers; Panel Boards; Motor Control; All Interior and Exterior Lighting; Theatrical Lighting; Complete Fire Alarm Systems; Conduit and Stubs for Security Systems; Complete Clock and PA Systems; Conduit and Stubs for Voice and Data Systems; Complete Call Systems; Complete Rescue Call for Assistance Systems; Complete Intercommunication Systems; Conduit and Stubs for Audio/Visual Systems; All Lighting Control Systems; Interior & Exterior Temporary Light and Power; Core Boring; Firestopping and Through-Penetration Firestop Systems for your scope of work; Site Electric and Site Communications; Site Lighting including furnishing of Anchor Bolts for installation

by others; Electric Disconnects for equipment; HVAC controls; Motor Controllers/Starters shall be provided by the Contractor or equipment motor supplier furnishing the equipment (unless specifically noted to be provided by the Electrical Contractor); Elevator Recall System; Fire Alarm Systems; Mock-ups; Submittals, Product Data and Samples; Record Drawings; Identification Tags and Drawings; Operating and Maintenance Instructions; Testing and Commissioning; - **ADD. NO. 3**

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

4) Electrical Demolition: This Subcontractor shall be responsible to remove and properly dispose of all **Electrical** installations as indicated on the Contract Documents. This Subcontractor shall also be required to cap all existing utilities services at the interface of the building to be demolished and the existing building interface. It is the intent of the Contract Documents that this subcontract coordinate systems, so that, they remain active during the construction and renovation of this phased project. This includes temporary measures, expansion of existing systems and maintenance of all systems required for occupancy in occupied areas of the building. This includes all systems including but not limited to fire alarm, data, phone, communications, security, power, lighting, and all other electrical systems.

- a. This Subcontractor shall identify and mark Electrical systems to be demolished as per the Contract Documents and in accordance with the Phasing Plan (Document 000926).
- b. This Subcontract shall cut, cap, make safe and drop the system identified to be removed.
 - i. Systems shall be cut into manageable pieces not greater than ten (10') feet in length. – **ADD. NO. 2**
- c. Removal and proper disposal shall be by the Demolition and Abatement Contractor (Bid Package 2.01).

- d. This Subcontractor shall be responsible to remove all fluorescent lights and ballasts and place them in a suitable container to be properly disposed by the Demolition and Abatement Contractor (Bid Package No. 2.01).

5) Temporary Construction Manager Site Office:

- a. The Electrical Contractor shall remove all Power and Telecom/Data) for the Construction Managers and Owner's Site Offices as shown on the Site Logistics Plan.

6) Temporary and Permanent Heating and Cooling:

- a. The Plumbing and HVAC Contractor shall utilize both Temporary and Permanent Cooling and Heating Equipment for Temporary Cooling and Heating subject to the approval of the Construction Manager, in its sole discretion. Subcontractor to provide all temporary heating and cooling as required and specified below.
- b. All Temporary Heating and Cooling requirements are per the Project Schedule and Phasing Plan (Document 000926).
- c. The Plumbing and HVAC Contractor shall provide a compatible **temporary low pressure steam boiler** to run the existing steam heating systems for all areas not under construction as indicated in the phasing plan. The temporary boiler must have sufficient capacity (200 Horsepower minimum) to service the areas not under construction. Include all rental, transport, start-up, adjustment, service, temporary piping, inspection, permitting, controls and connection costs with the existing system and temporary utilities for a complete functioning system. It is critical that the temporary boiler system be reliable and Subcontractor must have all necessary service agreements, replacement parts on hand and service technicians available to repair any issues within eight (8) hours. A replacement temporary boiler must be delivered and connected within eight (8) hours of the temporary boiler going off-line if repairs can't be made. A temporary boiler of sufficient capacity must be operating during the winter heating season (October 1 to May 1). Include gas piping of sufficient capacity for the temporary boiler.
- d. The Plumbing and HVAC Contractor shall provide all labor and materials to connect temporary ductwork and all of its components and necessary accessories, including but not limited to hangers, insulation, dampers, vents, from the **exterior located temporary construction heating units (as described in the Allowance under this Bid Package)** with risers to all floors. The temporary ductwork shall be extended down hallways and into individual rooms to maintain distribution of the required minimum temperature. The system shall be fully functional to the approval of the Construction Manager, in its sole discretion. Sufficient

temperature for temporary heating shall be a minimum ambient temperature of 55 degrees Fahrenheit.

- e. The Plumbing and HVAC Contractor shall provide Cooling / Humidity Control with **New Permanent Cooling System** during the summer cooling season (May 1 thru October 1). Sufficient temperature for temporary cooling shall be a maximum ambient temperature of 78 degrees Fahrenheit and a maximum relative humidity of 50 percent.
- f. The Plumbing and HVAC Contractor shall provide **all temporary control wiring** for its temporary heating and cooling systems. At a minimum, thermostat controls shall be provided in a quantity (one per floor per unit) and location (remote from Units), as approved by the Construction Manager, to accommodate an evenly distribution of temporary heating and cooling.
- g. All necessary Equipment, Temperature Controls, Plumbing, Safety Controls that may be required shall be installed and operational prior to requesting approval to utilize the permanent heating or cooling system.
- h. The Plumbing and HVAC Contractor shall provide **temporary filters at all return ducts as required** and at the sole discretion of the Construction Manager, changed at weekly intervals, so as not to allow the migration of construction dirt and dust.
- i. When the **Permanent Cooling System** is utilized for Temporary Cooling, the Plumbing and HVAC Contractor shall be responsible for the maintenance, repair, refurbishing and extension of all required warranties of the HVAC Equipment (including temporary connections).
- j. **Power Consumption** cost (**Usage Only**) to operate the **Permanent Cooling System** shall be by others.
- k. **Fuel Consumption** cost (**Usage Only**) to operate the Temporary and **Permanent Heating System** shall be by others.
- l. The Plumbing and HVAC Contractor shall take adequate precautions to prevent any Damage from occurring to the **Permanent Heating and Cooling Equipment** while providing Temporary Heating and Cooling.
- m. All system filters for liquid or air shall be routinely replaced as required by maintenance intervals, written in the O & M Manuals.
- n. All permanent Plumbing and HVAC Systems and Components utilized for Temporary Heating and Cooling shall be **completely serviced, vacuumed, cleaned and turned over in "As New" condition** prior to acceptance by Owner.

- o. All Plumbing and HVAC Equipment and Filters used for Temporary Cooling shall have the **Warranties and Guarantees Extended** so that their full term as specified is available to the Owner from the date of Substantial Completion of each Phase as required by the Contract Documents.
- p. The Electrical Contractor shall provide all power wiring necessary to accommodate the above Temporary and Permanent Heating and Cooling requirements. Provide **two temporary boiler connections rated at 50 A @ 460V/3 ph/60 cy service** near the exterior of the existing boiler room as directed by the Construction Manager.

7) Light Poles/Bollards/Grounding:

The Electrical Contractor shall furnish all Anchor Bolts and Anchor Bolt templates to the Site Contractor for installation by the Site Work Contractor. The Electrical Contractor shall furnish and install **ALL** site light fixtures, conduit wire and cable. The Electrical Contractor shall also furnish and Install all required grounding cable and grounding rods

8) Appliances:

The Residential Appliances shall be provided by the Owner as shown on the Contract Documents. The Owner shall bring and set the appliance to the required locations; the Plumbing, Mechanical, Electrical Contractors shall connect the appliance to their respective utilities.

9) Kitchen Equipment:

The Electrical Contractor shall be responsible for any and all final connections to food service equipment as noted on the Contract Documents.

The Plumbing and HVAC Contractor shall install faucets and sinks which are provided by the Food Service Equipment Contractor. The Electrical Contractor shall provide power to the hand sinks in the kitchen, including all final connections to the hard wired transformer.

Electrical Subcontractor to provide and install all fused disconnect switches where required for the refrigerators, freezers, and all other food service equipment.

10) Freezer/Cooler:

The Food Service Equipment Contractor shall coordinate with the Plumbing, Mechanical and Electrical Contractors for work that they are shown as being responsible for on the Kitchen Drawings with respect to the freezer / cooler.

11) Service Connections:

The Electrical Contractor shall be responsible for all final connections, including, disconnects and etc. for all Equipment, (furnished by others) as it relates to your scope of work, including but not limited to: Millwork and Casework Services, Fans, Pumps, Doors/hardware, Projection Screens Laboratory Equipment, Kitchen Equipment, Elevator and Wheelchair Lift, Owner Supplied Equipment, Boilers, Heating, Ventilating and Cooling Units, Overhead Door(s), Operable HVAC Controls, Operable Misc. Gym Equipment, Washers, Dryers and Dishwashers, etc.

This Contractor shall coordinate the location of connections for equipment; Failure to notify the Construction Manager of any discrepancies shall be construed as acceptance of the condition.

The Plumbing, Mechanical and Electrical Contractors shall each be responsible for final connections and control wiring to and for the food service equipment as noted on the Contract Documents.

The Food Service Equipment Contractor shall submit in writing, as a separate submission, that all electrical requirements for all food service equipment, i.e., quantity, location phase, voltage, etc., is correctly shown on the contract drawings. This separate submission shall be submitted to the Construction Manager and to the Electrical Trade Contractor.

The Plumbing Contractor shall install faucets and sinks which are provided by the Food Service Equipment Contractor. The Electrical Contractor shall provide power to the hand sinks in the kitchen, including all final connections to the hard wired transformer(s).

12) Equipment:

The Electrical Contractor shall provide line voltage to electrical equipment provided within this project for all trades unless specifically noted otherwise. Starters and disconnects shall be provided by the Contractor that is providing the motorized equipment unless specifically noted to be provided by the Electrical Contractor. In any case, the installation of starters and disconnects shall be by the Electrical Contractor.

The Plumbing and Mechanical Contractors will coordinate and shall furnish all starters disconnects switches for all Plumbing, HVAC, ATC equipment and as specified and noted on the Contract Documents. Installation of these devices shall be by the Electrical Contractor.

13) Fire Alarm Systems:

The Electrical Contractor shall provide any and all coordination that may be required with the Mechanical Contractor as it relative to the Fire Alarm System. This shall include

but not limited to Tie-ins, Equipment, Meetings, Drawings, Sketches, Schematics Tests and etc as indicated on the Contract Documents.

It is the intent of the Contract Documents that the Fire Alarm System be complete in all respects. Failure to notify the Construction Manager that discrepancies exist within the Contract Documents shall be construed as acceptance of the information provided.

It is critical that a fire alarm system be functioning properly in all completed and occupied areas of the project at all times and the existing system shall not be removed or disabled until the new system has been completed, tested, passed inspection and is fully functional. The new fire alarm system must be fully functional and operational in all spaces prior to the end of each phase.

In addition, add all required temporary devices, wiring, panels and other items required as a result of temporary doors, walls and conditions created by the phasing. Additional devices (smoke detectors, horns, strobes and pull stations as applicable) shall be temporarily added on each side of temporary doors, walls, and other separations as if these were permanent separations to meet code at **15 temporary separation locations**. Include all permanent and temporary programming to the existing and new fire alarm systems required for the phasing. Electrical Subcontractor to complete all work related to the new and existing Fire Alarm systems.

Provide and remove temporary electric lit **exit signs that are code compliant at 15 locations** as directed by the Construction Manager.

14) Pre-Engineered Kitchen Hood Extinguishing System:

The Pre-Engineered Kitchen Hood Extinguishing System for the Food Service Equipment shall be interlocked with the building fire alarm system. The Electrical Trade Contractor shall be responsible for all tie-ins to the building fire alarm system.

15) Equipment, Control Devices and Starters for Food Service Equipment:

Switches, fuses, terminal boxes, cords, flexible connectors, control devices, starters, disconnect, and plugs for food service equipment shall be furnished by the Food Service Equipment Contractor unless specifically noted otherwise.

The Electrical Contractor shall be responsible for line voltage connections and the Mechanical Contractor shall be responsible for Plumbing and Mechanical connections. **All interconnecting wiring shall be the responsibility of the Electrical Contractor.**

The Food Service Equipment Contractor shall coordinate the location of connections for equipment and shall notify the Construction Manager of any discrepancies. Failure to notify the Construction Manager shall be construed as acceptance of the condition.

The Food Service Equipment Contractor shall submit in writing, as a separate submission, that all electrical requirements for all food service equipment, i.e., quantity, location phase, voltage, etc., is correctly shown on the contract drawings. This separate submission shall be submitted to the Construction Manager and forwarded to the Electrical Trade Contractor.

The Electrical Contractor shall provide power to the hand sinks in the kitchen, including all final connections to the hard wired transformer(s).

16) Kitchen Equipment Exhaust Ventilator:

The Food Service Equipment shall provide (furnish and install) the Kitchen Equipment Exhaust Ventilator.

The Electrical Contractor shall make all final connections to the Exhaust Ventilator. The Electrical Contractor shall provide any and all accessories required, including but not limited to access doors, as noted on the Contract Documents or as required by the applicable inspector.

17) Elevator Recall System:

An Elevator recall System for all Elevators shall be installed in accordance with the Contract Documents. Coordination and final connections to the Elevator Control Panel shall be provided by the General Trades (for Elevator) Contractor

18) Elevator Telephone:

The Electrical Contractor shall be responsible for furnishing and installing any conduit necessary to bring the elevator phone line wire to the elevator controller. The Electrical Contractor shall leave the phone line wire coiled in the elevator machine room adjacent to the controller for final connection to the elevator controller by the General Trades (for Elevator) Contractor.

The General Trades (for Elevator) Contractor shall provide a functioning telephone within the elevator cab. Dial Tone for the telephone will be brought into the elevator machine room by The Electrical Contractor as described above. The General Trades (for Elevator) Contractor is responsible to land all wires on, to and from his or her equipment.

19) Conduit in Concrete Slabs:

The Electrical Contractor shall not place conduit in any concrete slab. All routing of conduit must be concealed and take place from ceiling space, cavity space and in walls.

20) Communication Service:

The Electrical Contractor shall provide ALL Communication service in accordance with that as indicated on drawing. All required Excavation, Bedding, Encasement and Backfill shall be provided by the Site Contractor.

21) Temporary Light and Power:

Installation:

Provide labor, material and equipment for the installation of interior temporary light as required by these specifications, unless specifically noted otherwise in the Contract Documents.

Furnish, install, and maintain and eventually remove all distribution of interior temporary light as required.

Temporary lighting shall be installed in such a manner as not to interfere with the permanent construction. If such interference does occur, it will be the responsibility of the Electric Contractor to make such changes as may be required to overcome the interference. The cost of these changes are included as part of the Contract price.

Temporary wiring is to be laid out, balanced and wire-sized so as to produce a voltage drop of not greater than five percent (5%) at the extreme end of the line when operating a full load.

Lighting Requirements:

The exterior of the building, and the Construction Manager Office Trailer and the Construction Parking / Material Storage Trailers Location area as shown on the Site Logistics Plan, shall have extreme Security Lighting at various locations as determined by the Construction Manager. This lighting shall be controlled by sensors w/ on/off switch overrides. Staging area and Trailer area and perimeter of the existing building (30 feet out) will require a minimum of 1/2 watt/SF.

All other temporary lighting shall be controlled by appropriate on/off equipment at a mutually agreed location.

The replacement of all bulbs and temporary wiring shall be included as part of these requirements and maintained by this Subcontractor. At least on a weekly basis, the entire job shall be checked and re-lamped as required. At no time shall more than 10 percent of the temporary lighting not be operational.

System is to be of a movable nature suspended from structure and is not to damage or dislodge any spray-on-fireproofing during the life of its installation. It shall also be installed, removed and/or reinstalled as work progresses. Temporary lighting shall utilize 100-watt bulbs with pigtailed and protective shields. General Area lighting will require a minimum of 1/4 watt/SF.

All mechanical rooms/areas will require a minimum of 1/2 watt/SF.

