



PUBLIC BUILDING COMMISSION AGENDA

Community Cultural Center Auditorum

740 Main Street, East Hartford, CT 06108

April 11, 2024 / 6:30 PM

From: Hank Pawlowski, Jr., Chair

To PBC Members: John Murphy, Gary Roy, Angel Santiago; Stephen Roczynski; Board of Education Representatives, Marilyn Pet, Chris Tierinni; Town Council Representatives Rich Kehoe and John Morrison

This is to inform the Commission that a Special Meeting of the Public Building Commission is scheduled for Thursday **April 11, 2024** at Community Cultural Center in the Auditorium at 6:30 PM.

PLEASE NOTE: If for any reason a member is unable to attend the meeting, please notify either Jason Marshall at 860-291-7207 or myself at 860-918-3209. Thank you.

AGENDA

1. Call to Order
 2. Approval of Minutes
 - A. April 4, 2024 Special Meeting re: Walkthrough
 - B. April 4, 2024 Meeting
 3. Public Participation
 4. Old Business
 5. New Business
 - A. Norris Elementary School Flooring Abatement and Replacement Project - Local Plan Review and Sign-off on Review of Final Plans Form SCG-042
 - B. Middle School Partial Flooring Abatement and Replacement Project - Local Plan Review and Sign-off on Review of Final Plans Form SCG-042
 - C. Hockanum School Steam Tunnel Abatement Project - Local Plan Review and Sign-off on Review of Final Plans Form SCG-042
 6. Motion to Pay Clerk
 7. Adjournment
- cc: Mayor Connor S Martin
James Rovezzi, Acting Director of Facilities, Board of Education
Public Building Commissioners

PUBLIC BUILDING COMMISSION
SPECIAL MEETING re: Facilities Tours
Department of Public Works (61 Ecology Drive)
Town Hall (740 Main Street)
EAST HARTFORD CT 06108
April 4, 2024

PRESENT Henry Pawlowski, Jr., Chair
Gary Roy, Member
John Murphy, Member
Stephen Roczynski, Member
Rich Kehoe, East Hartford Town Council Representative
John Morrison, East Hartford Town Council Representative
Chris Tierinni, Board of Education Representative

ALSO PRESENT Lewis Tamaccio, Project Manager- Sustainability
Jessica Carrero, Durational Project Manager
Justin Stanziale, Facilities Manager
Alex Trujillo, Director of Public Works
Greg Grew, Acting Director of Inspection and Permits

ABSENT Angel Santiago, Member

NOTE: per the Town Charter, non-Board of Education projects before the Public Building Commission do not require Board of Education representative members.

The meeting was called to order at 6:00 p.m.

The Commissioners toured the Department of Public Works facilities which provided them with an understanding of current conditions and the proposed development plans renovations needed.

The Commission then traveled to tour the Town Hall to view the current status of the renovation project and were provided with a summary of upgrades and improvements.

The Chair closed the meeting at 7:28 p.m.

PUBLIC BUILDING COMMISSION
Town Hall Engineering Conference Room
EAST HARTFORD CT 06108
April 4, 2024

PRESENT Henry Pawlowski, Jr., Chair
 Gary Roy, Member
 John Murphy, Member
 Stephen Roczynski, Member
 Rich Kehoe, East Hartford Town Council Representative
 John Morrison, East Hartford Town Council Representative
 Chris Tierinni, Board of Education Representative

ABSENT Angel Santiago, Member
 Marilyn Pet, Board of Education Representative

ALSO PRESENT Steve Hnatuk, Deputy Development Director
 Robert Fitzgerald, Assistant Corporation Counsel
 Lewis Tamaccio, Project Manager- Sustainability
 Jessica Carrero, Durational Project Manager
 Justin Stanziale, Facilities Manager
 Alex Trujillo, DPW Director
 Greg Grew, Director of Inspection and Permits
 Mike Dell’Accio, Downes Construction Company

The meeting was called to order at 7:30 p.m. Chair Pawlowski performed a roll call to determine attendance.

NOTE: per the Town Charter, non-Board of Education projects before the Public Building Commission do not require Board of Education representative members.

APPROVAL OF MINUTES

January 18, 2024 Meeting

MOTION By Rich Kehoe
 seconded by John Murphy

to **approve** the January 18, 2024 minutes of the Public Building Commission meeting with the necessary corrections. (s/b Gary Roy instead of Gary James Roy).

Motion carried 7/0

PUBLIC PARTICIPATION - None

NEW BUSINESS - None

Church Corners Inn – 860 Main Street

Church Corners Inn located at 860 Main Street is a mixed-use Rooming House and Commercial Building located in the Central Business District (B5 – Downtown East Hartford) and is adjacent to the U.S. Post Office building and one block from Town Hall. The site consists of 0.40 acres and is a 4-story building of 24,820 square feet, of which 6,000 square feet is ground floor commercial space. The upper floors of the building consist of a 53-unit rooming house with the first floor occupied by a 6,000 square foot restaurant. The Town acquired the property in January 2023.

- The Town obtained a grant for \$2.5 million
- Sell property prior to renovation
- Parent company for developer is Parker Benjamin
- Reimbursable grant
- Terms of grant – spend \$760,000.00 on demolition
- Save façade of building – only gut internally
Working on terms of agreement with Parker Benjamin
Historian and engineering consultants to do the constructional engineering of the building – need to add-on to the building to accommodate side stairwells/elevator shafts. Architectural Consultant – full scale side of building

DPW Facility Improvements

The following is a brief summary of the project.

- The design of the improvements planned for the DPW facility is being developed in conjunction with representatives from the East Hartford Department of Public Works. The project design & civil engineer team includes professionals from Weston & Sampson.
- The previous administration proposed a phased approach to the Town Council for necessary improvements to the DPW Facility located on Ecology Drive.
- The improvements will allow for safer working conditions for the DPW staff and create more efficient work areas.
- The initial phases include modular facilities (to include male/female bathrooms, rest area, meeting room and showers), construction of a new Highway Storage Garage and the demolition of the existing highway garage. Once the existing garage is demolished, the retaining wall will be shored up to prevent any further erosion.

- The original plan to retrofit the existing sanitation garage for use by the Fleet Shop is on hold while a more permanent solution is developed.
- The cost of the initial phases of construction are estimated to cost approximately \$2-3 million.

Town Hall MEP Improvement Project

The following is a brief summary of the project.

- The design of the new building was developed in conjunction with representatives from the East Hartford Town Hall departments. The project architect is BVH Integrated Services, a Salas O'Brien Company and the onsite project management team is from Downes Construction Company.
- Project Summary: The Town Hall Renovation Project has modernized the building's HVAC and electrical systems. New mechanical roof top units, chiller, boilers, Fan Coil Units, EPDM roofing, and limited structural and architectural improvements associated with the mechanical, electrical, and plumbing upgrades have been completed. The main elevator has been modernized. Plumbing finishes and fixtures in the basement bathrooms have been replaced. Sitework included new utility connections and improvements to the front stairs and walkway.
- Mechanical, Electrical and Plumbing upgrades are complete, with the exception of the chiller install. Ceiling grid, flooring, fan coil unit installation, millwork, the hot water system is also complete. The heating system and all life safety systems are operational. Testing and balancing on the chilled water system has been completed. With chiller manufacturing delays, this installation is expected to be completed in late April. The chilled water system installation and completion will not impact anticipated substantial completion. The parking area for this installation can be safely blocked off from the rest of the parking lot.
- The Town Clerk was moved back to their space in early March, with the support of the IT and Facilities staff working from temporary locations. The furniture move-in is currently underway and the balance of Town of East Hartford staff are expected back by the end of April.
- Phase 1 is completed and the Town will have to sign off.

From a procedural and paperwork standpoint, this group will not act but before the project is signed off on as final complete, this group will vote and approve.

OLD BUSINESS

None

Payment of Clerk

MOTION By Henry Pawlowski, Jr.,

seconded by Rich Kehoe
to pay the clerk for tonight's meeting.
Motion carried 7/0

ADJOURNMENT

MOTION By Rich Kehoe
seconded by John Murphy
to adjourn at 8:14 p.m
Motion carried 7/0

Submitted by Juliet Relph, Clerk



LOCAL PLAN REVIEW AND SIGN-OFF ON “REQUEST FOR REVIEW OF FINAL PLANS” FORM SCG-042

*ANNA. E NORRIS ELEMENTARY SCHOOL
FLOORING ABATEMENT AND REPLACEMENT
STATE PROJECT #043-0252 CV*

DATE: *TBD*

SUBMITTED TO: *Public Building Commission*

SUBMITTED BY: *James Rovezzi, Acting Director of Facilities*

ENCLOSURES: *Project Manual (Plans, Specifications) and Form SCG-042 (working copy)*
State OSCG&R Process Requirement

REASON:

BACKGROUND:

Plans and specifications for the Anna E. Norris Elementary School project were produced by TRC Environmental Corporation and combined into a “project manual” dated March 8, 2024. A cost estimate was produced by TRC Environmental Corporation on October 16, 2023. Prior to going out to bid, the final plans must be reviewed by the State DAS Office of School Construction Grants and Review after a “local review” is completed by select Town of East Hartford personnel.

All required “certifications of local approval” of the plans, specs, and estimate have been obtained, including the local Building Official, Fire Marshal, Health Official, local Federal 504 Official and Chairperson of the Public Building Commission. Form SCG-042 has been signed by these individuals.

This request will be presented to the BOE Facilities Committee and full Board of Education for approval on April 15, 2024. Once signed off by the district, the final certification/signature needed on Form SCG-042 is from the Chairperson of the Public Building Commission. Facilities will then submit the form to DAS OSCGR so they may conduct a final plan review prior to public bidding the construction phase of the project.

ACTION: *Accept or Reject*

FORM SCG-042 Request for Review of Final Plans

State Project No. 043-0252 CV

Project Name: Norris Flooring Abatement

Name of Contact Person: James Rovezzi	Telephone: 860-622-5952	Date: March 11,2024
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Certifications of Local Approval:		
I certify that I have local jurisdiction over the State Building Code and that the plans and project manual dated <u>March 8, 2024</u> for the above referenced project comply with all applicable building codes.		
<u>Milton Gregroy Grew</u> Local Building Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Fire Safety Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable fire codes.		
<u>John Pelow</u> Local Fire Marshal's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Health Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable health codes.		
<u>Laurence Burnsed, MPH</u> Local Health Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over Section 504 of the Rehabilitation Act of 1973 , and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated _____ for the above referenced project comply with all applicable accessibility codes.		
<u>Tyron Harris</u> Local Federal 504 Official's Name	_____ Signature	_____ Date

- NOTES:** 1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.
- 2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.
- 3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
 The Office of School Construction Grants & Review
 450 Columbus Blvd., Suite 1503
 Hartford, CT 06103

PROJECT MANUAL

**EAST HARTFORD PUBLIC SCHOOLS
FLOORING ABATEMENT AND REPLACEMENT PROJECT AT
ANNA E. NORRIS ELEMENTARY SCHOOL
40 Remington Rd
East Hartford, CT 06108**

**Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, CT 06108**

State Project No. 043-0252 CV

TOWN OF EAST HARTFORD

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

Prepared by:
TRC Environmental Corporation
21 Griffin Road, North
Windsor, CT 06095

PROJECT MANUAL DIRECTORY

PROJECT: Flooring Abatement and Replacement
Anna E. Norris Elementary School
40 Remington Rd
East Hartford, CT 06108

ALL QUESTIONS REGARDING THIS PROJECT MUST BE DIRECTED TO THE ARCHITECT

OWNER: East Hartford Public Schools
Department of Facilities
734 Tolland Street
East Hartford, CT 06108

ARCHITECT: TRC Environmental Corporation Office # (860)298-9692
21 Griffin Road, North
Windsor, Connecticut 06095
Gregory Kaczynski
Project Manager

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

	<u># OF PAGES</u>
Procurement and Contracting Requirements	3
Indemnification and Insurance Requirements	4
Affirmative Action / Equal Opportunity Policy Statement	1
AIA A104: Standard Abbreviated Form of Agreement Between Owner and Contractor.....	26
CHRO Contract Compliance Regulations.....	5

TECHNICAL SPECIFICATIONS

<u>DIVISION 1</u>	<u>GENERAL REQUIREMENTS</u>	<u>PAGES</u>
SECTION 01000	General Conditions	15
<u>DIVISION 2</u>	<u>SITE WORK</u>	
SECTION 02080	Asbestos Abatement.....	35
<u>DIVISION 3-8</u>	Not Used	
<u>DIVISION 9</u>	<u>FINISHES</u>	
SECTION 09650	Floor Tile Replacement.....	4
SECTION 09680	Carpeting	5
<u>DIVISION 10-16</u>	Not Used	

ATTACHMENTS

Hazardous Building Materials Investigation Report for Anna E. Norris Elementary School – March 8, 2022

DRAWINGS

T-1 – Title Sheet
HAZ-001 - Asbestos Abatement and Related Work

East Hartford Public Schools
Flooring Abatement and Replacement at Norris School

Division 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00.1 Procurement Using DAS Contracts

Project will be constructed using contractors that are on the Statewide CT DAS Contract as follows (to obtain minimum 3 quotes per work classification):

Work Classification 1: Abatement of existing floor tile (per project specification)

Use: Asbestos Abatement Contract #DAS-20PSX0154

Work Classification 2: Supply and Install New Vinyl Composition Floor tile (per project Specifications)

Use: Flooring Contract #DAS-20PSX0088

00.2 Requirements for Procuring Requests for Quotes with DAS Contractors:

Prevailing Wage: Estimated costs for both work classifications combined above are expected to reach the thresholds requiring prevailing wage rates to be applied to this project. Contractors shall comply with section 31-57f of the CT General Statutes.

CHRO Compliance: This project is funding using CT State Grant funds therefor all applicable requirements will be adhered to by contractors. Compliance with CONN. Gen. STAT. 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f inclusive, as amended by June 2015 Special Session Public Act 15-5(See CHRO attachment included in this project manual)

Insurance Requirements: Contractors are required to agree to and provide all insurance and indemnification requirements as established by the East Hartford Board of Education. (See Indemnification and Insurance Requirements).

Project Documents: Contract documents for this project consist of: 1.) Construction drawings dated: March 8, 2024, and Specifications dated: March 8, 2024 developed by TRC Environmental. Contractors will use these documents to develop their quotes. These documents serve as the “Statement of Work” (SOW)

Dates for Construction: Start date of construction is expected to be **June 12, 2024** (barring any unforeseen events which may cause delays) and must be completed by **August 16th, 2024**. Contractors quotes will be applicable to cover the dates of construction.

Work Hours: Normal work hours shall be between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, excluding Federal and State recognized holidays, unless alternate hours are agreed upon by Facilities and the Contractor(s) in writing. Any Services Performed outside the normal hours of work must be authorized in writing by Facilities prior to the commencement of such work.

AIA Document A104-2017: Contract will be the “Standard Abbreviated form of Agreement Between Owner and Contractor” top form the basis of the contract between EHPS and the contractor.

Payment Terms & Invoicing: Certified payment applications shall be used and when received by the 15th of the month will be paid by the 15th of the following month. If received on the above schedule, payment will be made within 30 days of receipt. Retainage will be 5%. These figures will be added to sections 4.1.3 and 4.1.4 of the resulting AIA A104 contract.

Licenses: Contractors must be properly licensed by the State of Connecticut

Payment Bond: A payment bond will be required by the contractor for the full contract amount.

Performance Bond: A performance bond will be required by the contractor for the full contract amount.

Pricing: DAS Contractors will submit quotes on their letterhead, noting the applicable State DAS Contract #, and noting the basis of the work shall be in accordance to the plans and specification for that project, using the applicable pricing schedule as indicated in the associated DAS contract.

Purchase Orders: Purchase order(s) will be issued only after approval from the East Hartford Board of Education. No work shall begin until the purchase order has been assigned to the contractor.

Site Visit: Contractor(s), upon receipt of the project plans and specifications, shall schedule a site visit with EHPS Facilities to view existing conditions of the job site at the school. Contractor(s) shall take their own field measurements to determine the accuracy of all information in the plans. EHPS shall not be responsible for the accuracy of any measurements required to Perform the Services. Contractor(s) will be accompanied by an authorized Facilities representative during all site visits. Site visits can be scheduling by calling 860-622-5952

Warranty: Contractor(s) shall warranty all Services against defects and workmanship including all materials and labor for a period of one (1) year from the acceptance date of Service provided (the “Warranty Period”). The warranty must include the full cost of parts, materials, labor, packaging, handling, shipping and other costs incurred to repair the defective Services, at no charge to East Hartford Public Schools. Contractor(s) shall replace and repair any defective materials and parts during the Warranty Period. If any part installed under this **Warranty (Cont.):** Contract fails or does not function properly due to any fault in material or workmanship, Contractor(s) shall, upon notice from the East Hartford Public Schools, proceed to repair or replace the faulty item within twenty-four (24) hours or as mutually agreed, at no

charge to the EHPS. Contractor(s) shall be responsible for all aspects of warranty administration and shall ensure that Services are Performed according to warranty procedure. Manufacturers material warranties will apply separately as required and will carry their own warranty periods.

Note: Section 00.2 above is in addition to the applicable DAS contract language and is intended to clarify terms and conditions of this particular project. In cases of dispute the DAS Contract will supersede.