All stairwells will require a light at each landing and intermediate landing.

All entrances and exits of the building will require a single string of lights with bulbs a minimum of 10 feet on center.

Power Requirements

This Contractor shall carry all cost and all materials and equipment as needed to step down to a 600 amp 480 volt 3 phase complete temporary power service inside the building, including but not limited to, conduit, wiring, CT and DT Cabinets, meter, panel-board, grounding, etc for complete system per the NEC and the local building code. This Subcontractor shall also provide all provisions required for weather tightness of the above system.

Provide **six (6) 200 amp 120/208 volt interior temporary panels** as directed by the Construction Manager. This Subcontractor shall also provide all provisions required for weather tightness of the above system.

Provide **two (2) 200 amp 120/208 volt exterior temporary panels** as directed by the Construction Manager. This Subcontractor shall also provide all provisions required for weather tightness of the above system.

For small tools, provide 20 amp @ 120 volt power outlets located throughout the project so that the floor area and exterior of the building can be covered with standard 50 foot extension cords.

Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

Provide 220 volt 40 amp receptacle for larger power equipment at each temporary panel.

When the permanent power service is activated, all temporary installation shall be transferred to that source, including required OSHA Ground Fault Protection. A competent qualified Electrician is required to test all GFI certificates at the outlet panel at a minimum on a monthly basis and each panel must include a dated sign off in plain view. Any costs related to these inspections shall be included in this Contractor's bid proposal. Each Trade Contractor is to include in his or her proposal electrical cords for their work.

Maintenance

This Contractor shall maintain the temporary lighting (interior and exterior) and power systems.

All work covered under this Contract is to be maintained in good and safe operating condition and in a timely manner so not to delay the project in whole or in part. This Contractor shall be responsible for installing and maintaining a reasonably balanced system and shall take current reading on the feeders at regular intervals.

All temporary facilities are to be maintained and kept in good operating conditions. Maintenance men necessary to perform this work shall be provided so that other trades are not delayed. Local power centers shall be constantly maintained to prevent the accumulation of "rat's-nest circuitry". All temporary wiring shall be suspended and maintained at least 8 feet above finished floors and pass through permanent walls above the permanent ceiling level. The patching of holes in partitions is to be done by the General Trades Contractor for drywall and the Masonry Contractor for masonry.

Removal

This Contractor shall eventually remove (at the direction of the Construction Manager) all temporary power and lighting equipment (interior and exterior).

22) Supplement Temporary Lighting:

General temporary lighting will be provided by the Electrical Trade Contractor after the steel is erected. It will be the responsibility of each Trade Contractor to provide supplement lighting and cords as needed or when finish work is being completed especially prior to the new permanent lighting is installed and lit.

23) Electric Door Hardware:

The Electrical Contractor shall provide final connections for all electrified door hardware (locks, hold-opens, strikes, hinges, etc.) shown on the Contract Documents. Electrified door hardware shall be furnished and installed by others with the exception of electromagnetic hold opens which shall be furnished and installed by the Electrical Contractor. The Electrical Contractor shall coordinate the location of the door magnets and conduits supplying power to the magnets. All wiring to the magnets shall be concealed within the walls. Include power for all electrified hardware. Verify through submittals and in the field that all electrified hardware is rated for the supplied voltage and power and then make all connections.

24) Heat Trace:

The Mechanical Contractor will furnish and install all electric heat trace cable indicated on the Contract Documents and the Electrical Contractor will provide all of the power wiring to these heating cables.

25) Mechanical Service Lighting:

The Electrical Contractor shall furnish and install any necessary wiring for internal lighting in or on mechanical units. This Contractor is expected to check mechanical specifications and drawings to be sure any lights associated with the mechanical units are wired and operational.

26) Fire Protection Devices:

The Fire Suppression Contractor shall provide all fire alarm devices related to the sprinkler system (flow and tamper switches). The Electrical Contractor is responsible to wire these devices to the Fire Alarm System. This Contractor will coordinate with the Electrical Contractor exact number and location of these devices.

27) Casework Lighting and Receptacles:

Wood Casework electrical receptacles/wiremold and task lighting shall be provided by the Electrical Contractor except if built into a finished product.

28) Pre-Manufactured Finished Raceway for Devices at Existing Walls

The Electrical Contractor shall provide pre-manufactured finished raceway as indicated on the Contract Documents.

29) Stage Lighting Support System:

The Electrical Contractor shall be responsible to provide any and all support system for stage lighting to be hung from the structure above or adjacent and as noted on the Contract Documents.

30) Minor Work/Provisions:

The Electrical Contractor shall carry in their base bid **240 hours of Electrician hours with small tools to perform additional minor work directed by the Construction Manager.**

31) Pricing of Additional Work

All additional work for change orders that are submitted by the Electrical Trade Contractor must be calculated on the basis of the latest version of NECA Category 1 costs further reduced by 25%.

32) Wiring of ALL Plumbing/HVAC Fixtures and Equipment

The Electrical Contractor shall furnish and install all wiring and transformers for Plumbing Fixtures and HVAC Equipment that may not be shown on the Electrical Drawings but is required by the Contract Documents. This Contractor is expected to check plumbing and mechanical specifications and drawings to be sure any power associated with Plumbing Fixtures and HVAC Equipment are wired and operational.

6) Underground Ducts and Utility Structures:

The Electrical Contractor shall provide all Conduits and other materials as required to complete the Underground Conduits, Cables, Ducts, Grounding systems and Utilities installation per the Electrical Divisions.

CLARIFICATIONS

a.) The Electrical Subcontractor shall include:

- 1) Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
- 2) Sheet C-19 - Include power supply and connection to irrigation controller and 3" conduit to 5 feet outside of the building terminating with a pull box. Also include power to booster pump.
- 3) Sheet D-101, 102, 103, 105, 106, and 107 Specific Demolition Notes – Include all work for Demolition Note A2 related to the electrical systems. Include reinstallation and all work needed to maintain systems during construction in all areas. Include attachment and support for all items. Safe-off all electrical connections required for demolition. Also, rewire outlets and provide new covers per Specific Demolition Note A13.
- 4) Sheet D-112 - Safe-off all electrical connections for the food service and kitchen equipment.
- 5) Sheet A-101.1 – Complete all electrical work described under Construction Note 12 relating to the elevator system.
- 6) Sheet EQ-101 – Furnish and install all electrical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all electrical for all equipment. Furnish and install the following items:
 - a. Shop Equipment Schedule – Automotive Production Shop
 - i. Item 17 – Suspended Drop Lights
 - ii. Item 18 – Power Drops
 - iii. Item 30 – Emergency Shut-Off Switch
- 7) Sheet EQ-102 – Furnish and install all electrical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all electrical for all equipment. Furnish and install the following items:
 - a. Shop Equipment Schedule – Electrical
 - i. Item 7 – Power Cord Reels
 - ii. Item 13 – Emergency Disconnect Switch

- iii. Item 16 – Master Electrical Panel
 - iv. Item 17 – Residential Electrical Panel
 - b. Shop Equipment Schedule – Carpentry
 - i. Item 28 – Emergency Shut-Off Switch
 - ii. Item 34 – Power Cord Reels
- 8) Sheet EQ-102 – Install all electrical related equipment and work indicated to be owner furnished and contractor installed. Install the following items:
- a. Shop Equipment Schedule – Electrical
 - i. Item 4 – Power Console
- 9) Sheet EQ-103 – Furnish and install all electrical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all electrical for all equipment. Furnish and install the following items:
- a. Shop Equipment Schedule – Plumbing
 - i. Item 15 – Emergency Shut-Off Switches
 - ii. Item 21 – Electrical Panel W/ Breakers
 - iii. Item 31 – Power Cord Reels
 - b. Shop Equipment Schedule – Graphics
 - i. Item 17 – Emergency Power Shut-Off
- 10) Sheet EQ-106 – Furnish and install all electrical related equipment and work indicated to be contractor furnished and installed. Also, furnish and install all electrical for all equipment. Furnish and install the following items:
- a. Shop Equipment Schedule – Manufacturing
 - i. Item 18 – Emergency Shut-Off Switch
- 11) Sheet EQ-101, EQ-102, EQ-103 and EQ-106 - Furnish and install all Electrical and Power. Include all connections to equipment. – **ADD. NO. 1**
- 12) Sheet EV-101 - Provide power for the active soil depressurization radon systems.
- 13) Sheet E-001 – Include all work indicated on this sheet.
- a. General Note 4 – Provide a suitable junction box at each recessed fixture, whether specifically indicated or not.
 - b. General Note 13 and 14 - Provide all power wiring.
 - c. General Note 25 – Provide GFI type receptacles when receptacles shown on plans are within 6 feet of any water source whether depicted to be GFI on the plan sheet or not.
 - d. General Note 43 – Furnish and install wiring for automatic flush valves as indicated.
 - e. General Note 47 – Include hand dryer wiring as indicated.
 - f. General Note 58 – Provide and install supplemental steel for light fixture installation.
 - g. General Note 63 – Provide additional duplex receptacle systems as indicated.
 - h. General Note 64 – Provide additional home run circuits and breakers as indicated.
 - i. General Note 65 – Provide additional home run circuits and breakers as indicated.
 - j. General Note 77 – Provide additional GFI duplex receptacles as indicated.
 - k. General Note 63 – Provide additional home run circuits and breakers as indicated.

1. General Note 81 – Provide all power, wiring and other electrical work required for items indicated in the plumbing drawings for complete and functional fixtures.
- 14) Sheet ER-100, 101, 102, 103, 104, 105, 106 and 107 – Include all electrical removal and demolition work. Include completely removing unused electrical conductors, conduits, and other electrical items as indicated. Include furnishing and installing temporary lighting and temporary emergency lighting battery units as indicated. Include removals of work in trenches between buildings.
- 15) Sheet ER-100
 - a. Removal General Note 2 - Include the removal of TV brackets and television sets as indicated.
- 16) Sheet E-106.1 – Furnish and install galvanized unistrut and fittings as required to independently support disconnects and receptacles.
- 17) Sheet E-703 Detail 3 – Include all electrical work indicated in this detail. Include all work at floor box fire detail including box as indicated.
- 18) Provide temporary power.
- 19) Provide all penetrations and cores required to complete Subcontractor's Work. Include patching, fire caulking, acoustical caulking, and architectural caulking as required.
- 20) Include all temporary egress lighting required including what is shown in the demolition drawings.
- 21) Include all cord reels.
- 22) Include all disconnects for the project.
- 23) Maintain or provide lighting for all drop off, parking lot and pedestrian areas throughout the course of the project.
- 24) Include demolishing any existing electrical system items that are no longer to be used that were not specified to be demolished in the demolition drawings. Verify any and all demolition with the Construction Manager prior to completion.
- 25) Include the maintenance and repair of all new and existing electrical systems until the entire project is complete.
- 26) Include all electrical cutting, capping, and making safe as required.
- 27) Include all sleeves for electrical work including the locations shown in the structural drawings.
- 28) Include providing temporary electric power to the 2 teacher stations in the temporary science labs as indicated in the phasing documents and directed by the Construction Manager.
- 29) Include shop drawings and calculations prepared and stamped by a qualified professional engineer as specified for this scope of work. Include shop drawings and calculations for seismic restraints.
- 30) Include all electrical work for the food service equipment including all service rough-ins, junction boxes, conduit and wiring, support brackets, disconnects, and final connections. Include the installation of all Food Service Subcontractor provided items specified to be installed by the Electrical Subcontractor.
- 31) Provide all access doors and panels required for this scope of work to be installed by others.

- 32) Include power connections and switching for the overhead motorized service doors and motorized operable panel partitions. Provide all line voltage wiring and switching.
- 33) Include power for the display cases.
- 34) Include the installation for the switches and furnishing and installing wiring at the motorized projection screens. Switches to be furnished by the General Trades Subcontractor. Include all wiring, conduit, junction boxes and components.
- 35) Include the installation for the switches and furnishing and installing wiring at the motorized basketball goal systems. Switches to be furnished by the General Trades Subcontractor. Include all wiring, conduit, junction boxes and components.
- 36) Furnish and install all electrical for the gymnasium scoreboard systems including power conduit, cable, outlet boxes and all other related items. Include signal raceways, boxes, jacks, cover plates and all terminations.
- 37) Furnish and install all electrical work at the laboratory casework including service rough-ins, junction boxes, internal conduit and wiring, support brackets, final connections, disconnects, starters and all other electrical work.
- 38) Include power for dust collectors.
- 39) Furnish and install all GPS related equipment.
- 40) Include emergency generator system.
- 41) Include all conduit, cable trays, raceways, sleeves, fire sealing at sleeves, back boxes, boxes, pull cords, infrastructure, and power wiring for the security system shown on the SEC drawings. All work for the security system is to be reviewed and approved by the owner's security consultant and the Construction Manager prior to starting the work.
- 42) Video for Training, Maintenance & Operation - For equipment which requires training, maintenance and/or operation by operational personnel, provide a professionally developed video DVD with audio for the use of maintenance training for the facility as indicated in the specifications. Each video will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the video. The recordings shall include the equipment being maintained by qualified personnel, the required maintenance tools, and a step by step technique, both verbally and visually demonstrating how to maintain each piece of equipment in a hands on application. Provide 5 copies of the video to the Construction Manager.
- 43) Include the demolition of all electrical items not indicated to remain as part of the permanent systems including items shown in the drawings and including items not shown in the drawings but existing on site. Include the demolition of all above ceiling and roof electrical not indicated to remain as part of the permanent system.
- 44) Furnish and install stage and theatrical light systems and all supports.
- 45) Review all specified equipment for the project and provide a letter to the Construction Manager indicating if all existing and new equipment will function properly with the electrical utilities specified in the construction documents 30 calendar days prior to completing related work.
- 46) Furnish all door hardware specified to be furnished by the electrical contractor in specification section 087100. Furnish and install all magnetic holders throughout the project.
- 47) Include cutting openings in metal deck for all work.

- 48) Include all shunt trips for the elevator shaft and other locations as indicated.
- 49) Equipment to be moved (By Bid Package 1.03) shall be disconnected by this Contractor and reconnected when delivered back to the building.
- 50) Obtain and pay for all permits including but not limited to certificate of compliance requirements for fire alarm inspection testing certification for all protective signaling systems.
- 51) Include electrical related work at the E House including conduit and wire for electrical service and installation of complete electrical service as indicated on the Contract Documents. – **ADD. NO. 2**
- 52) Provide Notes 1, 6, 12 for Electric & Gas Shut-Off Detail typical and as noted on 1 & 2/E-704. Electrical Contractor to provide all wiring complete. – **ADD. NO. 3**
- 53) Provide all wiring complete for Kitchen Hood Equipment Interface Detail typical and as noted on 3/E103.1Ka. – **ADD. NO. 3**

EXCLUSIONS

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

ALLOWANCE NO. 1: NEW ELECTRICAL SERVICE \$10,000

-The Electrical Trade Contractor shall include in his/her base bid the allowance of **\$10,000** to cover fees and charges from Utility Company to install the new **permanent** electrical power service to the Building.

**EXHIBIT “B”
SCOPE OF WORK**

**Bid Package #31.01
Site Work**

**ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR**

THE FOLLOWING WORK IS INCLUDED IN THE SUBCONTRACT:

The Scope of Work shall include but not be limited to labor, materials, equipment and all incidental work associated with **Site Work** as described in the Contract Documents and as outlined below. It is the intent of this Subcontractor to provide for the complete coordination, furnishing and installation of all **Site Work** as required, shown, described and specified under this Bid Package, and all related scope and services, required to complete the Project.

This Subcontractor shall be responsible to perform all Work not expressly specified or indicated by the Contract Documents but as required for a thorough and complete execution of the Work of this Bid Package/Subcontract in every respect. Note that the word “provide” if, and when used herein shall mean furnish and install completely, including all costs for labor, materials, and equipment. It is further understood that the Project Drawings, Specifications and other Documents listed in Exhibit B, may not be fully developed, and that the total Subcontract Agreement Price will include whatever is required beyond same to provide a complete and functional installation to the satisfaction of the Owner and Construction Manager. Should a conflict occur within the Contract Documents, the most restrictive, greatest quantity and highest quality shall prevail.