East Hartford Public Schools

East Hartford Board of Education



INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES

A. INDEMNIFICATION

BIDDERS AND PROPOSERS ARE REQUIRED TO AGREE TO THE FOLLOWING INDEMNIFICATION LANGUAGE BY NOTARIZING BELOW

To the fullest extent permitted by law, THE AWARDED BIDDER/PROPOSER agrees on behalf of itself and its successors and assigns, covenants and agrees at its sole cost and expense, to protect, defend, indemnify, release and hold the East Hartford Board of Education, Town of East Hartford, its agents, servants, officials, employees, volunteers and members of its boards and commissions (Collectively the “Board and Town of East Hartford”), harmless from and against any and all Losses (defined below) imposed upon or incurred by or asserted against the Board and Town of East Hartford by reason of bodily injury, personal injury, death, or property damage of whatsoever kind or nature, to any individuals or parties (including, but not limited to the Board and Town of East Hartford, the Awarded Bidder/Proposer, or any other third party) arising out of or resulting from, or alleged to arise out of or arise from Awarded Bidder’s/Proposer’s performance of its work under the contract, but only to the extent such Losses are attributable to the negligent or intentional act, error or omission of the Awarded Bidder/Proposer or any person or organization employed or engaged by Awarded Bidder/Proposer to perform all or any part of the contract. The term “Losses” includes any losses, damages, costs, fees, expenses, claims, suits, judgments, awards, liabilities (including, but not limited to, strict liabilities), obligations, debts, fines, penalties, charges, amounts paid in settlement, foreseeable and unforeseeable consequential damages, litigation costs, attorneys’ fees, expert’s fees, and investigation costs, of whatever kind or nature, and whether or not incurred in connection with any judicial or administrative proceedings, actions, claims, suits, judgments or awards.

Upon written request by the Board and Town of East Hartford, the Awarded Bidder/Proposer shall defend and provide legal representation to the Board and Town of East Hartford with respect to any of the matters referenced above. Notwithstanding the foregoing, the Board and Town of East Hartford may, in its sole and absolute discretion, engage its own attorneys and other professionals to defend or assist it with respect to such matters and, at the option of the Board and Town of East Hartford, its attorneys shall control the resolution of such matters. Upon demand, the Awarded Bidder/Proposer shall pay or, in the sole and absolute discretion of the Board and Town of East Hartford, reimburse, the Board and Town of East Hartford for the payment of reasonable fees and disbursements of attorneys and other professionals in connection with this contract.

THE BOARD and TOWN OF EAST HARTFORD WILL NOT AGREE TO INDEMNIFY THE AWARDED BIDDER/PROPOSER; SUBCONTRACTOR(S); OR INDEPENDENT CONTRACTOR(S)

STATE OF CONNECTICUT
COUNTY OF:

Signature _____

Name: _____

Company Name: _____

SEAL HERE:

Address: _____

Date: _____

Subscribes and Sworn to before me on this _____ day of _____, 202__

Notary Public _____

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

B. INSURANCE

NOTE: CERTIFICATE OF INSURANCE WILL BE REQUIRED UPON AWARD AND PRIOR TO START OF WORK OR ISSUANCE OF PURCHASE ORDER

1. GENERAL REQUIREMENTS

The AWARDED BIDDER/PROPOSER shall be responsible for maintaining insurance coverage in force for the life of this contract of the kinds and adequate amounts to secure all of the AWARDED BIDDER/PROPOSER'S obligations under this contract with an insurance company(ies) with an AM Best Rating of A-VII or better licensed to write such insurance in the State of Connecticut and acceptable to the Board and Town of East Hartford Additional Insured: **The East Hartford Board of Education and the Town of East Hartford, its officials, employees, volunteers, boards and commissions must be included as an Additional Insured on the AWARDED BIDDER/PROPOSER'S Insurance Policies** (except Workers' Compensation and Professional Errors & Omissions). Evidence of this must be provided upon inception of this contract and upon renewal of insurance by the AWARDED BIDDER/PROPOSER to the Board and Town of East Hartford in the form of language on a Certificate of Insurance as well as a policy endorsement.

The AWARDED BIDDER/PROPOSER shall provide the Board and Town of East Hartford with a Certificate(s) of Insurance signed by an authorized representative of the insurance company(ies) prior to the performance of this contract describing the coverage and providing that the insurer shall give the Board and Town of East Hartford written notice at least thirty (30) days in advance of any termination, expiration, or any and all changes in coverage. Such insurance or renewals or replacements thereof shall remain in force during the AWARDED BIDDER/PROPOSER'S responsibility under this contract. Failure to provide or maintain any of the insurance coverage required herein shall constitute a breach of the Contract.

2. SPECIFIC REQUIREMENTS:

a) Commercial General Liability Insurance

The AWARDED BIDDER/PROPOSER shall carry Commercial General Liability Insurance (broad form coverage) insuring against claims for bodily injury, property damage, personal injury and advertising injury that shall be no less comprehensive and no more restrictive than the coverage provided by Insurance Services Office (ISO) form for Commercial General (CG 0001 04/2013). By its terms or appropriate endorsements such insurance shall include the following coverage, to wit: Bodily Injury, Property Damage, Fire Legal Liability (not less than the replacement value of the portion of the premises occupied), Personal & Advertising Injury, Blanket Contractual, Independent Contractor's, Premises Operations, Products and Completed Operations (for a minimum of two (2) years following Final Completion of the Project). Any deviations from the standard unendorsed form will be noted on the Certificate of Insurance.

Type of Coverage:	Occurrence Basis
Minimum Amount of Coverage:	\$1,000,000 per occurrence \$2,000,000 aggregate
Policy Period:	Annual Policy

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

b) Workers' Compensation and Employer's Liability Insurance

The AWARDED BIDDER/PROPOSER shall provide Statutory Workers' Compensation Insurance as required by the State of Connecticut, including Employer's Liability.

Amount of Coverage: Coverage A:	Statutory
Coverage B (Employer Liability):	\$500,000 Each Accident
	\$500,000 Disease, Policy Limit
	\$500,000 Disease, Each Employee

c) Commercial Automobile Liability Insurance

The AWARDED BIDDER/PROPOSER shall carry Commercial Automobile Liability Insurance insuring against claims for bodily injury and property damage and covering the ownership, maintenance or use of any auto or all owned/leased and non-owned and hired vehicles used in the performance of the Work, both on and off the Project Site, including loading and unloading. The coverage should be provided by Insurance Services Office form for Commercial Auto Coverage (CA CA0001 10/2013) or equivalent. "Auto" (symbol 1 or equivalent) is required. Any deviations from the standard unendorsed form will be noted on the Certificate of Insurance.

Type of Coverage:	Occurrence Basis
Minimum Amount of Coverage:	\$1,000,000 combined single limit
Policy Period:	Annual Policy

d) Umbrella Liability Insurance

The AWARDED BIDDER shall carry an umbrella liability insurance policy of **\$5,000,000**.

3. PROFESSIONAL SERVICE CONTRACTOR REQUIRMENTS

(e.g., Architects, Engineers, et al.)

The AWARDED BIDDER/PROPOSER shall carry Errors & Omissions coverage in the **minimum** amount \$1,000,000 per claim/\$1,000,000 annual aggregate for all professional services contracts. If the insurance coverage is written on a Claims-Made basis, an extended reporting period of at least 3 years after substantial completion of the project is required. Increased coverage limits may be required based on the scope, price and duration of the work to be performed. The East Hartford Board of Education or Town of East Hartford will inform the **AWARDED BIDDER/PROPOSER** as to the required limits for this insurance as soon as practicable, and has sole discretion of the limits to be required.

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

4. SUBCONTRACTOR REQUIREMENTS:

The AWARDED BIDDER/PROPOSER shall require all subcontractors and independent contractors to carry the coverages set forth in section B. INSURANCE and will obtain appropriate Certificates of Insurance before the subcontractors and independent contractors are permitted to begin work.

The AWARDED BIDDER/PROPOSER shall require that East Hartford Board of Education and The Town of East Hartford, its officials, employees, volunteers, boards and commissions be included as an Additional Insured on all subcontractors and independent contractors' insurance (except Workers' Compensation and Professional Errors & Omissions) before permitted to begin work.

The AWARDED BIDDER/PROPOSER and all subcontractors and independent contractors and their insurers shall waive all rights of subrogation against the East Hartford Board of Education and Town of East Hartford, and its officers, agents, servants and employees for losses arising from work performed by each on this contract.

**THE EAST HARTFORD BOARD OF EDUCATION OR TOWN OF EAST HARTFORD
RESERVES THE RIGHT TO AMEND THE AMOUNTS OF COVERAGE REQUIRED AND
TYPE OF COVERAGE PROVIDED BASED ON THE FINAL AGREED UPON SCOPE OF
SERVICES**



AFFIRMATIVE ACTION / EQUAL OPPORTUNITY POLICY STATEMENT

East Hartford Public Schools is an Equal Opportunity Employer and will not transact business with firms that are not in compliance with all Federal and State Statutes and Executive Orders pertaining to non-discrimination.

This form is required to be filled in (enter company name above lines below), signed and returned with any Invitation to Bid, Request for Proposal, or other public solicitation document in order to transact any business with East Hartford Public Schools.

_____ will not make employment decisions (including decisions related to hiring, assignment, compensation, promotion, demotion, disciplinary action and termination) on the basis of race, color, religion, age, sex, marital status, sexual orientation, national origin, alienage, ancestry, disability (including pregnancy), genetic information, veteran status or gender identity or expression, except in the case of a bona fide occupational qualification.

It is the policy of _____ that any form of discrimination or harassment on the basis of race, religion, color, national origin, alienage, sex, sexual orientation, marital status, age, disability (including pregnancy), genetic information, veteran status or gender identity or expression, or any other basis prohibited by state or federal law is prohibited.

_____ will also take affirmative action as called for by applicable laws and Executive Orders to ensure that minority group individuals, females, disabled veterans, recently separated veterans, other protected veterans, Armed Forces service medal veterans, and qualified disabled persons are introduced into our workforce and considered for promotional opportunities.

_____ will remain in full compliance with the above while under contract with or performing work for East Hartford Public Schools.

Signed

Name/Title of Company Officer

Date

Business Address

Phone



AIA[®] Document A104[™] – 2017

Standard Abbreviated Form of Agreement Between Owner and Contractor

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

Sample

The Owner and Contractor agree as follows.

Init.

TABLE OF ARTICLES

1	THE WORK OF THIS CONTRACT
2	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
3	CONTRACT SUM
4	PAYMENT
5	DISPUTE RESOLUTION
6	ENUMERATION OF CONTRACT DOCUMENTS
7	GENERAL PROVISIONS
8	OWNER
9	CONTRACTOR
10	ARCHITECT
11	SUBCONTRACTORS
12	CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
13	CHANGES IN THE WORK
14	TIME
15	PAYMENTS AND COMPLETION
16	PROTECTION OF PERSONS AND PROPERTY
17	INSURANCE & BONDS
18	CORRECTION OF WORK
19	MISCELLANEOUS PROVISIONS
20	TERMINATION OF THE CONTRACT
21	CLAIMS AND DISPUTES

EXHIBIT A DETERMINATION OF THE COST OF THE WORK

ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.

- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3 Substantial Completion

§ 2.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check the appropriate box and complete the necessary information.)

- Not later than () calendar days from the date of commencement of the Work.
- By the following date:

§ 2.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 2.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 2.3, liquidated damages, if any, shall be assessed as set forth in Section 3.5.

ARTICLE 3 CONTRACT SUM

§ 3.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:

(Check the appropriate box.)

- Stipulated Sum, in accordance with Section 3.2 below
- Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below
- Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)

§ 3.2 The Stipulated Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.2.2 Unit prices, if any:

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 3.2.3 Allowances, if any, included in the stipulated sum:

(Identify each allowance.)

Item	Price
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§ 3.3 Cost of the Work Plus Contractor's Fee

§ 3.3.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.3.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price

§ 3.4.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.4.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4.3 Guaranteed Maximum Price

§ 3.4.3.1 The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed (\$), subject to additions and deductions by changes in the Work as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

(Insert specific provisions if the Contractor is to participate in any savings.)

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4.3.3 Unit Prices, if any:

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 3.4.3.4 Allowances, if any, included in the Guaranteed Maximum Price:

(Identify each allowance.)

Item	Price
-------------	--------------

§ 3.4.3.5 Assumptions, if any, on which the Guaranteed Maximum Price is based:

§ 3.4.3.6 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

§ 3.4.3.7 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 3.4.3.5. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 3.4.3.5 and the revised Contract Documents.

§ 3.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

ARTICLE 4 PAYMENT

§ 4.1 Progress Payments

§ 4.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 4.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 4.1.3 Provided that an Application for Payment is received by the Architect not later than the _____ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the _____ day of the _____ month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than () days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 4.1.4 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold retainage from the payment otherwise due as follows:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment and any terms for reduction of retainage during the course of the Work. The amount of retainage may be limited by governing law.)

§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

%

§ 4.2 Final Payment

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a Guaranteed Maximum Price; and
- .3 a final Certificate for Payment has been issued by the Architect in accordance with Section 15.7.1.

§ 4.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 5 DISPUTE RESOLUTION

§ 5.1 Binding Dispute Resolution

For any claim subject to, but not resolved by, mediation pursuant to Section 21.5, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 21.6 of this Agreement
- Litigation in a court of competent jurisdiction

Other (*Specify*)

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.

ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor.

§ 6.1.2 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(*Insert the date of the E203–2013 incorporated into this Agreement.*)

§ 6.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 6.1.4 The Specifications:
(*Either list the Specifications here or refer to an exhibit attached to this Agreement.*)

Section	Title	Date	Pages
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§ 6.1.5 The Drawings:
(*Either list the Drawings here or refer to an exhibit attached to this Agreement.*)

Number	Title	Date
--------	-------	------

§ 6.1.6 The Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are enumerated in this Article 6.

§ 6.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 Other Exhibits:
(Check all boxes that apply.)

- Exhibit A, Determination of the Cost of the Work.
- AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)
- The Sustainability Plan:

Title	Date	Pages
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- Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents.)

ARTICLE 7 GENERAL PROVISIONS

§ 7.1 The Contract Documents

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 7.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

§ 7.3 The Work

The term “Work” means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.

§ 7.4 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect’s consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 7.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service

§ 7.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

§ 7.5.2 The Contractor, Subcontractors, Sub-subcontractors and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to the protocols established pursuant to Sections 7.6 and 7.7, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

§ 7.6 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 7.7 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party’s sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 7.8 Severability

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 7.9 Notice

§ 7.9.1 Except as otherwise provided in Section 7.9.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering Notice in electronic format such as name, title and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 7.9.2 Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 7.10 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

ARTICLE 8 OWNER

§ 8.1 Information and Services Required of the Owner

§ 8.1.1 Prior to commencement of the Work, at the written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 8.1.1, the Contract Time shall be extended appropriately.

§ 8.1.2 The Owner shall furnish all necessary surveys and a legal description of the site.

§ 8.1.3 The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 8.1.4 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

§ 8.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 8.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 15.4.3, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 21.

ARTICLE 9 CONTRACTOR

§ 9.1 Review of Contract Documents and Field Conditions by Contractor

§ 9.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 9.1.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.2, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 9.1.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 9.2 Supervision and Construction Procedures

§ 9.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

§ 9.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 9.3 Labor and Materials

§ 9.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 9.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 9.3.3 The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification.

§ 9.4 Warranty

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants

that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. All other warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 15.6.3.

§ 9.5 Taxes

The Contractor shall pay sales, consumer, use, and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 9.6 Permits, Fees, Notices, and Compliance with Laws

§ 9.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 9.6.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 9.7 Allowances

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Contractor's costs for unloading and handling at the site, labor, installation, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowance.

§ 9.8 Contractor's Construction Schedules

§ 9.8.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 9.8.2 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Architect.

§ 9.9 Submittals

§ 9.9.1 The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

§ 9.9.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

§ 9.9.3 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents or unless the Contractor needs to provide such services in order to carry out the Contractor's own responsibilities. If professional design services or certifications by a design professional are specifically required, the Owner and the Architect will specify the performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional. If no criteria are specified, the design

shall comply with applicable codes and ordinances. Each Party shall be entitled to rely upon the information provided by the other Party. The Architect will review and approve or take other appropriate action on submittals for the limited purpose of checking for conformance with information provided and the design concept expressed in the Contract Documents. The Architect's review of Shop Drawings, Product Data, Samples, and similar submittals shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. In performing such review, the Architect will approve, or take other appropriate action upon, the Contractor's Shop Drawings, Product Data, Samples, and similar submittals.

§ 9.10 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 9.11 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 9.12 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus material from and about the Project.

§ 9.13 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 9.14 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 9.15 Indemnification

§ 9.15.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

§ 9.15.2 In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 10 ARCHITECT

§ 10.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction, until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 10.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 10.3 The Architect will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.4 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 10.5 Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 10.6 The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

§ 10.7 The Architect will review and approve or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 10.8 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes, and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

§ 10.9 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

ARTICLE 11 SUBCONTRACTORS

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the Subcontractors or suppliers proposed for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The term “Separate Contractor(s)” shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner’s own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 12.2 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor’s activities with theirs as required by the Contract Documents.

§ 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a Separate Contractor because of delays, improperly timed activities, or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work, or defective construction of a Separate Contractor.

ARTICLE 13 CHANGES IN THE WORK

§ 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor, and Architect, or by written Construction Change Directive signed by the Owner and Architect. Upon issuance of the Change Order or Construction Change Directive, the Contractor shall proceed promptly with such changes in the Work, unless otherwise provided in the Change Order or Construction Change Directive.

§ 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor’s cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor’s monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

§ 13.3 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work.

§ 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

ARTICLE 14 TIME

§ 14.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing this Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 14.2 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 14.3 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 14.4 The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.6.3.