SCOPE OF WORK

- 1) **Bid Package 31.01 Site Work:** This Subcontractor is responsible to provide all coordination, manufacturing, fabrication, labor, materials, tools, equipment and appurtenances of every kind for the complete execution to furnish and install the **Site Work** and related work as described in the Specifications, Drawings, Site Logistics Plans and herein. The Scope of Work shall include, but not be limited to, the General Conditions, all Division One Specification Sections and all of the Work of this Bid Package in the following Specification Section(s) and those related Specification Sections, as shown and indicated on the Contract Documents, as shown and as further described herein:

Project Manual:

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1" prepared by Fusco Corporation dated June 18, 2012.

Entitled: "Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR Volume 1-3" prepared by Antinozzi Associates dated June 18, 2012.

Specification Sections of the Project Manual:

Include all work for all specifications sections specifically listed below or as applicable if indicated "(As Applicable)". In addition, complete work in other specification sections not listed as applicable to this scope of work and as described in the Scope of Work and Contract Documents.

020100	Site Preparation
024113	Site Clearing, Site Demolition and Removals
024216	Building Demolition (As Applicable) – ADD. NO. 1
033001	Portland Cement Concrete – Site
040501	Mortar and Grout – Site
042113	Brick Masonry - Site
072100	Building Insulation (As Applicable)
079200	Joint Sealants (As Applicable)
101453	Site Signage
107500	Flagpole

111233	Vehicle Access Gate
129300	Site Furnishings
Division 22	Plumbing (As Applicable)
Division 26	Electrical (As Applicable)
Division 27	Communications (As Applicable)
Division 28	Electronic Safety and Security (As Applicable)
311400	Strip and Stockpile Existing Topsoil
312000	Building Earthwork
312213	Formation of Subgrade
312316	Earthwork
312317	Unclassified Excavation
212323	Borrow Soil Fill
312333	Trenching
312500	Erosion and Sediment Controls
316613	Helical Pile
321123	Processed Aggregate Base
321200	Bituminous Concrete Pavement and Markings
321213	Portland Cement Concrete Pavement and Curb
321244	Reinforced Turf
321413	Unit Pavers
321541	Stone Screenings
321726	Detactable / Tactile Warning Surfaces
323223	Modular Retaining Wall System
328000	Irrigation System (As Applicable)
329113	Topsoil
329200	Seed and Sod Lawn
Division 33	Utilities
481614	Geothermal Well Drilling

Schedule of Drawings:

Eli Whitney, Connecticut Technical High School, Hamden, Connecticut, Project No.: BI-RT-837-CMR prepared by Antinozzi Associates dated June 18, 2012.

2) Description of Work:

- a. The following requirements are in addition to those contained within the contract

drawings, specifications, and bidding instructions and shall serve to amend, clarify, or supplement the requirements of those sections:

Layout; Temporary Sidewalks and associated work; Sedimentation and Erosion Control; Cast in Place Concrete; Footings and Foundations for Site Walls; Utility Pads; Removal and Replacement of Unsuitable Material; Excavation and Backfilling; Demolition and Tree Removal; Rock Removal; Foundation Underpinning and Soil Retentions Systems; Trenching and installation both outside and inside the Buildings (including but not limited to Gas, Water, Electrical, Grounding, Telephone/Data/Cable TV, Storm, Sewer, Fire Protection; Ductwork, Heating and Cooling); Concrete Thrust Blocks for All Utilities/Systems; Sheeting and Shoring; Dewatering for all trades; Earthwork; Anti-Tracking Pads; Site Water Distribution & Drainage; Foundation Drainage; Processed Aggregate Base; Soil & Materials Management; Site Storm Sewer Systems, (including Storm Water Discharge Permit); Site Sanitary Sewer System; Gas Utility System; Water Systems (including Water Meter Pit & Vault); all other Site Utilities as noted; Bituminous Concrete Pavement; Portland Cement Concrete Pavement & Curbs; Stone Pavers; Granite Curbs; Temporary Protection and weatherproofing; Concrete Encasements; Concrete Formwork (For Site Concrete Work only); Concrete Reinforcement (For Site Concrete Work only); Structural Concrete (For Site Concrete Work only); Site/Traffic Control Signage; Flagpoles; Joint Sealers and Caulking (as it applies to your scope of work) and as described in the Specifications Divisions and Sections listed below.

3) Phasing:

This Project is divided into multiple construction phases which shall be in accordance with the Phasing Plan (Document 000926).

This Scope of Work shall apply equally, similarly and likewise to all phases of the Project whether or not indicated as such. If this Scope of Work identifies a quantity of scope to be provided, that total quantity shall apply to the Project as a whole, and therefore to all phases whereby that quantity shall be divided under the acceptance of the Subcontractor's schedule of values. Shop Drawings will only be reviewed by phase. Material submittals will be reviewed for the entire Project after award. Only material produced and purchased specifically for incorporation into the phase of the Project being constructed will be considered for payment. The Construction Manager will not under any circumstances consider or approve payment for material produced or purchased specifically for incorporation into a future phase.

Site Preparation:

- a. This Subcontractor shall relocate as necessary and remove a minimum of **six (6) construction signs and bases** at surrounding City streets stating “Construction Equipment and Trucks Entering Road”. Additional signs may be required by the **Town of Hamden** and is included in the Subcontract price.
- b. This Subcontractor shall relocate as necessary and eventually remove a minimum of **ten (10) temporary wayfinding signs and bases** as directed by the Construction Manager.
- c. This Subcontractor shall include protection of site appurtenances, lawns and plantings adjacent to work areas. This Subcontractor shall be required to provide tree protection for existing trees to remain. All protection to be removed by this Subcontractor at the completion of the Work.
- d. This Subcontractor shall provide and maintain and eventually remove all erosion control measures as required including, but not limited to, inlet protection at manholes, silt fence, hay bales, anti-tracking pads at the construction entrance and exit including all associated filter fabric and large stone, as detailed and approved in the aforementioned Logistics Plan. All truck tires are to be free of dirt, dry and clean before leaving the construction site.
- e. This Subcontractor shall provide dust control (watering trucks) as required by the Construction Manager and/or by any state or local agency.
- f. This Subcontractor shall protect all asphalt, concrete and existing site improvements. In the event asphalt, concrete or other site improvements intended to remain, this Subcontractor shall repair and restore the asphalt, concrete and site improvements to its original condition.
- g. This Subcontractor is responsible for maintenance and eventual removal of crushed stone temporary roads to adequately support loading and withstand exposure to heavy construction traffic. Obtain approval from the Construction Manager to locate temporary roads, storage and parking areas. Extend temporary roads in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration and supervisory personnel during later phases.
- h. This Contractor shall be responsible for all costs to eventually remove the water line taps and any other work related to the new water services to the Office Trailers. The water authority will provide a list of qualified Contractors who can be used for the Taps, disconnects, and any other work that needs qualifications.
- i. This Subcontractor shall remove and restore the following areas depicted on the Site Logistics Plan:

- i. Construction Parking and Material Storage Location : Remove 6” of compacted processed stone at 30,000 square feet and install perimeter erosion control, all acceptable to the Construction Manager. Remove and restore per finish sitework plan.
- ii. Construction Manager’s Office Trailer: Remove and dispose of a pressured treated wood deck and shed roof (watertight) to connect the entrances between the Owner’s jobsite trailer and the Construction Manager’s jobsite trailer – approx. 40x12 in size deck with 2-48” wide stairs/rails built to all applicable codes and as directed by the CM.
- iii. Construction Manager’s Office Trailer & Owner Office Trailer: For each the Owner and Construction Manager’s Trailer – Remove and dispose of two base cabinets and two wall cabinets and countertop to fill twelve foot long space in two locations in both Construction Manager’s and Owner’s Office Trailers.

This Subcontractor shall remove within their Base Bid the following; two (2) large white mailbox installed on 4 x4 post for CM and Owner.

This Subcontractor shall provide a case (24) each of white, blue and yellow Marking spray paint, 10 rolls each of “Caution Tape” and “Danger”.

This Subcontractor shall include **five (5) round trips** from the Project Site to the Construction Managers warehouse/office in New Haven at the end of the project with a rack body truck (provided by this Contractor) to bring, furniture and incidentals from the site. Include **two (2) laborers** to move carry and distribute these incidentals.

- j. This Subcontractor shall remove conduit and wire for all Power and Telecom and Data for Construction Manager Trailer and Owner Trailer. Include removal of two (2) overhead poles and power backboard systems. Make final disconnections to trailers for power, telecom and data.
- k. This Subcontractor shall provide all Site Preparation, Sediment Erosion Control Protection, and Clearing and Grubbing to remove all Trees, Tree Roots, Stumps, Shrubs and other existing Plant materials with the exception of those specifically noted in the Contract Documents to remain.
- m. This Subcontractor shall provide, maintain and eventually remove all erosion control measures including, but not limited to, inlet protection at manholes, silt fence, hay bales, anti-tracking pads [as depicted on the Site Phasing/Logistics Plan] all construction entrances and exits including all associated filter fabric and

large stone, as detailed and approved in the aforementioned Logistics Plans. All truck tires are to be free of dirt, dry and clean before leaving the construction site. (See Bid Package No. 1.01 (“Site Preparation”) for (3) Anti-Tracking Pad being provided by that Contractor).

5) Site Demolition:

This Subcontractor shall include Existing Site Improvement removals.

6) Temporary Roads, Paving, Access

This Contractor shall provide for installation of asphalt binder course immediately following underground utilities work in that area. This Contractor shall also provide asphalt patching, asphalt cleaning or sweeping and tack coat prior to installation of final paving, including final pavement marking and striping. Final paving shall be prepared to eliminate bird baths and minimize cold joints. It is understood that all final paving (top course/finish course) can take place up to several months after the binder course is installed and all associated cost shall be included in this Contractor’s bid proposal.

The Site Contractor shall construct and maintain temporary roads and paving that will adequately support loading and withstand exposure to traffic and equipment during the construction period. Locate temporary roads, storage, staging and parking areas where the same permanent facilities will be located whenever possible. Extend temporary roads in and around the construction area as necessary to accommodate concrete trucks, concrete pumps, structural steel deliveries, and all other deliveries, storage of materials, and access for equipment and for administration and supervisory personnel. This Contractor must maintain a compacted surface that slightly slopes away from building around the entire perimeter of the building at a minimum of 10 feet wide suitable for staging of the exterior of the building. Provide and maintain suitable pumps and drains to keep the excavated areas of the building free from water and sufficiently dry at all times. This Contractor shall provide **five (5) separate compacted (90% compaction) dry pads suitable for the crane that will be used in erecting the building structural steel from outside of building foot print as located and as prescribed by the CM. These five (5) separate compacted pads shall be a minimum of thirty-five feet by thirty five feet.**

This Contractor shall be responsible to professionally sweep clean public roads around the project site as result of construction traffic. Additionally, this Contractor shall professionally sweep all pavement, sidewalks, and entry steps as directed by the Construction Manager from the time this Contractor mobilizes until the issuance of the Certificate of occupancy. – **ADD. NO. 3**

7) Soil Erosion and Sediment Control

This Contractor is responsible for the furnishing, maintenance and removal of Erosion and Sedimentation Controls including anti-tracking pads as shown on the Contract Documents. This Contractor will also be responsible to maintain the anti tracking pads as shown on the Contract Documents. Please Note, anti tracking pads are shown for count only and it is possible that these pads could be located in others areas as directed by the Construction Manager.

This Contractor is responsible for cleaning and /or washing down the tires of his or her construction vehicles and equipment including but not limited to visitors and vendors exiting the site at the anti-tracking aprons located at each construction entrance to avoid tracking mud, dust, and etc. from the site and onto public streets.

Sedimentation and erosion control shall be properly installed and maintained. The silt fence specified utilizes an 8' post spacing. The posts are to be hardwood posts with the fabric prefabricated on the posts from the factory. The fabric specified does exceed the specifications of some other manufacturers in regards to strength. The control includes two rows of fabric as a means of a second defense mechanism.

A breach in the erosion control systems shall be deemed a lack of oversight from this Contractor to properly ensure the systems are installed correctly and are being inspected and maintained regularly. In the event of a breach, this Contractor shall immediately repair and replace the breach and repair and restore the neighboring property.

It is essential that the site work be performed in a staged progression to minimize the potential for soil loss through erosion as stated in the Contract Documents. The Contract Documents are not intended to show every erosion control measure necessary to coordinate with the Project Schedule (this is identified in the Erosion Control Narrative Specification). Erosion control logs shall be required by this Contractor that clearly and accurately identifies the status of the erosion control measures in place, this item shall be on the agenda of every construction meeting.

Furthermore, this Contractor will be required to submit on a weekly basis, formally sign and follow requirements of the Water Pollution Control Plan for the project.

8) Survey / Layout:

The Site Work Trade Contractor shall provide **40 control lines and 10 benchmark grades**. This information shall be provided by a Connecticut Licensed Land Surveyor who shall install permanent offset points and bench marks that will allow for the reproduction of lines and grades by other trades.

This Contractor shall provide all other layout required to perform and complete his or her Work. The cost to replace or repair lost or damage control points shall be the charged to the offending Contractor.

9) Temporary Works:

The Site Work Contractor shall provide:

- l. The Site Work Contractor shall provide the Temporary Bituminous Sidewalks and associated work.
- m. This Subcontractor shall include protection of site appurtenances, lawns and plantings adjacent to work areas. The Site Contractor shall be required to provide tree protection for existing trees to remain.
- n. This Subcontractor shall include protection of utilities to remain within the work areas as indicated in the Contract Documents.
- o. This Contractor shall also provide and maintain suitable pumps, drains, and etc. to keep the site and building excavations free from water and sufficiently dry at all times.
- p. This Subcontractor shall not stockpile materials on site without prior written approval from the Construction Manager.
- q. This Subcontractor shall remove all Temporary Works below grade, including but not limited to, temporary power conduits, temporary water piping, temporary gas piping and other temporary systems not indicated to remain.
- r. This Subcontractor shall provide any and all temporary ramps over foundations for access by any trade.

10) Under-slab Utilities within the Structure:

The Site Contractor shall include all trenching, bedding and backfilling within the building footprint for installation of any and all under-slab work depicted on the Contract Documents and Reference Documents. Soil compaction shall be restored and tested as noted on the Contract Documents.

11) Removal of Mock-Ups:

The Site Contractor shall remove and dispose in the General Trades dumpster all Mock-ups (any trade) constructed in and around the Site when directed by the Construction Manager.

12) Site Utilities:

Site Contractor shall provide all Site Utilities as shown on the Contract Documents, including but not limited to:

- a. Trenching, Bedding, Pipe, Fittings, Valves, Concrete Anchors, Thrust Blocks, Concrete Encasements, Backfilling, and etc. as required to complete all systems as noted such as, Gas, Storm, Sanitary, Water, Fire Protection, Under Drains, CATV, Fiber, Electrical, Telecom, Data and Pole Mounted Security Cameras. All Conduits for the electrical, CATV, Fiber, Telecom, Data and Site Lighting will be provided by the Electrical Contractor. – ADD. NO. 2
- b. Site Water Distribution & Drainage, Site Storm Sewer Systems (including Storm Water Discharge Permit), Site Sanitary Sewer System; Gas Utility System; Fire Protection Service; Water Systems (including Water Meter Pit); all other Site Utilities as noted;
- c. This Contractor shall provide the above services from the point of origin into the building and coordinate same with the appropriate utility.
- d. This Subcontractor shall provide and install all thrust concrete blocking associated with all systems including fire protection lines.
- e. This Contractor will be responsible for coordination with the appropriate utility and provide and pay for all Permit, Fees, etc. and the coordination of inspections within the Contractor's Scope of Work as required by the service provider and/or the authority having jurisdiction.
- f. It is the intent of this document that the Site Contractor shall provide all utilities noted as complete in all respects, including but not limited to, providing Utility Pads as shown or required.
- g. The Site Contractor shall include in the Scope of Work any costs associated with shut downs that may be required to complete the Work.
- h. The Site Contractor shall be responsible for cleaning, flushing and disinfecting all water service piping prior to any Plumber or Fire Protection Trade Contractor's attaching to the new services. The Site Contractor shall employ a licensed Plumbing Contractor for any water service piping that is required to have a licensed contractor to install this above mentioned work by code. Site Subcontractor shall ensure everyone on site has appropriate licenses in regards to this subcontract.

- i. The Site Work Contractor shall furnish, install and coordinate with the Construction Manager and authority having jurisdiction when performing Domestic and Fire Protection water systems. It shall be the responsibility of the Site Work Contractor to make certain that the Water Distribution Services (Fire and Domestic) is complete in all respects at no additional cost to the Project. This includes but not limited to all tapping fees.
- j. The Site Contractor shall be responsible for all costs and coordination of water line taps and any other work related to the new water services. The water authority will provide a list of qualified Contractors who can be used for the Taps, disconnects, and any other work that needs qualifications.
- k. The Site Contractor shall provide excavation, Bedding and backfill for the new gas service from the Street Line to the new gas meter.
- l. The Site Contractor shall be responsible for connections to each utility service including the Gas Service, and coordinate work with other trades. Excavation, Bedding and backfill for all other trades shall be the responsibility of this Site Contractor. Inserts, sleeve and the like required to pass through the foundation and/or slabs shall be provided by the Contractor requiring the opening.
- m. The Site Contractor shall include in the Scope of Work any costs associated with shut downs to complete his or her work for the entire length of the project.
- n. The Site Work Contractor is responsible for all excavation, bedding and backfill required within the new and existing buildings and on the entire site for, all Trade Contractors. Each Trade Contractors shall provide line and grade for Site Contractor. It will be the responsibility of the Site Contractor to obtain the proper depth and location required for each excavation. It is the responsibility of the Site Contractor to fully coordinate with the Electrical, Mechanical, Plumbing and all drawings to ascertain the trenching requirements within the new and existing buildings and on the entire site. – **ADD. NO. 2**
- o. This Contractor is to furnish all labor, materials, equipment and incidentals necessary for the demolition and disconnection and lawful disposal of existing underground and above ground utilities and appurtenances servicing structures to be demolished as indicated on drawings and as necessary to perform work in the Scope of Work, as specified, and as directed by Engineer. This Contractor is to contact and coordinate with all utilities prior to the start of Work. Subcontractor to verify all existing utilities that are to remain that are in Subcontractor's area of work. Subcontractor is required to employ, at their expense, professional underground utility locating services for their onsite work. Any utility damaged due to Subcontractor's negligence will be fixed appropriately and costs passed on to Subcontractor. Stake, flag, and protect all existing utilities to remain.

13) Grease Interceptor:

The Site Contractor shall be responsible to furnish and install the Grease Interceptor as shown on the Contract Documents and shall include any necessary openings for, but not limited to, intake piping, exiting (downstream) piping, above access holes, etc. The Site Contractor shall be responsible for furnishing and installing all sanitary piping from the building into the grease interceptor. The Site Contractor shall install all sanitary piping from the downstream side of the Grease Interceptor and any manhole covers, manhole frames, manhole risers, vent lines, etc.

The Site Contractor shall verify operation of the grease interceptor and correct any malfunctions.

14) Bituminous Damp Proofing at Foundation and Site Walls:

- a. This Contractor shall be responsible for any and all damp-proofing, waterproofing, and insulation as it relates to Foundation Walls.
- b. This Contractor shall be responsible for all damp proofing, waterproofing and insulation at Site Walls.

15) Site Security:

The Site Contractor shall be responsible for security of the site with temporary gates, chains, locks, etc. Any associated cost shall be included in their base bid (distribution of keys free of charge as directed by the Construction Manager. Provide locks and chains on gates in fence as indicated on the Site Logistics Plan and as directed by the Construction Manager.

The Site Contractor shall be responsible on a *daily basis* to secure all access points to the site at the direction of the Construction Manager.

16) Office Trailer Locations:

This Subcontractor shall remove conduit and wire for all required Power and Telecom/Data for **All** Site Offices.

This Subcontractor shall remove wastewater sewer connection for **All** Site Offices.

This Subcontractor shall remove water service connection for **All** Site Offices.

17) Bid Package No. 1.01 (“Site Preparation”) Site Excavation and Stockpile:

Any excess soil that is stockpiled by the Bid Package No. 1.01 (“Site Preparation”) Contractor shall be removed by this Subcontractor. Stockpiles that have erosion control measures installed around it shall be maintained by this Subcontractor.

18) Construction Parking and Material Storage Location:

At the completion of the Project, or as directed by the Construction Manager, all services shall be removal and the area completed or restored in accordance with the Contract Documents. The Site Contractor shall cut, cap and remove all services to the Construction Parking and Material Storage Location. The Site Contractor shall remove or reuse all processed stone parking lot materials, erosion control and any other components of the Construction Parking and Material Storage Location area not indicated to remain as per the Contract Documents. The Construction Parking and Material Storage Location will be constructed in accordance with the Site Logistics Plan.

19) Building and Site Excavation, Bedding, Backfill:

The Site Contractor shall provide Excavation, Bedding, Backfill and etc. where indicated for all structures including: Retaining Walls, Structures, Site and Building Footings and Foundations, Utilities, Mud Slabs, Flag Poles, Miscellaneous Site Improvements, etc.

The Site Contractor shall provide Bases for all Site Lighting.

This Subcontractor shall be responsible for the Removal and Replacement of Unsuitable Material.

The Site Contractor shall provide the excavation and installation of Light Fixture bases.

Strip site and off haul soil spoils and/or stock pile for future use. Subcontractor is responsible for determining amount of soil needed for obtaining a balanced site (complete rough & finish grade and backfilling operations). Any excess soil is to be off-hauled by Subcontractor; if site is short, Subcontractor is responsible for importing. Stockpiles shall have erosion control measures installed around it and maintained. All spoils or any other soil being removed from the site must be tested and characterized prior to leaving the site and legally disposed of off site.

20) Underground Ducts and Utility Structures:

The Site Work Contractor shall provide Excavation, Dewatering, Bedding and Backfill, and installation of all Underground Ducts, Grounding System and all other Utilities.

Additionally the Site Contractor shall furnish and install Manholes, Handholds, Power Boxes Underground Structures and Pads, Transformer Vault/Pad, Concrete Anchors & Concrete Encasements, including Reinforcing Steel and Identification for same for all Underground Conduits, Ducts and all other Utilities. – **ADD. NO. 2**

The Electrical Contractor shall provide all Conduits, Ducts, Electrical Wire Accessories, connections and other materials as required to complete the Underground Conduits, Cables, Ducts, Grounding systems and Utilities installation per the Electrical Divisions.

The Site Contractor shall include in the Scope of Work any costs associated with any type of shut down to complete the work.

Additionally, the Site Contractor shall include all Trenching, Bedding and Backfilling within the building for installation of all under slab underground work performed by others (under new and existing slabs).

This Contractor shall be responsible for the removal of ALL existing underground utilities and structures as indicated on the Contract Documents.

This Contractor shall include all dewatering including all excavations, trenches, pits, open foundations, footings, etc., for the duration of the project.

21) Rigid Under Slab and Foundation Insulation:

All Extruded-Polystyrene Insulation inside and outside and underneath the Foundation walls and footings, where indicated on the Contract Documents, shall be furnished and installed by the Site Contractor.

22) Sheeting, Shoring, Underpinning and Open Hole Protection:

In addition to that required by the Contract Documents, the Site Contractor is responsible to provide all Sheeting, Shoring, Bracing, and Underpinning as required to complete his or her Scope of Work and the work of other Trades, whether shown or not on the Contract Documents.

- a. Also included shall be the restoration of all previously existing conditions disturbed as a result of the Site Contractor's work.
- b. Any street and parking area openings must be plated, barricaded with jersey barriers, barrels, signage, caution tape, and/or flashing caution lights at the end of each workday by this Subcontractor.
- c. Any and all work in or along edges of roadways will be coordinated and scheduled with the proper authorities two weeks prior to beginning work.

- d. Underpinning of existing foundation shall be the full responsibility of this Contractor to maintain the integrity of the foundation to the complete satisfaction of the Structural Engineer and Architect.
- e. Any compromise of the integrity of the existing foundation shall be the full responsibility of this Contractor to rebuild the existing foundation to the satisfaction of the Structural Engineer and Architect.

23) Site Concrete:

The Site Contractor shall provide all Concrete Formwork (for Site Concrete Work only), Concrete Reinforcement (for Site Concrete Work only) and Structural Concrete (for Site Concrete Work only) to complete all Site Concrete as indicated on the Contract Documents, including the Clarifications as listed below:

- a. The Site Contractor shall provide excavation and installation of Concrete Bases and footings for the Site Lighting Fixtures, including the setting of anchor bolts. The Site Contractor shall provide Concrete Grouting if required. Refer to the electrical drawings.
- b. The Site Contractor shall provide Excavation, Bedding, Backfill, Formwork, Drypack, Grout, Concrete , removals, etc., for all Site Concrete Work as indicated on the Contract Documents, including but not limited to Sidewalks, Bituminous Concrete Pavement, Portland Cement Concrete Pavement & Curbs, Stone Pavers, Detectable Warning Surfaces, Granite Curbs, Bollards, Light Pole Bases; Flag Pole and Base; Concrete Encasements; Concrete Formwork (For Site Concrete Work only); Concrete Reinforcement (For Site Concrete Work only); Structural Concrete (For Site Concrete Work only) and Retaining Walls.
- c. This Subcontractor shall provide all Utility Equipment Pads, Generator Pads, Slabs, All Exterior Mechanical Pads, and Transformer Vaults as indicated on the Contract Documents or required by Utility Companies or authorities;
- d. The Site Contractor shall provide all Site Signage, Traffic Signage, Parking Signage, and associated Posts and/or Concrete Bases (VLOCs) as noted in the Contract Documents. Include all site utility signage specified and required by all applicable codes and agencies.
- e. The Site Contractor shall install all inserts, anchors, as provided by others, to allow for the installation of pipe and tube railings provided by others.
- f. The Site Contractor shall provide all Site Concrete typical and as noted on the Civil, Architectural and Structural Drawings.

- g. The Site Contractor shall provide ALL Concrete and Reinforcing in its entirety from the outside face of the existing or new exterior concrete foundations walls.

24) Site Signage:

The Site Contractor shall provide all Site Signage, Traffic Signage, Parking Signage, and associated Posts and/or Concrete Bases (VLOCs) as noted in the Contract Documents.

- a. The Site Contractor shall provide the excavation, foundation and backfill at the school sign typical and as noted on Detail 5/C10.
- b. The Signage Contractor shall provide the Cast Metal Letters at school sign typical and as noted on Detail 5/C10.
- c. The Masonry Contractor shall provide the masonry and precast at the school sign typical and as noted on Detail 5/C10.

25) Grounding:

The Site Contractor shall provide Trenching, Bedding and Backfilling for the installation of the Grounding system as indicated in the drawings. – **ADD. NO. 2**

26) Winter Protection, Dewatering and Runoff Control:

- a. The Site Contractor shall provide removal of snow, ice and mud from Construction Roads (including the Athletic Field Project Site Roads), Permanent Driveways & Roads, City Sidewalks, Construction Trailer Office Locations, Office Trailer stairs and access and Construction Parking and Material Storage Areas as may be required for accessibility, safety, protection and prosecution of all trade work. These operations shall be performed for the duration of the Project. In addition to removing the snow, this Contractor shall spread ice melt as needed or at the Construction Manager's discretion. This Contractor will be responsible to sweep up all sand used in the above process. Site Subcontractor also to provide all removal of snow, ice and mud to complete its own work.
- b. This Subcontractor shall include and maintain all rainwater runoff control and shall sign and agree to the Storm Water Pollution Control Plan.
- c. This Subcontractor shall include ALL dewatering and surface water control for all open excavations, foundations, footings, access and haul roads, and staging areas as required for the duration of the Project. All erosion controls shall be inspected weekly and before every anticipated rain event and after every rain event.
- d. This Subcontractor shall provide and maintain all winter protection up to the point where the area is taken over by the Concrete Foundation Subcontractor. This Subcontractor shall include preparation, protecting and/or pre-heating/thawing

(including but not limited to blankets, ground heaters, etc.) required to complete its Work and will provide the Concrete Subcontractor's with "non-frozen" conditions. The Concrete Foundation Subcontractor will be responsible for dewatering its Work. Once forms are stripped, this Subcontractor shall resume responsibility and backfill promptly.

27) Dust Control:

The Site Contractor shall provide all Dust Control for the duration of the Project. This Contractor will provide dust control (watering trucks) as required or as requested by the Construction Manager and/or by any state or local agency.

28) Permanent Roads and Pavement:

This Contractor shall provide for installation of asphalt binder course for each designated paved area. This Contractor shall also provide asphalt patching, asphalt cleaning or sweeping and tack coat prior to installation of final paving, plus final pavement marking and striping. Final Paving shall be prepared to eliminate birdbaths and minimize cold joints.

Additionally, this Contractor shall professionally sweep all pavement, sidewalk, and entry steps just prior to occupancy as directed by the Construction Manager.

This Contractor is responsible for all pavement and field markings/painting, curb and wheel stops, speed bumps, undulations, and sealers. Include the complete removal of existing striping in lieu of just painting over existing with black paint.

29) Neighboring Property Owners:

This Contractor shall provide any and all coordination (through the Construction Manager) with neighboring property owners while conducting Work in the vicinity of the property line, including but not limited to rock removal, excavation, site demolition and brush and tree removals.

30) Storm Water Systems – ADD. NO. 2

This Contractor shall be required to construct the Storm Water Systems upon mobilization to the Project.

This Contractor shall be required maintain the Storm Water Systems for the duration of the Project. – **ADD. NO 2**

This Contractor shall be required to permit reasonable access to all Contractors over the Storm Water Systems and provide temporary protection over the units to allow for such

reasonable access (manlifts, lulls, highlifts and other construction equipment) to the building. – **ADD. NO. 2**

This Contractor shall be required to restore and completely clean to the satisfaction of the **Town of Hamden**, Architect, Construction Manager and any other entity having authority over the Storm Water Systems. – **ADD. NO. 2**

This Contractor shall prepare and submit for approval a Work Plan specifically identifying the work activities in sequence for the construction of Storm Water Systems. This Contractor shall meet with the Construction Manager, Site Engineer and appropriate representatives of the **Town of Hamden** and likely the State of Connecticut to review the Work Plan which shall include at a minimum: (1) schedule of operations, (2) installation sequence, (3) sedimentation and erosion control measures, (4) shop drawings, (5) removal of construction sedimentation prior to closeout and any other information required by the **Town of Hamden**, Architect and Engineer. – **ADD. NO. 2**

31) Dumpsters, Clean-up, Wash-Out & Waste Removal:

- a. The Site Work Contractor shall be responsible to compact down ALL TRADES dumpsters w/ a machine equivalent to or greater than a John Deere 410 on an as needed basis per the Construction Manager.
- b. The Site Work Contractor shall be responsible for washing out concrete trucks, pumping trucks, pipe lines, etc., off-site (take back to plant) or at a designated place on site which can be cleaned and disposed of at his or her expense. Additionally, the cost of cleaning of all concrete, mortar, and grout splatter from all surfaces immediately after placement of these materials, and repairing any resulting damage to the satisfaction of the Construction Manager shall be included in this Contractor's bid proposal. Also include a location for the Concrete Subcontractor to wash out its trucks on the project site. NO WASHING OF TOOLS, EQUIPMENT, ETC. OR ANY MATERIALS INTO STORM OR SANITARY SYSTEMS WILL BE PERMITTED.
- c. This Contractor will provide, maintain, and remove at project completion a washout area for his or hers and the Concrete/Mason Contractor's concrete trucks, pump trucks, pipe lines, etc., delivering to the site. Including periodically relocating the washout area as dictated by the Construction Manager and/or Engineer.