§ 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) changes ordered in the Work; (2) by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably

anticipatable, unavoidable casualties, or any causes beyond the Contractor's control; or (3) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

ARTICLE 15 PAYMENTS AND COMPLETION

§ 15.1 Schedule of Values

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price pursuant to Section 3.2 or 3.4, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Stipulated Sum or Guaranteed Maximum Price to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy required by the Architect. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 15.1.2 The allocation of the Stipulated Sum or Guaranteed Maximum Price under this Section 15.1 shall not constitute a separate stipulated sum or guaranteed maximum price for each individual line item in the schedule of values.

§ 15.2 Control Estimate

§ 15.2.1 Where the Contract Sum is the Cost of the Work, plus the Contractor's Fee without a Guaranteed Maximum Price pursuant to Section 3.3, the Contractor shall prepare and submit to the Owner a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the estimated Cost of the Work plus the Contractor's Fee.

§ 15.2.2 The Control Estimate shall include:

- .1 the documents enumerated in Article 6, including all Modifications thereto;
- .2 a list of the assumptions made by the Contractor in the preparation of the Control Estimate to supplement the information provided by the Owner and contained in the Contract Documents;
- .3 a statement of the estimated Cost of the Work organized by trade categories or systems and the Contractor's Fee;
- .4 a project schedule upon which the Control Estimate is based, indicating proposed Subcontractors, activity sequences and durations, milestone dates for receipt and approval of pertinent information, schedule of shop drawings and samples, procurement and delivery of materials or equipment the Owner's occupancy requirements, and the date of Substantial Completion; and
- .5 a list of any contingency amounts included in the Control Estimate for further development of design and construction.

§ 15.2.3 When the Control Estimate is acceptable to the Owner and Architect, the Owner shall acknowledge it in writing. The Owner's acceptance of the Control Estimate does not imply that the Control Estimate constitutes a Guaranteed Maximum Price.

§ 15.2.4 The Contractor shall develop and implement a detailed system of cost control that will provide the Owner and Architect with timely information as to the anticipated total Cost of the Work. The cost control system shall compare the Control Estimate with the actual cost for activities in progress and estimates for uncompleted tasks and proposed changes. This information shall be reported to the Owner, in writing, no later than the Contractor's first Application for Payment and shall be revised and submitted with each Application for Payment.

§ 15.2.5 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in the Control Estimate. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the Control Estimate and the revised Contract Documents.

§ 15.3 Applications for Payment

§ 15.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 15.1, for completed portions of the Work. The application shall be notarized, if required; be supported by all data substantiating the Contractor's right to payment that the Owner or Architect require; shall reflect retainage if provided for in the Contract Documents; and include any revised cost control information required by Section 15.2.4. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 15.3.2 With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 15.3.3 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.3.4 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

§ 15.4 Certificates for Payment

§ 15.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.4.3.

§ 15.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluations of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.4.3 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.4.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;
- .2 third-party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 15.4.4 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 15.4.3, in whole or in part, that party may submit a Claim in accordance with Article 21.

§ 15.5 Progress Payments

§ 15.5.1 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in a similar manner.

§ 15.5.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor or supplier except as may otherwise be required by law.

§ 15.5.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 15.5.4 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 15.6 Substantial Completion

§ 15.6.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.6.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.6.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.6.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 15.7 Final Completion and Final Payment

§ 15.7.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.7.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.7.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

§ 15.7.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 15.7.4 Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of the final Application for Payment.

ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

§ 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3. The Contractor may make a claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

§ 16.2 Hazardous Materials and Substances

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 16.2.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 16.2.3 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

ARTICLE 17 INSURANCE AND BONDS

§ 17.1 Contractor's Insurance

§ 17.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in this Section 17.1 or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the insurance required by this Agreement from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 18.4, unless a different duration is stated below:

§ 17.1.2 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than (\$) each occurrence, (\$) general aggregate, and (\$) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 9.15.

§ 17.1.3 Automobile Liability covering vehicles owned by the Contractor and non-owned vehicles used by the Contractor, with policy limits of not less than (\$) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 17.1.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 17.1.2 and 17.1.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 17.1.5 Workers' Compensation at statutory limits.

§ 17.1.6 Employers' Liability with policy limits not less than (\$) each accident (\$) each employee, and (\$) policy limit.

§ 17.1.7 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.8 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.9 Coverage under Sections 17.1.7 and 17.1.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.10 The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Section 17.1 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period required by Section 17.1.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy.

§ 17.1.11 The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ 17.1.12 To the fullest extent permitted by law, the Contractor shall cause the commercial liability coverage required by this Section 17.1 to include (1) the Owner, the Architect, and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's Consultants, CG 20 32 07 04.

§ 17.1.13 Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.1, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 17.1.14 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ 17.2 Owner's Insurance

§ 17.2.1 Owner's Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 17.2.2 Property Insurance

§ 17.2.2.1 The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed or materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section 17.2.2.2, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ 17.2.2.2 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section 17.2.2.1 or, if necessary, replace the insurance policy required under Section 17.2.2.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 18.4.

§ 17.2.2.3 If the insurance required by this Section 17.2.2 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ 17.2.2.4 If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 18.4, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ 17.2.2.5 Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Section 17.2.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by this Section 17.2.2. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ 17.2.2.6 Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.2.2, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 17.2.2.7 Waiver of Subrogation

§ 17.2.2.7.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by this Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 17.2.2.7 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 17.2.2.7.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 17.2.2.7.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 17.2.2.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements, written where legally required for validity, the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 17.2.3 Other Insurance Provided by the Owner

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

§ 17.3 Performance Bond and Payment Bond

§ 17.3.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract.

§ 17.3.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 18 CORRECTION OF WORK

§ 18.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed, or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.1.7.3 in Exhibit A, Determination of the Cost of the Work.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.6.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

ARTICLE 19 MISCELLANEOUS PROVISIONS

§ 19.1 Assignment of Contract

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 19.2 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.6.

§ 19.3 Tests and Inspections

Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 19.4 The Owner's representative:

(Name, address, email address and other information)

§ 19.5 The Contractor's representative:
(Name, address, email address and other information)

§ 19.6 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

ARTICLE 20 TERMINATION OF THE CONTRACT

§ 20.1 Termination by the Contractor

If the Architect fails to certify payment as provided in Section 15.4.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 20.2 Termination by the Owner for Cause

§ 20.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 20.2.2 When any of the reasons described in Section 20.2.1 exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 20.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 20.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 20.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Owner shall pay the Contractor for Work executed; and costs incurred by reason of such termination, including costs attributable to termination of Subcontracts; and a termination fee, if any, as follows:

(Insert the amount of or method for determining the fee payable to the Contractor by the Owner following a termination for the Owner's convenience, if any.)

ARTICLE 21 CLAIMS AND DISPUTES

§ 21.1 Claims, disputes, and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.11 and Sections 15.7.3 and 15.7.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation as a condition precedent to binding dispute resolution.

§ 21.2 Notice of Claims

§ 21.2.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the Architect within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 21.2.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the other party.

§ 21.3 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action against the other and arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in this Agreement, whether in contract, tort, breach of warranty, or otherwise, within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 21.3.

§ 21.4 If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 21.5 The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 21.6 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 21.7 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the

arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 21.8 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

§ 21.9 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 21.10 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 21.11 Waiver of Claims for Consequential Damages

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.11 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

(Printed name and title)

(Printed name and title)

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists.

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes ___ No ___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes ___ No ___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes ___ No ___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes ___ No ___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes ___ No ___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes ___ No ___	9. Does your company have a mandatory retirement age for all employees? Yes ___ No ___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes ___ No ___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes ___ No ___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes ___ No ___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number. _____

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)	3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source		
State Employment Service				Work Experience	
Private Employment Agencies				Ability to Speak or Write English	
Schools and Colleges				Written Tests	
Newspaper Advertisement				High School Diploma	
Walk Ins				College Degree	
Present Employees				Union Membership	
Labor Organizations				Personal Recommendation	
Minority/Community Organizations				Height or Weight	
Others (please identify)				Car Ownership	
				Arrest Record	
				Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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TABLE OF CONTENTS

<u>ARTICLE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
01006	THE DESIGN CONSULTANT, HIS STATUS AND DECISION	2
01007	EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE	2
01010	SUMMARY OF WORK	2
01012	PROJECT DOCUMENTS	2
01013	DRAWINGS FURNISHED	2
01015	CONTRACTOR'S USE OF PREMISES	2
01016	OCCUPANCY	3
01035	OVERTIME	3
01040	COORDINATION	3
01090	STANDARDS, CODES, AND SPECIFICATIONS	3
01100	SPECIAL PROJECT PROCEDURES	4
01121	SALVAGEABLE MATERIALS	5
01210	PRECONSTRUCTION CONFERENCE	5
01220	PROJECT MEETINGS	5
01310	CONSTRUCTION SCHEDULE	5
01341	SAMPLES	5
01400	QUALITY CONTROL	6
01410	TESTING LABORATORY SERVICES	6
01511	TEMPORARY ELECTRICITY AND LIGHTING	7
01513	TEMPORARY HEATING, COOLING, AND VENTILATING	7
01514	TEMPORARY TELEPHONE	7
01515	TEMPORARY WATER	8
01516	TEMPORARY SANITARY FACILITIES	8
01518	FIRE PROTECTION	8
01520	CONSTRUCTION EQUIPMENT	8
01530	BARRIERS AND ENCLOSURES	9
01535	PROTECTION	9
01540	SECURITY	10
01550	TRAFFIC WAYS	10
01569	CLEANING	10
01590	FIELD OFFICES AND SHEDS	11
01610	TRANSPORTATION AND HANDLING	11
01620	STORAGE AND PROTECTION	12
01710	FINAL CLEANING	12
01720	PROJECT RECORD DOCUMENTS	13
01740	WARRANTIES AND GUARANTEES	13
01741	INSURANCE	14
01742	INDEMNIFICATION	15

01006 THE DESIGN CONSULTANT, HIS STATUS AND DECISIONS

- A. The Design Consultant is TRC Environmental Corporation (TRC), 21 Griffin Road North, Windsor, Connecticut 06095, or his/their accredited representative, and is referred to in the Contract Documents as "Design Consultant" or "Design Consultants" or by pronouns which imply them.