32) Sub-grade Preparation:

This Contractor is responsible for providing Sub-grade to tolerances indicated in the Contract Documents for all elevations noted on the Contract Documents.

33) Radon Pit Removal System:

The Site Contractor shall be responsible for Excavation, Bedding, Backfill, Concrete Block, Plywood or Metal Decking as indicated in the details, of Radon Collection Systems and all accessories for the Radon Removal Systems as detailed on the Contract Documents.

The Mechanical Contractor shall confirm the operation of the Radon Removal Systems after installation as noted on the Contract Documents. The Mechanical Contractor shall be responsible for providing a licensed certified radon testing company to certify all Radon Removal Systems as noted on the Contract Documents.

Include all under slab radon trenching, installation, and connections and stub up from the slab on grade.

34) Flagpole

This Contractor shall provide the Flagpole and flags and related components as noted on the Contract Documents, including demolition and removal and proper disposal of the existing pole/base.

35) Traffic Control Signage

This Contractor shall provide the Traffic Control Signage and related components as noted on the Contract Documents, including demolition and removal and proper disposal of the existing pole/base.

35) Final Cleaning of Asphalt and Site Concrete:

The Sitework Contractor shall professionally sweep clean the roads and pressure wash all sidewalks.

36) Topsoil and Lawn Seeding

This Subcontractor shall provide all approved topsoil and seeding as indicated on the Contract Documents. This Contractor shall be responsible for watering, cutting and maintaining all grasses until Project is complete and as specified. **Only complete Work to the Project North of the Athletic Fields & Courts Demarcation Line (See Contract Documents). All work to the project south of the Athletic Fields & Courts Demarcation Line will be completed by the BP#31.04 Athletic Fields Subcontractor.**

36) Geothermal Wells

This Subcontractor shall provide all Geothermal Wells as indicated on the Contract Documents, specifically depths noted in Specification 481614. Include also Unit Prices in Specification Section 012000 Subsection 1.5 in lieu of table in Specification Section 481614 Part 4.1.a.2. – ADD. NO. 3

CLARIFICATIONS

- a.) Subcontractor shall **only complete Work to the Project North of the Athletic Fields & Courts Demarcation Line (See Contract Documents). All work to the project south of the Athletic Fields & Courts Demarcation Line will be completed by the BP#31.04 Athletic Fields Subcontractor.** Include all sleeves for plumbing, electrical, storm water drainage and irrigation work located to the project north of the Athletic Fields & Courts Demarcation Line that are required for work to the project south of the Athletic Fields & Courts Demarcation Line. Utilities crossing the Athletic Fields & Courts Demarcation Line shall be terminated at the line by this Subcontractor with a pull box or manhole unless otherwise noted.
1. Sheet PH-101 – Include all work indicated on this sheet as it applies to this scope of work.
 2. The Fire Suppression Contractor shall coordinate closely with the work of the Site Contractor to complete the water service(s) connection in a timely manner, as directed by the Construction Manager in its sole discretion, as not to delay the backfilling of the new water service(s). In the event the Fire Suppression Contractor is not acting timely, in the Construction Manager's sole discretion, the Construction Manager shall direct the Sitework Contractor to complete the installation into the building with cost backcharged to the Fire Suppression Contractor.
 3. The Sitework Trade Contractor shall provide fire protection service and domestic water line to within 5'0 of exterior face of exterior foundation wall with a flanged end or a bell end of the ductile iron pipe or similar condition for the other Trade Contractors to connect to. The Plumbing and Mechanical Trade Contractor and the Fire Protection Contractors shall be responsible for making the connections and running the piping into the building from that point.
 4. Complete work using the phasing described in Fusco Corporation's Phasing Documents. Provide excavation, bedding and backfill for temporary exterior lighting conduits as required. – **ADD. NO. 2**
 5. Sheet C-1 - Include all work indicated on this sheet.
 6. Sheet C-2 - Include all work indicated on this sheet except for the demolition of "D" Wing and the garage. The demolition of "D" Wing (listed as "D" Wing and "G" Wing on some sheets) and demolition of the garage will be completed by the

- Demolition and Abatement Subcontractor. Site Work Subcontractor to include demolition of oil separator tank and all exterior steps, stairs, ramps, walks, hand rails, and guard rails.
7. Sheet C-3 - Include all site footings except for footings at fencing. Include reinforcing at footings where specified. Include footings for gates, hand rails, guard rails, other railings, bollards, removable bollards and vehicle access gates and coordinate with other trade contractors. Infill bollards with concrete and form top. Include all exterior and site concrete, concrete paving, sidewalks, ramps, steps and stairs, aprons, curbs, asphaltic concrete paving, traffic signage and striping, all exterior signage not attached to buildings, stop bars, crosswalks, stone screenings, parking stalls, loading zones, flagpoles, retaining walls, utility pads, bike racks, trash receptacles, and benches. Include all grass, lawn and reinforced turf located north of the Athletic Fields & Courts Demarcation Line.
 8. Sheet - C-4 - Include all work indicated on this sheet. Include all utility connections, permits and fees. For site materials and methods use CTDOT Form 816 and/or the specifications, whichever is more stringent.
 9. Sheet C-5 – Include all grass, sod and lawn on the Project North side of the Athletic Fields & Courts Demarcation Line.
 10. Sheet C-6 - Include all work indicated on this sheet. Include the installation, maintenance, and removal of **three (3) Anti-Tracking pads** to be located as directed by the Construction Manager based on revised phasing. Maintenance of the anti-tracking pads includes the periodic removal of materials and addition of new rock as directed by the Construction Manager. In addition, include sedimentation and erosion control systems along the Athletic Fields & Courts Demarcation Line which is not shown in the drawings and all required erosion control whether shown on the drawings or not. Also include the maintenance and removal of three (3) separate Anti-Tracking pads provided through Bid Package No. 1.01 (“Site Preparation”).
 11. Sheet C-7 - Include all work indicated on this sheet.
 12. Sheet C-8 Include all work indicated on this sheet.
 13. Sheet C-9 - Include all work indicated on this sheet.
 14. Sheet C-10 Detail 5 - Include all work indicated in this detail below the top of the footing and include the reinforcing coming out of the top of the footing. Provide a shop drawing for this footing and coordinate with Masonry Subcontractor.
 15. Sheet C-10 Detail 6 - Include all work indicated in the detail listed.
 16. Sheet C-10 Detail 7 – Include all work indicated in this detail.
 17. Sheet C-11 Detail 1, 2, 3, 4, 5, 6, 7, 8, and 9 - Include all work indicated in the details listed.
 18. Sheet C-13 Detail 7 - Include all work indicated in the details listed.(See Drawing C-3 for location adjacent to Building E typical).
 19. Sheet C-15 Detail 4 – Include all concrete and concrete expansion joints, tooled joints, pre-molded joints, sealants and any other concrete joints.
 20. Sheet C-16 Detail 2, 3, 4 & 5 - Include all footing and concrete and other work indicated in the details listed except for furnishing the railings and gates.

- Miscellaneous Metals Subcontractor to furnish and install railings and gates in these details. Infill bollards with concrete and form top.
21. Sheet C-17 - Include all work indicated in this sheet. Include furnishing and installing the entire sand pit system.
 22. Sheet C-18 Detail 1 - Include all work indicated in the details listed. Include benches, concrete pavers, trash receptacles, bike racks and flag pole.
 23. Sheet C-18 Detail 2 – Include all work indicated in this detail except for the tree, mulch, precast cap and brick veneer. Include the plaques and skate stops in this scope. Provide shop drawings for the seat wall system and plaques and coordinate with Masonry Subcontractor and Landscaping Subcontractor. Include sand-blasting at concrete.
 24. Sheet EV-101 - Sitework Subcontractor shall be responsible for Excavation, Bedding, Backfill, ¾” Pressure Treated Plywood and/or metal deck as indicated in the drawings, Crushed Stone, Concrete Block and accessories for the Radon Removal Systems as detailed on the Contract Documents. Include piping under the slab and stub up above the slab. Coordinate with Mechanical Subcontractor and Concrete Subcontractor.
 25. Structural (“S”) Drawings – Include all work in the Structural drawings as it relates to this scope of work. Include the excavation for all building footings and slabs and include all subgrade, base, crushed stone, fill and backfill. This includes excavation work and bedding and backfill work at slab removal and infill locations.
 26. Sheet S-100 Foundation Note 1 – Include all work described in Foundation Note #1 including 12” of compacted granular fill under all footings and foundations and all work relating to helical piles and the surveying for those piles.
 27. Sheet S-106 – Include site work as applicable to this scope of work as indicated on this sheet for the E House.
 28. Sheet S-202 Detail 7 - Include all crushed stone at building slabs and at infill areas. Include infill areas that are shown throughout the contract documents and infill areas required but not shown in the drawings.
 29. Sheet S-222 Detail 21, 22 and 23- Include ALL helical piles typical and as noted throughout the Contract Documents.
 30. Sheet EQ-101 – Furnish and install all site and plumbing related equipment and work indicated to be contractor furnished and installed outside of the buildings. Furnish and install the following items:
 - a. Shop Equipment Schedule – Automotive Production Shop
 - i. Item 12 – Waste Oil Containment System – Include entire tank and system and bring piping within 5’ of the building.
 31. Sheet EQ-103 – Furnish and install all site and plumbing related equipment and work indicated to be contractor furnished and installed outside of the buildings. Furnish and install the following items:
 - a. Shop Equipment Schedule – Plumbing
 - i. Item 3 – Oil Tank – Include entire tank and system and bring piping within 5’ of the building.

32. Sheet PR-102 – Demolish and remove existing gas piping system from 5’ outside of the exterior of building to main line in Jones Road. Cap in the street at the main. Coordinate and comply with local utility. Coordinate and comply with Town of Hamden requirements for street work.
33. Sheet P-104.2 - Furnish and install the oil separator systems outside of the buildings.
34. Sheet M102.2 Detail 1 – Provide 12” Sonotube Foundations for Dust Collector angle frame. Coordinate location with Plumbing and HVAC Contractor.
35. Sheet ES-101 Detail 6 & 6a – Include all transformer utility pads. Include a pad for the generator.
36. Sheet ES-101 Detail 0, 1, 2, 3, and 4 – Include all site electrical infrastructure including ductbanks.
37. Sheet F-002 Detail 1 and 2 – Include the demolition of the existing site fire protection piping and construction of the new site fire protection line system to within 5’ of where the line is shown to enter the building.
38. Sheet F-003 Detail 1 – Include installation of the fire sprinkler site piping system from point of connection shown to within 5’ of where the line is shown to enter the building. Include control valve and box.
39. Include hydro flushing and cleaning of all existing and new storm drainage piping, catch basins, and manholes that are to be reused in the final plan at the end of the construction project. Also, hydro flush and clean all existing storm drainage piping, catch basins, and manholes at the beginning of the project and periodically during the project to endure a clean and properly functioning system as directed by the Construction Manager. All hydro flushing and cleaning to be done to the point of connection in the street.
40. Include all temporary pavement markings as indicated or required and their removal.
41. Saw cut and remove asphalt, sidewalk, curb, and site concrete as required for new sidewalk, curb, site concrete and drive and/or ramp entrance requirements. Saw cuts to be laid out prior to cutting and lay-out MUST be approved by Construction Manager’s Superintendent (correct layout is the responsibility of Subcontractor; Construction Manager’s Superintendent to verify neatness and constructability only). All cuts to be neat and all overcuts to be kept to an absolute minimum.
42. Include all sawcutting for utility demolition and for new utilities throughout the project outside of the buildings.
43. Subcontractor shall provide all suitable soil and topsoil for the entire site including all lawn, landscaping and planting areas. Subcontractor shall furnish and install all soil amendments, conditioners, compost, manure, and fertilizers and shall complete all soil preparation. Include rototilling. Include topsoil testing and report costs as specified and include all amendments and work indicated in the report.
44. Include back fill at perimeters of building structures after completion of concrete.
45. Include the off-haul of spoils from all work including any work by other trades.
46. Hand dig around tree drip lines and near existing utilities.
47. Include shop drawings prepared and stamped by a Professional Engineer licensed in the State Of Connecticut for the vehicle access gates as indicated in specification section 111233 and for precast structural concrete units as indicated in specification

- section 033000 and for soil shoring as indicated in specification section 312317 and helical piles as indicated in specification section 316613 and the modular retaining walls as indicated in specification section 323223 provide shop drawings stamped by a Professional Engineer for all other applicable items in this scope. Helical pile work shall be completed after school hours or on weekends or holidays.
48. Site Subcontractor responsible to install, maintain, and relocate fencing and surfaces for egress paths out of school as they change with the construction phasing. All pedestrian walkways shall be asphaltic (not crushed stone or processed).
 49. Include a new driveway apron and asphaltic concrete paved driveway over baserock matching the permanent construction details as a temporary driveway and road for school access from Jones Road just west of Pease Street to the existing parking lot. See Fusco Site Phasing Plan and CP-1.2 for reference and demolish this temporary driveway and road as directed by the Construction Manager when it is no longer needed.
 50. The Sitework Subcontractor shall provide Excavation, Bedding, Backfill for the Concrete Subcontractor for all structures including: Structures Footings and Foundations. Excavation and backfill of sumps and pits will be by the Sitework Subcontractor.
 51. Provide all concrete joints and include shop drawings indicating the layout of joints.
 52. The demolition of all concrete shall extend to the nearest control joint, expansion joint or tooled edge.
 53. Include relocating 2 existing and 3 new Conex type storage containers on site which are approximately 20' long 4 times each as directed by the Construction Manager.
 54. Include concrete patching at all city sidewalks and concrete repair at city sidewalks near construction entrances.
 55. Include all underground location services as required and coordinate with all agencies to avoid underground utility damage. Any utility damaged due to Subcontractor's negligence will be fixed appropriately and costs back-charged to the Subcontractor.
 56. Provide all temporary egress protective pathways required to obtain Certificate of Occupancies and Temporary Certificate of Occupancies and as indicated in the Contract Documents.
 57. Include pumping out and disposing of all materials in existing site fuel and waste oil containers as directed by the Construction Manager
 58. Include all exterior sand-blasting.
 59. Furnish and install all skate stops.
 60. Create as-built drawings for all underground utilities prior to covering them.
 61. Include all vaults, manholes and box covers and lids. Provide and install traffic rated Christy boxes or manhole covers at roadways, sidewalks, and all other areas where vehicular traffic is likely.
 62. Subcontractor is responsible for potholing and locating all existing underground utilities for the entire project.
 - i. Include potholing to determine existing conditions and utility locations. Verify the locations & invert elevations of all shown utilities. Include locating, cutting, capping, relocation, and connection to all existing utilities.

- ii. Verification of underground utilities prior to sawcutting is the responsibility of the Subcontractor. All information contained in the contract drawings must be verified prior to sawcutting. Include all sawcutting for this scope of work.
 - iii. If the field conditions are inconsistent with the drawings, notify the General Contractor's Superintendent immediately. Provide detailed & complete information that can be sent to the Engineer for direction.
 - iv. Subcontractor is required to employ, at their expense, professional underground utility locating services for their onsite excavations and trenching. Any utility damaged due to Subcontractor's negligence will be fixed appropriately and costs passed on to Subcontractor.
 - v. Subcontractor to safe-off utilities as required.
63. Subcontractor will be responsible for any line and it's functionality that Subcontractor connects to (including but not limited to, drainlines). Subcontractor to clean lines and ensure that lines are clear and are functioning/flowing as intended.
64. Provide patching for all finished surfaces.
65. Adjust the elevations of all new and existing utility boxes to finish grade. Include new covers, boxes, and risers as needed.
66. Complete all onsite and offsite utility connections.
67. Include the sanitation and flushing of all systems as indicated.
68. Furnish and install all lateral lines, inlets, catch basins, area drains clean-outs & manholes. Include required grates and fasteners. All grates shall meet ADA accessibility requirements.
69. Include all required adjustments of new and existing manholes, valve boxes, vaults, grates, catch basins, inlets, etcetera, to finish grade.
70. Include all off-site work for utility connections. Include layout, sawcutting, demolition and off-haul, trenching, pipe systems, back-fill, connections, compaction and patching.
71. Demolish and remove all existing site items not indicated to remain as directed by the Construction Manager.
72. Subcontractor shall furnish and install all indicated header boards adjacent to their work.
73. Include all utility connections. Include all coordination, permits, and fees for utility connections. Include all fees associated with cable TV, electric, gas, sewer, telephone and water. Include all permits and fees for the construction storm water and erosion control management including the fees and submission for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities for the entire project site (both sides of the demarcation line).
74. Include all site and utility related work at the E House including excavation for electrical service and installation of water line. Include the drilling of the geothermal well system. – **ADD. NO. 2**
75. Specification 024216.2.3.E.2 – After Building Demolition Bid Package 2.01 Demolition and Abatement Contractor shall leave all remaining excavation (hole slopes) OSHA safe. Backfill shall be by the Bid Package 31.01 Sitework Contractor. – **ADD. NO. 1**

76. Sheet C2 – Include demolition of underground utility tunnel between Wing B & Wing C typical and as noted on Sheet C2. – **ADD. NO. 1**
77. Sheet C4 / Specification 220000 – Provide new: oil tank; grease trap with backwater; oil/water separator and waste oil tank typical and as noted on Sheet C4. Provide piping as specified to all units and within 5ft of the building. – **ADD. NO. 2**

EXCLUSIONS:

- 1) Sale and Use Taxes.

ALTERNATE BIDS

Provide Alternate Bids as requested on Bid Form.

UNIT PRICES

Provide Unit Prices as requested on Bid Form.

ALLOWANCES

This Contractor shall include within the Subcontract Price, the allowances as listed below per Specifications Section 012100. Allowances as listed below shall include all necessary material, cost for delivery, installation, machinery, insurance, applicable taxes.

Allowances shall appear as a line item on the Contractor's Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

ALLOWANCE NO. 1: REGIONAL WATER AUTHORITY FEE - \$30,000

The Site Work Contractor shall include in the base bid the allowance of **\$30,000** for the Regional Water Authority Fee. All other related Work remains the same and shall be included in the Base Bid.

The total amount of the Bid as computed by the undersigned Bidder is (in words):

Dollars and Cents

(and figures) \$ _____

The Fusco Corporation reserves the right to make the award on the basis of the above Base Bid.

In submitting this Bid, the Bidder understands that the Fusco Corporation reserves the right to reject any and all bids, or to waive any informality in submitted bid documents. The Bidder also understands that the Fusco Corporation reserves the right to accept any, all, or none of the Alternates, which may be listed above, and may accept Alternates in any order at Fusco Corporation's sole discretion subject to a thorough review of the stated value and approval of such value by the Owner. The Bidder agrees to perform the work of each accepted Alternate for the sum quoted above for each, and to include such accepted Alternates in the Contract for Construction.

If written notice of the acceptance of this Bid and any or all of the Alternates is mailed, telegraphed, or otherwise delivered to the undersigned within ninety (90) days after the opening of the Bid, or at any time thereafter before the Bid is withdrawn, the undersigned prescribed form, and to furnish the required bonds within ten (10) days after the Contract is presented to them for signature.

Bid Bond:

The undersigned herewith submits security equal to ten percent (10%) of the Base Bid, the sum of: _____ dollars and no cents

\$ _____

This security shall be the sole and exclusive property of the Fusco Corporation as liquidated damages to the Owner, if the undersigned fails to execute a Contract in conformity with the accompanying forms, after due date notification therefore in the Contract Documents.

Bidders shall furnish with their bids (in triplicate) the following: - ADD. NO. 3

1. Document 000950: Bid Forms A through F
2. Document 000310: Bid Bond and Form of Surety
3. Document 000315: Form of Surety Guarantee
4. Document 000320: Non-Collusion Affidavit of Prime Bidder
5. Document 000350-2: Contractor's Minority Business Enterprises - CHRO
6. Document 000350-3: Notification to Bidders – CHRO
7. Document 000360: Certification of Bidder Regarding Equal Employment Opportunity
8. Document 000370: Certificate as to Corporate Principal
9. Document 000412A: Department of Administrative Services (DAS) "Contractor Prequalification Certificate and **Update Statement**
10. Document 000412B: Statement of Bidders Qualifications
11. Document 000847: Contractors Wage Certification Form
12. S/M/W/DisBE Certificate from the State of Connecticut Department of Administrative Services (DAS) for Set-Aside Bid Packages.

Addenda:

The Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Date received	Signature

Bidder's Official Name and Address:

Company Name

Street Address

City, State & Zip Code

Contact Name:

Signature

Title

Date

Bid Form “B” Labor Rates

ELI WHITNEY CONNECTICUT TECHNICAL HIGH SCHOOL Hamden, Connecticut Project No. BI-RT-837-CMR

Labor Rates

The following Labor Rates shall apply when Changes in your Scope Work are requested by the Owner/Construction Manager per the General Conditions of the Contract for Construction, where Unit Prices are not applicable and a Lump Sum Cost proposal cannot be agreed upon. The labor rate shall only include those categories as listed below plus the allowable percentage for Overhead and Profit (10%). Trade-related equipment, hand tools and power tools, normally supplied with the labor, shall not be included in the Labor Rate. The 10% Overhead and Profit is defined as all other incidental costs, Main Office Expenses, Main/Field Office Staffing, Project Management, Supervision, Insurances, Travel Expenses, etc.

Item	Other	Laborer	Oper. Engineer	Carp.	Mason	Iron Worker	Plumb.	Elect.
Base Rate								
Benefits								
F.I.C.A.								
St. Umemp.								
Fed. Umemp.								
Gen. Liab.								
Wrkrs.Comp.								
Subtotal								
10% OH&P								

Bid Form “C”
Alternates

ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

All Bidders shall include within his or her Bid any additional costs associated with the Alternates as listed below and in the Specifications. Should an Alternate not apply to your Scope of Work, indicate so on the Bid Form provided. The Alternate Bid prices shall be listed on Bid Form “C” and shall include all necessary labor, materials; equipment, installation; cost for delivery; machinery; insurance; applicable taxes; supervision, overhead; and profit. Should an Alternate be accepted, the cost or credit as noted on the above form shall be added or deducted from the Contract Value via Change Order. –

Bid Form “D”
Allowances

ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

All Bidders shall include within the bid price the applicable Bid Allowances listed below. Should an Allowance not apply to your Scope of Work, indicate so on the Bid Form provided.

Allowances shall appear as a line item on the Contractor’s Schedule of Values. The allowance amount covers the cost of the Contractor's labor/material/equipment delivered to the project plus all taxes less any trade discounts to which the contractor may be entitled with respect to the item of work. The Contractor's costs for supervision, overhead, profit and other administrative expenses with respect to the allowance item are included in the base contract amount - not in the allowance amount.

All increases to an Allowance shall be by Change Order. Any unused portion of an allowance shall be returned to the Owner by deduct Change Order.

SEE SPECIFICATIONS AND SCOPES OF WORK FOR ALLOWANCES

Bid Form “E”
 Proposed Subcontractor Listing

ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

This form shall be filled out by each bidder in accordance with amended Paragraph 5.2.1 through 5.2.4 of AIA Document A201 General Conditions 1997 Edition and as required by Article 21 of the Instructions to Bidders. Attach additional sheets if necessary.

Subcontractor Name And Address	Trade	Contract Amount	Certificate Type <i>(SBE, MBE, WBE)</i>	CHRO SetAside	
				<i>SBE (30%)</i>	<i>M/WBE (6.25%)</i>

**Bid Form “F”
 Unit Prices**

**ELI WHITNEY
 CONNECTICUT TECHNICAL HIGH SCHOOL
 Hamden, Connecticut
 Project No. BI-RT-837-CMR**

The Contractor shall include within his or her Bid the Unit Prices as listed in the Specifications. Should a Unit Price not apply to your Scope of Work, indicate so on the Bid Form provided.

The undersigned further proposes and agrees that should the amount of work required be increased or decreased, as directed by the Architect/CM, the following supplemental Unit Prices will be the basic price in place for computing extra cost. The stated costs are to be for “Additions” or “Deletions” of work to the Trade Contractor’s Contract. All Unit Prices shall include all cost of work to the representative contractor, including all charges for materials, labor, plant, equipment, overhead, profit, additional insurance, taxes and all charges of whatever kind.

Acceptance of a unit price amount, if any, is subject to review by the Architect and Construction Manager and final approval of the Owner.

Any and all adjustments to the Contract shall be made via Change Order. No adjustments for Overhead; Profit; Supervision and the like will be allowed.

	<u>DESCRIPTION</u>	UNIT PRICES
	<u>SITWORK (BP#31.01)</u>	
1.	Petroleum contaminated soil removal, legal disposal & backfill with on site clean material	\$ _____ TN
	<u>MASONRY (BP#4.01)</u>	
2	Additional masonry re-pointing (minimum area of 100 sf).	\$ _____ SF
	<u>FLOORING (BP#9.02)</u>	
3.	<u>Surface Applied Moisture Barrier</u> – Provide a unit price for a suitable surface applied moisture barrier compatible with each flooring system for use if actual flooring conditions exceed manufacturers’ requirements.	\$ _____ SF

	A	B	C	D	E	F	G	H	I	J
1	Section 000973 - Plan Holders List 7-30-12 - ADD. NO. 3			Bid Distribution Plan Holders List						
2	Eli Whitney	6/25/2012	PAPER	CD	BOTH					9/14/2011
3	Company	Contact	Address #1	Address #2	City	State	ZIP	Phone	Fax	Email
4	UNITED STEEL	MYER ELGART	164 SCHOOL ST		HARTFORD	CT	06108	840-610-4033	860-289-6350	MELGART@UNITEDSTEEL.COM
5	C.J. FUCCI	NANCY FUCCI	63 RUSSELL ST		NEW HAVEN	CT	06513	203-469-7487	203-468-6256	NFUCCI@CJFUCCI.COM
6	SILKTOWN ROOFING	VICKI MARCHITTO	151 WATER ST		DERBY	CT	06418	203-735-0552	203-732-7649	VICKI@SILKTOWNROOFING.COM
7	ENTERPRISE PLUMBING & HEATING	MICHELE MASSARO	801 STATE ST		NEW HAVEN	CT	06511	203-787-4311	203-787-2859	MMARO@SNET.NET
8	GREENWOOD INDUSTRIES	SCOT ROBERT	50 HOWE AVE		MILLBURY	MA	01527	508-726-1385	508-865-8016	SROBERT@GREENWOOD-INDUSTRIES.COM
9	M.J. DALY	CHARLES GABRIEL	110 MATTATUCK HEIGHTS		WATERBURY	CT	06705	203-753-5131	203-597-0227	CGABRIEL@MJDALYLLC.COM
10	A. SECONDINO	MATT KEOUGH	21 ACORN RD		BRANFORD	CT	06405	203-481-3496	203-483-8804	MKEOUGH@ASECONDINOANDSON.COM
11	TITAN MECHANICAL CONTRACTORS	TONYA FERAGNE	150 BATSON DRIVE		MANCHESTER	CT	06042	860-645-1105	860-645-1176	TFERAGNE@TITANMECHANICAL.COM
12	ALLIED RESTORATION	ERIN FINAN	162 GOVERNOR ST		EAST HARTFORD	CT	06108	860-291-8833	860-291-0770	ERIN@ALLIEDRESTORATION.NET
13	P & D MECHANICAL	LINDSAY E.	627 OLD HARTFORD RD		COLCHESTER	CT	06415	860-537-0617	860-537-0839	LINDSAYE@PDMECHANICAL-INC.COM
14	WJ MOUNTFORD CO	PAUL HOLLMAN	170 COMMERCE WAY		SOUTH WINDSOR	CT	06074	860-291-9448	860-289-6382	PHOLLMANN@WJMOUNTFORD.COM
15	ACORN GLASS	ARTHUR FIORE	30 CENTURY DRIVE		STRATFORD	CT	06497	203-375-3033	203-377-8110	AFIORE@ACORNGLASSINC.COM
16	H CARR & SONS	JACKIE LEGNOS	15 LAKEWOOD DR		OAKDALE	CT	02904	860-447-8244	860-447-8244	JACKIEL@HCARR.COM
17	AAIS	JOE VILLANO	802 BOSTON POST RD		WEST HAVEN	CT	06516	203-932-2992	203-932-9892	JOECAAISCORP.COM
18	F.MONARCA MASONRY (ACRANOM)	DOM MONTEANO	80 INDUSTRIAL PARK ACCESS RD		MIDDLEFIELD	CT	06455	860-349-5975	860-349-5965	DMONTEANO@ACRANOMMASONRY.COM
19	BISMARCK CONSTRUCTION	KEVIN WOOD	100 BRIDGEPORT AVE		MILFORD	CT	06460	203-876-8331	203-876-8425	KWOOD@BISMARCKCONSTRUCTION.COM
20	WATERBURY MASONRY & FOUNDATION	DAVE ROMAINE	120 COMMERCE COURT		CHESHIRE	CT	06410	203-272-5946	203-272-3694	ROMAINE@WATERBURYMASONRY.COM
21	CENTRAL CONN ACOUSTICS	GERRY ST. HILAIRE	105 NORTH CHERRY ST		WALLINGFORD	CT	06497	203-269-1421	203-265-3211	GSTHILAIRE@CENTRALCONNACOUSTICS.COM
22	THE IMPERIAL COMPANY, INC	HEATHER CARTA/STEPHANIE R.	261 MAIN ST		CROMWELL	CT	06416	860-632-2258	860-632-2278	HEATHERC@THEIMPERIALCO.COM
23	JOE CAPASSO MASONRY	ELLEN QUINN	251 MIDDLE ST		MIDDLETOWN	CT	06457	860-638-1111	860-638-1113	EG@JOECAPASSOMASON.COM
24	CONSTRUCTION DATA COMPANY	ANA JACOME	1 OAKBROOK TERRACE SUITE 510		OAKBROOK TERRACE	IL	60181	800-872-7878	866-714-9554	PLANS@ADNEWS.COM
25	ELLI CORPORATION	MICHAEL DAY	5105 FLUSHING AVE, 2ND FL		MASPETH	NY	11378	718-418-9002	718-418-4629	N/A
26	CGM ACOUSTICS	JOHN MARUS	195 ISLAND BROOK AVE		BRIDGEPORT	CT	06606	203-579-7935	203-333-5994	JOHN@CGMACOUSTICS.COM
27	R. CAMPUTARO & SON	TYLER FRIES	1 ENTERPRISE DR		NORTH BRANFORD	CT	06471	203-483-0330	203-643-0299	TFRIES@CAMPUTAROANDSON.COM
28	06-29-2012 INVOICING TO FUSCO (24 SETS) SEE SO0232849									
29	AUTOMATED BUILDING SYSTEMS, INC	LISA CROCKER	126 KREIGER LANE		GLASTONBURY	CT	06033	860-657-9257	860-657-3135	LCROCKER@ABSDDC.COM
30	THP	RICH JAGOE	2225 RESERVOIR AVE		TRUMBULL	CT	06611	203-372-3583	203-371-7549	RICHJAGOE@THP-GC.COM
31	BANTON CONSTRUCTION	JOSHUA KING	339 WASHINGTON AVE		NORTH HAVEN	CT	06473	203-234-2353	203--234-0010	JKING@BANTONCONSTRUCTION.COM
32	FERGUSON ELECTRIC	LINDA MCKIM	112 NORTHWEST DRIVE		PLAINVILLE	CT	06062	860-517-3221	860-793-5050	LMCKIM@FERGUSON-CT.COM



21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.9399 FAX

www.TRCSolutions.com

July 25, 2012

Mr. Gene Festa
Senior Project Manager
Fusco Corporation
555 Long Wharf Drive, Suite 14
New Haven, CT 06511

Re: Proposal/Rate Schedule for Environmental Consulting Services located at Eli Whitney Technical High School., Hamden, CT.