01007 EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE

- A. The East Hartford Public Schools Representative is:

Mr. James Rovezzi
Acting Director of Facilities
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

01010 SUMMARY OF WORK

- A. The work includes removal of ACM (and related materials) described in Section 02080 and re-installation of flooring materials as described in Section 09650 and Section 09680.

01012 PROJECT DOCUMENTS

- A. The Specifications and Drawings describe and illustrate the materials and labor necessary for the work of this Project.

01013 DRAWINGS FURNISHED

- A. The Contractor will be given a reasonable number of sets of the Contract Documents on or about the time of execution of the Contract, free of charge.

01015 CONTRACTOR'S USE OF PREMISES

- A. The Contractor shall confine his operations, including storage of apparatus, equipment and materials to the Contract limit lines as directed by the Design Consultant.
- B. The areas and/or spaces, including access, shall be maintained free and clear throughout contract term.

- C. Parking for Contractor's employees will be readily available at the School site.

01016 OCCUPANCY

- A. The Contractor shall cooperate with the Owner in scheduling operations to minimize conflict and to facilitate Owner usage of the facility. School will not be in session and no students will be in the building; however, the School will be partially occupied by staff during the work.

01035 OVERTIME

- A. Regular working hours shall consist of an 8-hour period established by the Design Consultant between 7:00 a.m. and 4:00 p.m., Monday through Friday, excluding holidays.
- B. Work outside regular hours shall be coordinated with the East Hartford Public Schools Representative and the Design Consultant. Requests for work outside regular hours, not indicated or specified, shall be submitted in writing to East Hartford Public Schools and the Design Consultant for approval a minimum of 72 hours prior to overtime work.
- C. The Contractor shall be responsible for all costs associated with additional services and fees required to perform work, not indicated or specified herein, during other than regular working hours.

01040 COORDINATION

- A. Coordinate work to assure efficient and orderly sequence of installation of construction elements.

01090 STANDARDS, CODES AND SPECIFICATIONS

- A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. References to standard specifications and codes refer to the editions current at the bid due date. References include their addenda and errata, if any, and shall be considered a part of these specifications as if they were printed herein in full.

- C. The manufacturers' standard warranties or guarantees shall apply when their products are used on this project.

01100 SPECIAL PROJECT PROCEDURES

- A. Prior to beginning work, the Design Consultant, East Hartford Public Schools Representative and Contractor shall make a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit a list which shall include all damaged areas not scheduled for repair under this contract and include photographs and video tapes as applicable.
- B. An emergency plan shall be developed by the Contractor prior to abatement initiation. Copies of the plan showing emergency exits and indicating emergency procedures shall be posted in the Clean Room of the Worker Decontamination Enclosure System.
- C. The Contractor shall ensure that all employees use proper respiratory protection during all phases of this project as designated by 29 CFR 1926.1101. Where there has been no prior air sampling (i.e., any prep work), the workers will be required to use respiratory protection until a statistically reliable measurement of personal air sampling can be ascertained to determine if any respiratory protection is required.
- D. The Contractor shall be solely responsible for initiating, maintaining and supervising all Federal, State and Local labor, health and occupational regulations, safety precautions and programs in connection with asbestos abatement work.
- E. The Contractor shall provide an asbestos trained supervisor who is on-site at all times that abatement operations are in progress. The designated supervisor shall be available at all times to consult with the Project Monitor or Design Consultant and shall not work inside the contained areas except for short periods of time. The supervisor may also be the designated Competent Person.
- F. The Contractor shall provide a supervisor who is on-site at all times while work is being performed. The designated supervisor shall submit details of his work experience to the East Hartford Public Schools Representative at the time of the Pre-Construction Meeting. The East Hartford Public Schools Representative will review the work experience of the designated supervisor and has the right to accept or reject the Contractor's choice of supervisor, based on the supervisor's expertise, experience and knowledge of work practices and work skills related to the rework required under this Contract.

01121 SALVAGEABLE MATERIALS

- A. There are no items scheduled to be salvaged in this project.

01210 PRECONSTRUCTION CONFERENCE

- A. The Design Consultant will organize a Preconstruction Conference and notify the parties concerned.

01220 PROJECT MEETINGS

- A. A schedule of regular project meetings will be established at the Preconstruction Conference.

01310 CONSTRUCTION SCHEDULE

- A. Start date shall be June 12, 2024, and completion date shall be August 16, 2024.
- B. The Contractor shall submit a proposed project schedule for approval at the time of the Preconstruction Conference.

01341 SAMPLES

- A. Submit samples of items where specifically required. Furnish information and data for items or materials offered as equals to those specified, to establish their equality.
- B. Mark Samples to Show:
1. Name and number of project.
 2. Name or trade, type, quality or grade and any further designation necessary to identify the items or materials.
 3. Manufacturer's or producer's name.
 4. Name of Contractor and Subcontractor, if any.
- C. Submit samples of such size and/or number sufficient to show quality, type, range of color, finish and texture.
- D. Furnished materials shall be equal to approved samples.

01400 QUALITY CONTROL

- A. Comply with all manufacturers' and association or trade instructions and specifications for storage and use of their products.
- B. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from Design Consultant before proceeding.
- C. When specified require manufacturer to provide qualified personnel to observe field conditions; installation; quality of workmanship; to test, adjust and balance equipment, as applicable.
- D. Where required by the Specifications, submit certificates to the Design Consultant executed by a responsible officer of the Manufacturer, warranting that the product meets or exceeds specified requirements.
- E. When required by the Specifications, submit manufacturers' data sheets, including instructions and recommendations.

01410 TESTING LABORATORY SERVICES

- A. East Hartford Public Schools will retain the services of a Project Monitor for protection of its interests and those using the building. Pre-abatement, during abatement, and post-abatement sampling will be conducted as deemed necessary.
- B. Owner will pay for the services of an independent testing laboratory to perform inspections, tests, and other services required by the Specifications except as noted below.
 - 1. OSHA required personal air monitoring of Contractors personnel.
- C. Reports of test will be submitted to the Design Consultant indicating compliance or non-compliance with the specified standards and with the Contract Documents.
- D. Notify Design Consultant and Testing Laboratory 24-hours before expected time of testing.
- E. Make arrangement with testing laboratory and pay for additional tests if for Contractor's convenience.

- F. The Contractor shall bear the expense of any failed tests including retests, as required to obtain approval.

01511 TEMPORARY ELECTRICITY AND LIGHTING

- A. Connect to existing service, provide branch wiring and distribution boxes located to provide power and lighting by construction grade extension cords. Utilize ground fault interrupters according to asbestos abatement regulations. Owner will pay the cost of energy used. Take measures to conserve energy. Provide lighting for construction operations. At the termination of construction, return the facilities to their original condition.

01513 TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness and, in any event, between October 15 and April 15. Maintain during said period or periods until final completion of the Contract. Windows, doors, ventilators, and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations, and to protect materials and finishes from damage by temperature or humidity. Costs shall be paid by the Contractor. See individual Sections for temperature/humidity limits.
- B. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owners approval. Coordinate the use of existing facilities with the Owner. Provide additional temporary extensions and units to satisfy the criteria given in the preceding paragraph. The Owner will pay the cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition.
- C. Temporary heating shall comply with OSHA regulations, and other applicable codes, statutes, rules and regulations.

01514 TEMPORARY TELEPHONE

- A. The Contractor shall use their own cell phones for telephone service.

01515 TEMPORARY WATER

- A. The Contractor may connect to existing facilities through an approved backflow prevention device; extend branch piping with outlets so that water is available by use of hoses. The Owner will pay for water used. The Contractor shall not waste water or use faulty equipment. The Contractor shall provide, at his own expense, all connections, extensions and other apparatus required for use of such services. Upon completion of the Contract, the Contractor shall disconnect temporary extensions and return utility to its original condition.