Dear Mr. Festa:

TRC is pleased to provide the proposal/rate schedule for the environmental consulting services at Eli Whitney Technical High School located in Hamden, Connecticut. The rates for consulting services TRC will provide to Fusco Corporation are as follows:

➤ Phase 1 Asbestos Abatement School in Session Plan **\$1,275**

The School in Session Plan consists of written plan to the Connecticut Department of Public Health that details the amount and locations of the asbestos that is to be abated, the location of the students during abatement activities, location of hard barriers and the location of daily air sample locations. The above rate also includes the walkthrough of the building with the CTDPH representative that is required prior to approval.

You may indicate authorization to proceed on part or all of the proposed tasks by signing the bottom of this proposal and faxing it to TRC at (860) 298-6380 or by sending over a Purchase Order number. TRC is prepared to begin work on this project within two days upon receipt of written authorization to proceed.

Thank you for allowing TRC the continuing opportunity to serve the environmental engineering needs of Fusco Corporation. If you have any questions regarding this proposal, please feel free to contact me directly at (860) 298-6222.

Sincerely,

Donald LePage

Donald LePage
Project Manager
Building Sciences Division

PAYMENT TERMS: 30 DAYS FROM DATE OF INVOICE

I authorize TRC to proceed with the following task as outlined above

Gene Jock 7/26/2012

Signature





July 30th, 2012

ELI WHITNEY
CONNECTICUT TECHNICAL HIGH SCHOOL
Hamden, Connecticut
Project No. BI-RT-837-CMR

Responses to Pre-Bid RFI's #81 - #138

Q81: Reference Prefinished Uninsulated vertical corrugated metal panels as shown on details and elevations. What Bid Package is responsible for this work? Have specifications been issued?

A81: See Bid Package 8.01 Window, Glazing & Storefronts including the reference to specification section 074213 Metal Wall Panels and Item 2 and Clarification 7.

Q82: Section 2&3/A537 (and others) notes furring channels by panel system contractor. Please confirm the aluminum package will furnish and install all this furring, sub girts, girts, etc. shown in various details for the metal panels. In other words, the General Trades package will provide for metal studs and sheathing as shown only as the wall panel backup.

A82: No. Steel Studs for Metal Panel Systems as noted and specified are engineered and provided by Bid Package 8.01. See Document 000930.8.01 Clarifications 9, 10, 11, 12 & 13.

Q83: Referring to Section 2&3/A537 (and others), what is the drywall sub (assigned to the General Trades package) to assume when the drawings say the

spacing of studs and furring channels is by the panel manufacturer and General Trades package is not responsible for panel manufacturer? Provide spacing and gage for 8” studs for the drywall to carry to avoid change orders to drywall/ General Trades packages later.

A83: No. Steel Studs for Metal Panel Systems as noted and specified are engineered and provided by Bid Package 8.01. See Document 000930.8.01 Clarifications 9, 10, 11, 12 & 13.

Q84: For BP #26.01, with references to Drawing E704 and E103.1 Ka and to Spec Section 22 00 00, regarding Emergency Gas Shut-off Valve Assembly (EGV), which BP should carry this Scope of Work?

A84: See Document 000930.23.01 Clarification 59 and Document 000930.26.01 Clarification 52.

Q85: Detail 3/E103Ka states Gas Solenoid Valve Control Panel and Master Control Station with Key Reset by Division 15. Spec Section 22 00 00, 1.04, 2 says by others.

A85: See Document 000930.23.01 Clarification 60 and Document 000930.26.01 Clarification 53.

Q86: Please confirm that the aluminum door frames for FRP doors should be furnished by bid package 8.03 and installed by bid package 6.01.

A86: See Document 000930.8.03 Clarification 2 and See Document 000930.6.01 Clarification 67.

Q87: Who is responsible for the wire mesh at stair A2? See section 1 and 2/A-603.

A87: See Document 000930.5.02 Clarification 18.

Q88: Questions in regards to furnishing the bid bond:

- a. What is the warranty?
- b. Time to complete?
- c. Liquidated damages?

A88:

- a. See Document 000940 Item 7 and Specification Section in the AA Project Manual.
- b. See Document 000925, Project Schedule; Document 000926, Phasing Plan; Document 000940 Item 4.
- c. See Document 000940 Item 5.

Q89: In the Scope of Work for Bid Package 5.01, the structural steel contractor is responsible for all the lintels. Please confirm if this is correct.

A89: See Document 000930.5.01 Clarification a2.

Q90: In Detail F/A601, is the 10 ga. bent steel plate a part of the structural steel scope and/or metal fabrications scope?

A90: See Bid Package 5.01 Item 14 and Clarification 3.

A91: Questions on the Scope for Work for Bid Package 31.01:

- a. for Item 3, j: can the electrician perform the disconnection of telecom and power in the Project Manager's Trailer and Owner's Trailer, instead of the site work contractor, due to licensing issues?
- b. for Item 6: Is daily sweeping required for the duration of the project? This seems excessive and will be quite costly.
- c. for Item 12,c: how far into the building is the site contractor required to take utilities?
- d. for Item 17: Please provide a quantity for the removal of excess soil by Bid Package 1.01.
- e. for Item 19: Who is responsible for the soil characterization testing?

A91:

- a. No.

- b. See Document 000930.31.01 Item 6.
- c. See Bid Package 31.01, Item 10.
- d. Refer to contract documents.
- e. See Specification Section 312000 3.02.10 & 3.06.1a. See Specification Section 312323 1.5.A.

Q92: In Bid Package 26.01, Item 2 requires a “complete video telecommunication system”. Please provide information on this system.

A92: See Document 000930.26.01 Item 2. Refer to Specification Section 27 51 23, Intercommunication Systems.

Q93: Please confirm that Bid Package 5.02 is to install all the bollards. Bid Package 31.01 usually owns this work, because it sets up all the concrete. Please clarify.

A93: See Bid Package 5.02, Clarifications 16 and Item 2,a,i.

Q94: Referring to 1/A-510, 2/A-510, and 3/A-510, who is responsible for the 3x4x1/4 and 6x8x1/2 Slotted Steel Angles in all three details? These are not lintels. Please clarify.

A94: See Bid Package 5.01 Item 14 and 16 and Clarification 3 and 31.

Q95: Referring to 1/A-512, who is responsible for the 3x5x1/4 Angle Clip at the top of the well in the detail? There are a lot Angle Clips of this type, and half of them are not called out. Please clarify.

A95: See Bid Package 5.01 Item 14 and 16 and Clarification 3 and 32.

Q96: In Bid Package 9.03, Item 5 calls the contractor to furnish and install all wires for light fixtures. Does this include all wires to the suspension system to support light fixtures, or does this include both support wires and safety connections to the fixture?

A96: Both. See Document 000930.9.03 Item 5.

Q97: *Intentionally omitted.*

Q98: PMWeb RFI-0.004 - Specification Section 260500, subsection 2.01, 1, Metal Clad Cable (MC), states "Lighting and appliance branch circuitry concealed in dry wall partitions and accessible voids of suspended ceilings and concealed spaces except homeruns to overcurrent devices which shall be EMT." Subsection 2.04, 3, reads "...MC cable used for multi-wire homeruns shall contain..." Please clarify if MC cable can be used for branch and lighting homeruns.

A98: Paragraph 2.01.1 under metal clad calbe (MC) is correct. Pragraph 2.04.3 - delete the second sentence of this paragraph.

Q99: PMWeb RFI-0.008 - Specification Section 283100, subsection 1.05, 4 lists pre-approved manufacturers for the addressable fire alarm system. Can SimplexGrinnell be added as a pre-approved manufacturer for the addressable fire alarm system?

A99: No, Simplex Grinnell is not an approved manufacturer for this project.

Q100: PMWeb RFI-0.024 - Specification section 233000, subsection 3.17, item 5, indicates to include duct leakage testing for non-duct components such as fire, smoke, volume dampers and terminal boxes. Air balancing contractors have indicated that this is not feasible. Can this item be deleted or changed?

A100: The intent of this section is to include these items in the leakage test, where they occur in the portions required to be tested (note that this includes the duct run from the supply fan to the terminal box). This section is an integral part of the air duct leakage test, and will remain. Also note that reference in 233000, 3.16.6 to "A through E" should read "1 through 5." Similarly, reference in 233000, 3.17.8 to "A through G" should read "1 through 7."

Q101: PMWeb RFI-0.035 - Some ducts on supply side of VAV's show duct liner. Are all supply ducts off VAV's lined for 10 ft. or just as indicated on drawings. Please advise.

A102: Provide acoustic lining on rectangular and round ducts as shown on drawings and as specified. Note that acoustic lining on round ductwork shall be in the form of the specified double wall, insulated duct, with perforated inner liner.

Q103: PMWeb RFI-0.044 - Sheet ES-101, Site Plan Symbols, lists S-1, S-2 and S-3 light units. Detail 0/ES-101 shows S-1, S-2 and S-3 light units as well as S-4, S-5 and S-6 units. Are S-4, S-5 and S-6 units lights and are concrete bases or footings required? Please clarify.

A103: Refer to drawing ES-102, Addendum #1. S-4 requires concrete bases per Detail 3 ES-102. S-5 is always wall mounted per Section 265000 3.05 # 3 of the specification. S-6 requires concrete base similar to detail 3/ES-102. Modify dimensions of concrete base as follows: 18" base width x 24" depth.

Q104: PMWeb RFI-0.047 - Please address the following questions in regards to specification section 233000 and ductwork.

- A. Are all exterior ducts and all ducts on the roof to be double wall with 1" liner and perforated inner shells? Please clarify.
- B. Are all of the spiral ducts double wall?
- C. What is the gauge of the metal for the welding hoods?

A104: A. Rectangular ducts on roof to be single wall acoustically lined. Round ducts on roof to be as noted below.

B. All round ductwork that requires insulation shall be double wall insulated, in accordance with 233000, 2.11. Non insulated round ductwork does not need to be double wall. Round ductwork that requires acoustic lining shall be double wall insulated, per 233000, 2.11.

C. Duct gauge to be 24 ga if spiral lock, 22 ga if longitudinal seam, per 233000, 2.02.

Q105: PMWeb RFI-0.048 - 1. The specified panel/switchboard rating on this project is 65K AIC for all gears. Can a lower rating be acceptable for all 120/208 V panels as this will be a considerable savings?

2. Will a coordination study be required for this project? It is not mentioned in the specification.

A105: A coordination study is required for this project as stated in section 1.04 Submittals, number 3 of the specification. The results of the study will determine if a lower rating on the panels is acceptable.

Q106: PMWeb RFI-0.049 - Specification section 051200, subsection 1.6, A, indicates the installer for the structural steel framing must be an AISC Certified Erector. This certification will limit bidders, may limit or prevent MBE participation, and may add cost. Can the AISC Certified Erector requirement be removed through eliminating specification section 015200, subsection 1.6, A?

A106: AISC Certification requirement to remain in order to ensure high standard of quality control for steel fabrication and erection.

Q107: PMWeb RFI-0.050 - Specification section 051200, subsection 1.6, C, indicates the structural steel framing subcontractor must use a shop painting applicator that is qualified according to AISC's Sophisticated Paint Endorsement P1 or SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators." Many structural steel subcontractors can perform this work in house for less money but do not have this qualification. Can specification section 015200, subsection 1.6, C be eliminated to remove this requirement? This may reduce costs.

A107: P1 and SSPC-QP3 qualification requirements shall remain to ensure high standard of quality control for shop painted steel.

Q108: PMWeb RFI-0.056 - Please address the following items in regards to specification section 114000, Food Service Equipment.

(1) Does the warranty period for this job exceed the typical foodservice warranty which is one year parts and labor and 5 years compressor warranty?

- (2) The Food Service Equipment install is in phases with the final ending in 2014. Correct?
- (3) Will the state pay for stored material for Food Service Equipment?
- (4) Can the specification for the Walk-In Cooler be expanded to three brands?
- (5) Can the specification for the Hoods be expanded to three brands?
- (6) Can the specification for the Custom Fabricator be expanded to three brands?

A108: In response to the following:

1) The warranty period identified in the specification section 11400 shall be provided for all Kitchen Equipment.

4) Alternate manufacturers for the walk-in coolers and freezers will be accepted with all accessories, options, etc... as noted within the general specifications, itemized specifications and contract drawings. The following manufacturers are acceptable alternates Bally, Kolpak, Norlake and American Panel.

5) Alternate manufacturers for the exhaust hoods will be accepted with all accessories, options, etc... as noted within the general specifications, itemized specifications and contract drawings. The following manufacturers are acceptable alternates Captive Aire, Caddy and Avtec.

6) Alternate manufacturers for the custom fabrication will be accepted with all accessories, options, etc... as noted within the general specifications, itemized specifications and contract drawings. The following manufacturers are acceptable alternates All State Fabricators, South Jersey Metal and Low Temp Industries.

Q109: PMWeb RFI-0.063 - A. Sheet E-001, Electrical Symbols legend, includes a symbol that is an "S" with a dashed circle around it and is noted to be a Ceiling Mounted speaker. Some of the plan drawings show rooms with a symbol that is an "S" with a solid circle around it. Are the symbols with an "S" with a solid circle

around it ceiling mounted speakers? If so, please clarify what these speakers are for and update the legend.

B. If the Control Panel described in specification section 275123, subsection 2.08, 2 contains a speaker, are the two speakers in the classrooms for the PA/intercom system? Please clarify what the speaker mounted in the CPI do.

A109: A. Symbol "S" with either solid or dashed circle represents a ceiling mounted speaker.

B. No. Speaker mounted in CPI (multi-service custom control panel) is a public address type per 275123-2.08-2.

Q110: PMWeb RFI-0.064 - A. Specification section 275123, subsection 2.13, describes the Media Center And Media Center Classroom speaker systems which have been reported to be obsolete. Please specify updated systems or indicate to include comparable systems.

B. Specification section 275123, subsection 2.14, describes the TV Studio Sound System which has been reported to be obsolete. Please specify an updated system or indicate to include a comparable system.

C. Specification section 275123, subsection 2.15, describes the Cafeteria Sound System which has been reported to be obsolete. Please specify an updated system or indicate to include a comparable system.

D. Specification section 275123, subsection 2.17, describes the Assisted Listening System which has been reported to be obsolete. Please specify an updated system or indicate to include a comparable system.

E. Specification section 275123, subsection 2.18, describes the Classroom Hearing Amplified System which has been reported to be obsolete. Please specify an updated system or indicate to include a comparable system.

F. In regards to the Classroom Hearing Amplified System described in specification section 275123, subsection 2.18, 3, c, it is indicated to provide ceiling speakers in locations as noted on the documents. The drawings don't clearly indicate where these speakers should be installed. Please clarify a symbol for these system specific speakers and show locations on the drawings.

- A110: A. Added "or approved equal" to 275123-2.13.
- B. Added "or approved equal" to 275123-2.14.
- C. Added "or approved equal" to 275123-2.15.
- D. Added "or approved equal" to 275123-2.17.
- E. Added "or approved equal" to 275123-2.18.

F. Classroom hearing amplified system speakers are ceiling mounted and are indicated on plans by symbol "s" with a circle around it.

Q111: PMWeb RFI-0.072 - Specification section 23 07 00 pa. 3.02.3 indicates PVC jacket on exposed pipe insulation. Is the tunnel space considered exposed and, therefore, require PVC jacket?

Please note that the existing insulated piping within the tunnel does not have jacketing.

A111: The tunnel is exposed, and therefore requires the treatment specified in 230700, 3.02.3.

Q112: PMWeb RFI-0.073 - 1. Specification section 23 07 00 pa. 2.01.3 specifies foamglass for exterior condenser water, water m.u., and exterior ductwork. This is an unusual and expensive application. Would 2", 6#, fiberglass (Duct) and/or 2" fiberglass pipe insulation (pipe) be acceptable?

This is more cost effective and has been acceptable in other installations.

2. Does the outdoor glycol hot water serving the ACU's require insulation. If so, please provide specification.

Please note item 1 above pertaining to outdoor pipe insulation on condenser water and water m. u.

A112: 1. Fiberglass is not acceptable under the requirements of 230700, 2.01.3, as it will absorb water and result in decreased insulation effectiveness. Provide exterior insulation as specified.

2. Piping to hot water coils should be routed within roof curb of unit. Therefore, fiberglass insulation as specified in 230700 is applicable (not foamglass).

Q113: PMWeb RFI-0.075 - Detail 1/E-301, Fire Alarm System Schematic Riser Diagram, indicated to include approximately 130 duct smoke detectors. Many of the piece of equipment indicated to have duct smoke detectors, such as EF-1 through EF-53, are not shown with duct smoke detectors in other locations in the mechanical and electrical drawings. Are all of the duct smoke detectors shown in detail 1/E-301 required?

A113: Delete duct smoke detectors for exhaust fans. Fan shut down relays (FSR) shall remain.

Q114: PMWeb RFI-0.076 - Specification section 085113 subsection 2.1, A, indicates the basis of design for the aluminum windows is Winco model 1450H. On sheet A-920 and A-921, some window types are depicted as the specified 1450H and some are depicted as just 2" x 4 - 1/2" storefront. For example, sheet E-920 depicts type A as 2" x 4 - 1/2" storefront and type A1 as 1450H.

A. Should all aluminum windows be Winco 1450H or should they be as depicted, either 1450H or 2" x 4 - 1/2" storefront?

B. If we are to proceed with aluminum windows as they are depicted, with both 1450H and 2" x 4 - 1/2" storefront systems, what series vent should be used in the storefront system? Detail 1C/A-922 seems to show a 2 - 1/2" +/- deep vent.

C. If we are to proceed with aluminum windows as they are depicted, with both 1450H and 2" x 4 - 1/2" storefront systems, what system should be used where no details are provided? For example, no details are provided at Jr/A-921.

D. Sheet A-920 shows three different curtain wall face dimensions including a 2" width at AD, 2 - 1/4" width at M and 2 - 1/2" width at O. Is this correct or should the face dimensions be the same? Please clarify.

A114: A. All Aluminum windows shall meet the requirements or specifications for the model specified.

B. Vent shall be as dictated by the specified unit.

C. Systems, or components shall be dictated by the specified unit, and shall be similar to details identified on similar window types.

D. The face dimension shall be as depicted on the window and curtain wall elevation details.

Q115: PMWeb RFI-0.077 - Sheet EQ-103, Shop Equipment Schedule - Plumbing, Item 3, describes a new 275 gallon oil tank which is to be located project east of Boiler Pit B162. The drawings do not seem to specify additional information about the oil tank model or requirements or piping to the tank.

A. Are there any additional requirements for the 275 gallon oil tank? Should a particular model be used? Is this a double walled tank? Please clarify.

B. Should there be piping to the 275 gallon oil tank? If so, please show the routing and clarify the piping type. If there is piping is it double walled? Please clarify.

A115: Auto shop waste oil collection tank shall be Snyder Industries #1000500N89102 275 gallon capacity, double wall polyethylene construction, debris strainer basket and tank level indicator. Plumbing specifications will be updated in next addendum to reflect this.

Q116: PMWeb RFI-0.078 - 1. Door 162a is on the door schedule as type F steel o.h. door. No size is noted. Detail 34/A529 notes door height as 10'-0". Please confirm height and width of door.

A116: Note 32 in the Remarks column states the door is 7'-4" wide X 10'-0" high.

Q117: PMWeb RFI-0.079 - Sheet P-101.3, in the bottom left corner, includes a detail titled "RENOVATE FOR TEMPORARY SCIENCE ROOM PHASE 1.2". Should this detail be removed or is this work desired for the final product.

Note that the Fusco Project manual describes work to be completed for temporary teacher's stations in Scopes of Work and the Phasing Package.

A117: The temporary science room in question is no longer required and will be removed from the drawings in the next addendum.

Q118: PMWeb RFI-0.095 - Bidder Comment

Dust collection system as specified in section 23 70 00 pa. 2.26 is non compliant with NFPA 664 and State of Connecticut requirements. Will system be reviewed and redesigned?

A118: 1. Provide abort gate and support stand at discharge of dust collector. Interlock with spark detection module. Abort gate to be provided with structural steel stand with concrete foundations, steel ladder with OSHA fall prevention cage, and access platform.

2. Provide spark detection and extinguishing system on dust collection ductwork. Rework exhaust ductwork to provide 20 foot separation within building between spark detection module and extinguishing module without any connections in between. Connect extinguishing module to sprinkler system with water flow switch. Water flow switch shall indicate on fire alarm control panel.

3. Comply with NFPA 664 and State of Connecticut requirements.

4. Sketch of revisions will be issued at addendum.

Q119: PMWeb RFI-0.0103 - Specification section 093013, subsection 3.4, does not specifically indicate a tile setting method for toilet room ceramic floor tile. Several rooms are situated in new areas and are not in locations of previous toilet rooms. Should all of the toilet room floors indicated to have ceramic floor tile receive a thin-set tile installation to concrete slabs?

A119: Clarification: Ceramic tile on Toilet Room floors shall be installed using a thin set on concrete sub-floors.

Q120: PMWeb RFI-0.0104 - A. Specification section 093013, subsection 3.5, does not specifically indicate a tile setting method for ceramic wall tile. Ceramic wall tile installations is primarily at new stud walls and new CMU walls. Please confirm that all ceramic wall tile installation should be thin-set.

B. Specification section 093013, subsection 3.5, B, describes a metal lath and scratch coat for walls. Please confirm that this item should be removed from the specifications.

A120: A. Clarification: Ceramic tile on walls through-out the project shall be installed using the thin set method.

B. Specification Section 09 30 13, Delete paragraph 3.5.B. in its entirety.

Q121: PMWeb RFI-0.0105 - A. Specification section 093013, subsection 3.4, does not specifically indicate a tile setting method for quarry floor tile. Please clarify the quarry floor tile setting methods. Should the quarry floor tile be thin-set at all locations?

B. Sheet A-103.1, Key Construction Note 1, refers to 2" concrete leveler, which applies to areas of removed quarry tile. Please confirm that new quarry flooring tile should be thinset in these areas.

C. The new additions do not appear to have depressed slabs except for at the freezer and pot wash areas. Should all new quarry tile flooring be thinset? Should quarry tile flooring be thickset only at the freezer and pot wash or are these areas to receive topping and sloping by others and a thinset installation? Please clarify.

A121: A. Clarification: Quarry Floor tile shall be installed where required throughout this project using the thin set method.

B. Clarification: Quarry tile shall also be installed in Food Service areas using the thin set method

C. Clarification: The additions do not have depressed slabs. Where sloping is required, the concrete subfloor shall be sloped accordingly. Quarry tile shall be installed using the thin set method in these areas as well.

Q122: PMWeb RFI-0.0108 - Specification section 093013, subsection 2.1, S, indicates that the tile flooring should include Latapoxy SP-100 epoxy tile grout manufactured by Laticrete Corporation; however, this product has been discontinued and replaced by SpectraLOCK Grout.

Please confirm the epoxy tile grout for ceramic tile and quarry tile floor applications should be changed to SpectraLOCK Grout manufactured by Laticrete and update the specification or specify an alternate product.

A122: Specification Section 09 30 13, Paragraph 2.1.S, Delete the following, "Latapoxy SP 100," and insert the following in lieu thereof, "SpectraLOCK 2000 IG."

Q123: PMWeb RFI-0.0109 - Sheet M-100.1 shows 6" CPVC combustion air and 5" CPVC flue vent in the north tunnels; however, sheet M-201 shows 6" CPVC combustion air and 4" flue vent. Should the CPVC flue vent be 5" or 4"? Please clarify.

A123: M-201 shows work in boiler room, which is in Section B. This is a different area from the one referenced above on drawing M-100.1. Provide sizes as shown on drawings.

Q124: PMWeb RFI-0.0113 - Piping insulation is discussed in specification section 220000 subsection 3.10 which references section 230700. Is pipe jacketed insulation required on all piping systems concealed and exposed? Please clarify.

A124: The requirements of 230700 apply to piping, fittings and equipment provided under section 220000. Paragraph 230700, 3.02.2 and 3 discuss the finish treatment of both concealed and exposed pipe insulation.

Q125: PMWeb RFI-0.0114 - Specification section 230923, subsection 1.04, 2, indicates that the existing controls system is a DDC system by Automated Logic. This subsection also indicates that the new system must be fully interoperable and interfaced with the existing Central Monitoring and Control System located at the Vocational School's Middletown central office. Specification section 230923, subsection 2.02, 1, a, lists 4 different manufacturers.

A. Is the manufacturer Automated Logic an acceptable manufacturer for the controls system as this is the manufacturer of the central monitoring system that needs to be integrated with according to the specification or are only the manufacturers indicated in specification section 230923, subsection 2.02, 1, a, acceptable? Please clarify.

B. Does the controls system need to be fully interoperable and interfaced with the existing Automated Logic system at the Central Monitoring and Control System in Middletown? Please clarify.

A125: A. Automated Logic is acceptable.

B. Correct per 230923, 1.04.2.

Note: Reference to existing Automated Logic control system refers to the existing central monitoring control system located at the vocational school's Middletown central office. The system at Eli Whitney shall be all new.

Note: Reference in 230923, 2.03.1 should read "2 through 9", not "2.2.B through 2.2.I."

Q126: PMWeb RFI-0.0115 - Specification section 233000, subsection 2.03, 2, describes the duct classification for items needing to meet +3 inches of static pressure. Is supply ductwork downstream of VAV's, return, relief and exhaust ductwork required to be +3 inches of static pressure for this project? Please clarify.

A126: Specification section 2330000, 2.03.2 is correct.

Q127: PMWeb RFI-0.0116 - Sheet E-104.4 includes "Alternate" in the sheet title and sheet M-104.4 includes "Supp. Bid" in the sheet title for the D3 area. Please confirm that this work is part of the base contract and there is no alternate or supplemental bid for D3.

A127: E-104.4: Confirmed in base bid.

M104.4: Confirmed in base bid.

Q128: PMWeb RFI-0.0117 - The drawings indicate to include acoustical lining after VAV boxes at some ducts and not at others in the drawings. For example, sheet M-101.3 depicts acoustical lining after VAV boxes in the CLABs Room A-202, 205, 208 and 209 and does not depict acoustical lining in Computer Room A210. Detail 7/M-302 indicates to include acoustical lining for a minimum of 10' after terminal boxes where noted on plans.

Should acoustical lining be included for a minimum of 10' after VAV boxes at all locations or just where depicted on the drawings?

A128: Refer to response to RFI #0.035.

Q129: PMWeb RFI-0.0118 - Gymnasium Scoreboards Specification Section 116643 pa.h - "Optional Equipment to be Included".

1. Clarify that the optional equipment noted in spec. is to be furnished.
2. If so, please clarify following:
 - a. Items H.1 and H.2 cannot coexist. They are two different options for the same caption area.
 - b. Item 3 - Programmable message centers come in different sizes, colors, and resolutions. We need to know the size,color of LED's, and the resolution required.

A129: Specification Section 11 66 43,

1. Paragraph 2.03.H., Delete the word "included" and insert "Furnished with scoreboard," in lieu thereof
- 2a. Delete paragraph 2.03.H.1. in its entirety
- 3a. Delete paragraph 2.03.H.3. in its entirety.

Q130: PMWeb RFI-0.0119 - Specification Section 083323 pa. 2.4 refers to integral frame shutters (H-21 on dwg. A905). There are none on door schedule. .If any are on project, we need door number size and quantity.

A130: Clarification: The question appears to speciifiically refer to the coiling counter doors. All the coiling counter doors shall meet the specifications outlined in Paragraph 2.4.

Q131: PMWeb RFI-0.0120 - Detail 1/E-704 shows the use of the same mushroom type symbol for both "ESO - Symbol Emergency Electric Shut-Off See Plans. See Note #10" and for "ESO - Symbol Emergency Gas Shut-Off." Note #10 refers to a two gang (2) push buttons and light push button. Sheet E-101.3 shows a similar symbol used multiple times in the CLABs Room A202, A205, A208 and A209.

Please clarify where the "ESO - Symbol Emergency Electric Shut-Off See Plans. See Note #10" and "ESO - Symbol Emergency Gas Shut-Off" apply.

A131: Provide CLAB Rooms A202, A205, A208 and A209 with emergency shut-off as indicated on E-101.3 and P-101.3.

Q132: PMWeb RFI-0.0124 - As a follow up to RFI's 32 & 107, we need the geothermal wells located and the underground piping requirements from the wells to the E House.

A132: See responses to RFI #'s 032 and 107.

Q133: PMWeb RFI-0.0127 - The drawings do not indicate the details, piping layout, or specifications for the new waste oil tank and oil/water separator shown on sheet C-4. Please clarify the details, piping layout and specifications for the new waste oil tank and oil/water separator.

A134: Waste oil tank is specified in addendum 2 plumbing spec 220000, 2.12, 14. This is a stand alone unit with no piping. Oil interceptor is specified in plumbing spec 220000, 2.11, 2. It is model OMC 1000 on the attached installation drawing.

Q135: PMWeb RFI-0.0133 - Sheet C-1, C-2, C-3, C-4, C-5, and C-6 include a graphic scale in the bottom right corner where the distance on the drawings between the labels 0' and 50' is approximately 1" on a full-sized sheet and the distance between 0' and 200' is approximately 3".

Please confirm that sheet C-1, C-2, C-3, C-4, C-5, and C-6 should be 50 scale where 1" on a full sized drawing equals 50' for the project site and that the reference to 200' in the graphic scale should be changed to 150'.

A135: Plansheets are 50 scale. The 200' notation should be 150'.

Q136: PMWeb RFI-0.0134 - Sheet C-3 shows concrete stairs and a landing with rails outside of C-Wing with the rails detailed in 3/C-16. It is difficult to scale the length of these railings from this drawing. What is the length of these railings at the landing? Please clarify.

A136: Railings are approximately 10' in length for each side of the steps.

Q137: PMWeb RFI-0.0136 - Are the seismic clips/CMU top of wall clips described on sheet S-401 only required at new walls of the existing buildings?

A137: Masonry clips as shown on 3/S-401 and 5/S-401 are only required at new masonry walls at the existing buildings.

Q138: PMWeb RFI-0.0146 - Sheet EQ-106, Shop Equipment Schedule - Cosmetology, shows item 4 as Styling Chair (3'-0" Deep) Belvedere PA12-19CF-LB12FC. The manufacturer has noted that the tops for these chairs have been discontinued and recommends the Hampton styling chairs HP12-19CF-LB12UFC which have the same arms and approximately the same cost and would match the Hampton shampoo chairs.

What product should be used for item 4, Styling Chair, on sheet EQ-106, Shop Equipment Schedule - Cosmetology?

A138: Furnish and install the chair specified. During a conversation with Helena Monego - the Belvedere representative, on Friday ((07/27) afternoon, she confirmed the manufacturer will manufacture the specified chair since the order quantity was high enough.