01516 TEMPORARY SANITARY FACILITIES

- A. Designated existing toilets may be used during construction. It is the responsibility of the Contractor to maintain the facilities in a clean and sanitary condition and return them to their original condition after use. No loitering will be permitted in these areas.

01518 FIRE PROTECTION

- A. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. No flammable material shall be stored in the structure. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of necessary fire protection measures.

01520 CONSTRUCTION EQUIPMENT

- A. The Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to ensure convenience and safety in the execution of the Contract except where this is specified in any Specification Section. All such items shall meet the approval of the Design Consultant but responsibility for design, strength, and safety shall remain with the Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the A.G.C. and the standards of the State Labor Department.

- B. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.

01530 BARRIERS AND ENCLOSURES

- A. Provide barriers to prevent public entry to construction areas and to protect existing facilities from damage by construction operations.
- B. Provide covered walkways as required for public access to existing buildings.
- C. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, materials dumping, chemically injurious materials, puddling or running water.
- D. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- E. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract.
- F. Temporary exit signs and building evacuation plans shall be prominently displayed throughout the affected areas of the building. Location of emergency exits and building evacuation plan shall be submitted for approval prior to starting.

01535 PROTECTION

- A. Protect buildings, equipment, furnishings, grounds, and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to East Hartford Public Schools. The Contractor shall leave the site in a condition equal to or better than prior to start of work.
- B. Provide protective coverings and barricades necessary to prevent damage or physical injury. The Contractor shall be held responsible for, and must make good at his own expense, any water damage or any other type of damage due to improper coverings. Protect at all times the public and building personnel from injury.

- C. Provide temporary protection for installed products. Control traffic in the immediate area to minimize damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.
- E. Provide temporary barriers to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.

01540 SECURITY

- A. Provide security program and facilities to protect work, existing facilities, and Owner's operations from unauthorized entry, vandalism and theft. Coordinate with Owner's security program.
- B. The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.

01550 TRAFFIC WAYS

- A. The Contractor may use on site paved roads and parking areas, but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, construction operations, or in any other manner.
- B. Public roads and the existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.

01569 CLEANING

- A. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.

- C. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.
- D. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.
- E. Remove waste materials, debris and rubbish from the site and dispose of legally off-site. No scrap/debris shall remain inside the building or anywhere on site upon final acceptance of the project.

01590 FIELD OFFICES AND SHEDS

- A. East Hartford Public Schools will furnish without charge, one room for the Contractors use an office in the existing building. The Contractor shall be responsible for furniture and shall keep the area clean and return it to its original condition after use. The Contractor shall provide a 5 lb ABC fire extinguisher and an approved first aid kit.
- B. Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.
- C. Remove temporary materials, equipment services, and construction before Substantial Completion.
- D. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified, or to original conditions.

01610 TRANSPORTATION AND HANDLING

- A. Materials and equipment shall be delivered, stored and handled to prevent intrusion of foreign matter and damage by weather or breakage. Packaged materials shall be delivered and stored in original, unbroken packages.
- B. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct, and products are undamaged.
- C. Packages, materials and equipment showing evidence of damage will be rejected and replaced at no additional cost to the Owner.

01620 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity range required by manufacturer.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Arrange storage to provide access for inspection. Periodically inspect to ensure products are undamaged and are maintained under required conditions. Keep log showing date, time, and problems, if any.

01710 FINAL CLEANING

- A. Before final inspection, clean the work in readiness for occupancy.
- B. Clean interior and exterior surfaces to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, HEPA vacuum carpeted and soft surfaces. Clean equipment and fixtures. Also:
 - 1. Remove tape adhesive, spray glue and encapsulant stains; wash and polish glass. Repaint or refinish to match existing all surfaces which can not be totally cleaned of material deposited during this work.
 - 2. Clean and polish tile and other glazed surfaces.
 - 3. Clean floors; wax and buff resilient tile. Clean vinyl or rubber base.
 - 4. Wash washable surfaces of equipment and fixtures.
 - 5. HEPA vacuum and/or dust walls, ceilings, lighting fixtures, ceiling diffusers, and other wall and ceiling items.
 - 6. Remove defacements, streaks, fingerprints and erection marks.
 - 7. Clean site; sweep paved areas, rake other surfaces.
- C. Remove waste and surplus materials, rubbish, and construction equipment and facilities from the site.

- D. Leave the building clean and ready for occupancy. If the Contractor fails to clean up, East Hartford Public Schools may do so with the cost charged to the Contractor.

01720 PROJECT RECORD DOCUMENTS

- A. The Contractor shall keep one copy of the Specifications, Drawings, Addenda, approved Shop Drawings, Change Orders, Schedules and Instructions, in good order at the site and marked to record all changes made during construction. The documents shall be available to the Design Consultant at all times.

01740 WARRANTIES AND GUARANTEES

- A. The Contractor shall guarantee all materials and workmanship for a period of one year from the date of acceptance of the work. In addition, the Contractor shall furnish the warranties listed below. Submit to East Hartford Public Schools in the suppliers' standard form or in the form given below if there isn't a standard form available.
- B. Submit certification that finish materials are fire rated as specified.
- C. Forms of Bonds, Guarantees, Warranties:

Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

(Project Title and Number)

I (We) hereby guarantee (or warranty) the _____ work on the referenced project for a period of ___ years from _____, 20 __ against the failures of workmanship and materials in accordance with the requirements of Division __, Page __, Paragraph __ of the Contract Specifications.

Signed _____ General Contractor
(or authorized agent)

- D. Bonds shall be by approved Surety Companies, made out to East Hartford Public Schools on company's standard form.

- E. Guarantees, warranties or bonds supplied by Subcontractors, Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the General Contractor to be the product installed on the project and be countersigned by the General Contractor.

01741 INSURANCE

- A. **The East Hartford Board of Education and the Town of East Hartford, its officials, volunteers, boards and commissions** must be named additional insured on all insurance policies and each shall be given a Certificate of Insurance evidencing such coverage.
- B. Before the contract is executed, the Contractor will be required to file with East Hartford Public Schools a Certificate of Insurance, executed by an insurance company licensed to do business satisfactory to the State of Connecticut and in a form acceptable to East Hartford Public Schools stating that with respect to the contract awarded, the Contractor carries insurance in accordance with the following requirements and stipulations: (See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** Anna E. Norris Elementary School Flooring Abatement and Replacement Project.)
1. Workers Compensation:
 - a. See Bid Document #1824-23 referencing Workers Compensation
 2. Commercial General Liability (including but not limited to Premises and Operations; Independent Contractors Protection; Products and Completions; Broad Form Property Damage; and Asbestos Liability):
 - a. Bodily Injury
See Bid Document #1824-23 referencing General Liability
 - b. Personal Injury, with Employment Exclusion Deleted
See Bid Document #1824-23 referencing General Liability

- c. Property Damage
See Bid Document #1824-23 referencing General Liability
- 3. Commercial Automobile Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Automobile Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Automobile Liability Ins.
- 4. Contractual Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Contractual Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Contractual Liability Ins.
- 5. All Subcontractors on this project shall carry the same coverages as required for the General Contractor in Paragraphs 2 through 4 of this Section.

01742 INDEMNIFICATION

- A. See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** Anna E. Norris Elementary School Flooring Abatement and Replacement Project.
- B. The Contractor understands that it shall reimburse and hold East Hartford Public Schools harmless against any and all delays caused by the Contractor beyond the specified contract period which causes the loss of revenues to East Hartford Public Schools as a result of that delay.

END OF SECTION

PART 1 – GENERAL

1.1 SCOPE

- A. The work specified herein shall be the abatement of asbestos-containing materials by persons who are knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of asbestos-containing material, and the subsequent cleaning of the affected environment. The Contractor shall have a Competent Person in control on the job site at all times during asbestos abatement work. This person must comply with applicable Federal, State and Local regulations that mandate work practices, and be capable of performing the work of this contract.
- B. The Contractor shall be licensed by the State of Connecticut in accordance with State of Connecticut Regulations, Sections 20-440-1 through 9. Should any portion of the work be subcontracted, the subcontractor must also be licensed in accordance with these regulations.
- C. East Hartford Public Schools will retain the services of a State of Connecticut licensed Project Monitor, TRC Environmental Corporation (TRC), for protection of its interests and those using the building. Pre-abatement, during abatement and post-abatement sampling will be conducted as deemed necessary.
- D. Deviations from this Specification require the written approval from East Hartford Public Schools.
- E. Restore all work areas and auxiliary areas utilized during abatement (or related work) to conditions equal to or better than original. Any damage caused during the performance of abatement activities (or related work) shall be repaired by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, removal of ceiling tiles or concrete blocks, broken glass, etc.) at no additional expense to East Hartford Public Schools. The Contractor is responsible for protecting all objects in work areas that are permanent fixtures or too large to remove.

The Contractor shall be responsible for the following general requirements:

ANNA E. NORRIS ELEMENTAY SCHOOL
State Project No. 043-0252CV

1. Obtain all approvals and permits, and submit all notifications required.
 2. Provide, erect, and maintain all planking, bracing, shoring, barricades, and warning signs.
 3. Unless otherwise specified, all equipment, fixtures, piping and debris resulting from demolition shall become the property of the Contractor and shall be removed from the premises.
 4. Materials to be reused shall be removed with the utmost care to prevent damage of any kind. All material to be reused shall be stored as directed. The Contractor shall coordinate with East Hartford Public Schools as to the storage location.
 5. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
- F. It shall be the responsibility of the Contractor to protect and preserve in operating condition, all utilities traversing the building and site. Damage to any utility due to work under this Contract shall be repaired to the satisfaction of East Hartford Public Schools at no cost to East Hartford Public Schools.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall supply all labor, materials, equipment, services, insurance (with specific coverage for work on asbestos), and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations and these specifications.
- B. The asbestos abatement work shall include the removal of asbestos-containing materials as specified herein. This abatement project was designed by Mr. Gregory Kaczynski, a State of Connecticut licensed Asbestos Project Designer (#000328) from TRC. TRC is the Designer/Consultant for the project.

Work Area 1 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (CB2)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

Work Area 2 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (CB2)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

Work Area 3 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (CB2)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

1.3 **DEFINITIONS**

Accessible - A space easily accessed and which can be entered or seen without demolition.

Adequately Wet - Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

AHERA - Asbestos Hazard Emergency Response Act - U. S. EPA regulation 40 CFR Part 763 under Section 203 of Title II of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2643. This rule mandates inspections, accreditations of persons involved with asbestos, and -final air clearances following abatement in public and private schools, and public and commercial buildings.

Asbestos - The term asbestos includes chrysotile, amosite, crocidolite, asbestiform tremolite, asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered.

Asbestos Abatement - The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials.

Asbestos-Containing Waste Materials (ACM Waste) - Any waste that either contains or is contaminated with asbestos. This term includes asbestos-containing materials and materials contaminated with asbestos including disposable equipment and clothing, filters from control devices, polyethylene sheeting generated from disassembly of a containment structure, and any other items from within regulated areas which cannot be properly decontaminated.

Asbestos Control Area - An area where asbestos abatement operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glovebag".

Asbestos Fiber - A particulate form of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals having a length of five micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Authorized Asbestos Disposal Facility - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

Category I Non-Friable Asbestos-Containing Material (ACM) - Asbestos-containing packings, gaskets, resilient Floor coverings and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II Non-Friable ACM - Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Class I Asbestos Work - Activities involving the removal of TSI and surfacing ACM and PACM.

Class II Asbestos Work - Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

Class IV Asbestos Work - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Competent Person - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763). The Asbestos Abatement Site Supervisor as defined in RCSA>

Concealed Space - Space which is out of sight. Examples of a concealed space include area above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

Confined Space - See Permit Required Confined Spaces (PRCS).

Critical Barrier - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the Work Area and uncontaminated areas outside of the Work Area, including the outside of the building.

Decontamination Enclosure System - A series of rooms separated from the Work Area and from each other by air locks, for the decontamination of workers and equipment.

Demolition - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DEEP - The Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106.

DPH - The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06106.

Differential Pressure - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

Encapsulant - Specific materials in various forms used to chemically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulant as follows:

1. Removal Encapsulant (can be used as a wetting agent).
2. Bridging Encapsulant (used to provide a tough durable surface coating to asbestos-containing material).
3. Penetrating Encapsulant (used to penetrate the asbestos containing material down to substrate, encapsulating all asbestos fibers).
4. Lock-down Encapsulant (used to seal off "lock-down" minute asbestos fibers left on surfaces from which asbestos containing materials have been removed).

Encapsulation - The application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

Engineering Controls - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

Equipment Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

Exposed - Open to view.

Finished Space - Space used for habitation or occupancy where rough surfaces are plastered, paneled or otherwise treated to provide a pleasing appearance.

Fixed Critical Barrier - Barrier constructed of 2" x 4" wood or metal framing 16" O.C., with 2" plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Work Area side to prevent unauthorized access or air flow.

Fixed Object - A piece of equipment or furniture in the Work Area which cannot be

removed from the Work Area, as determined by the Project Monitor.

Friable Asbestos Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy, that when dry can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Full Containment – Two layers of six (6) mil poly on walls and floors, contiguous decontamination units, pressure differential between work area and adjacent area and engineering controls.

Glovebag - A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used glovebags provide a small Work Area enclosure typically used for small scale asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101).

Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. This technique requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

HEPA Filter Equipment - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

Inaccessible - A space not accessible and which cannot be entered or seen without demolition.

Lock-Down - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

Mini-Containment - A procedure using a single layer of polyethylene sheeting to contain the Work Area. Access to the mini-containment is controlled by an air lock which also serves as a Holding Area. This procedure requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

Movable Object - A piece of equipment or furniture in the Work Area which can be removed from the Work Area, as determined by the Project Monitor.

Negative Exposure Assessment - For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are not more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the

PELs.

Non-Friable Asbestos-Containing Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that when dry cannot be crumbled, pulverized or reduced to powder by hand pressure.

NPE - Negative pressure enclosure.

Owner or Operator of a Demolition or Renovation Activity - Any person who owns, leases, operates, controls and supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation, or both.

Permissible Exposure Limit (PEL) - (1) time-weighted average unit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) or air as an eight (8) hour time-weighted average time (TWA). (2) excursion limit. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fibers per cubic centimeter of air (f/cc) as averaged over a sampling period of thirty (30) minutes.

Permit Required Confined Spaces (PRCS) - A confined space that has the potential to cause harm to the entrants. These spaces could contain a hazardous atmosphere, material that could engulf the entrant, have an internal configuration that could entrap an entrant and any other serious safety or health hazard. PRCS require special entry precautions which could include retrieval systems, ventilation, monitoring and air line respirators. A written permit is required to be completed prior to entry. All TRC personnel entering a PRCS must follow TRC's health and safety program and the requirements for entering PRCS.

Personal Monitoring - Air sampling within the breathing zone of an employee.

Pre-Clean - The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

Presumed Asbestos-Containing Material (PACM) - TSI and surfacing material found in buildings constructed no later than 1980.

Project Monitor - The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut DPH regulations (Sections 20-440-1 through 20-440-9, inclusive). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts Registry.

Regulated Area - Area established by the employer to demarcate areas where Class I, II and III work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the Permissible Exposure Limit.

Regulated Asbestos-Containing Material (RACM) - (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Renovation - Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting members are wrecked or taken out are demolitions.

Repair - Overhauling, rebuilding, reconstructing or reconditioning of structures or substrates where asbestos, is present.

Thermal System Insulation (TSI) - Materials applied to pipes, fittings, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Unfinished Space - Space used for storage, utilities or work area where appearance is not a factor. Examples of an unfinished space include crawlspace; pipe tunnel and similar spaces.

Visible Emissions - Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material or from any

asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Visible Residue - Any debris or dust on surfaces in areas within the Work Area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos.

Waste Generator - Any owner or operator of a source whose act or process produces asbestos-containing waste material.

Waste Shipment Record - The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area - Specific area or location where the actual work is being performed or such other area of a facility which the Commissioner determines may be hazardous to public health as a result of such asbestos abatement.

Worker Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled passage of workers and authorized visitors, typically consisting of a Clean Room, a Shower Room and an Equipment Room that is under negative pressure.

1.4 REFERENCES

A. The current issue of each document shall govern. Where conflict among requirements or with these specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1001 - Asbestos, Tremolite, Anthophyllite, and Actinolite

29 CFR 1910.134 - Respiratory Protection

29 CFR 1926.21 - Safety Training and Education

29 CFR 1926.32 - Competent Person

29 CFR 1926.51 – Sanitation

29 CFR 1926.59 - Hazard Communication.

29 CFR 1926.62 - Lead in Construction

29 CFR 1926.200 - Accident Prevention Signs and Tags

29 CFR 1926.417 - Lockout and Tagging of Circuits

29 CFR 1926.1101 - Asbestos

2. Environmental Protection Agency (EPA)

40 CFR 61, Subpart M - National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule

40 CFR 763, Subpart E - Asbestos Hazard Emergency Response Act (AHERA)

40 CFR 763, Subpart G - Worker Protection Rule

3. State of Connecticut, Department of Public Health (DPH) Regulations

Section 20-440-1 through 20-440-9- Standards for Asbestos Abatement

Section 22a-209-1; 22a-209-8(i); 22a-449(c)-11; and 22a-449(c)-100 - Hazardous Waste Management Regulations

4. American National Standards Institute (ANSI)

ANSI Z9.2 - Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2 - Respiratory Protection

5. American Society of Testing and Materials (ASTM)

ASTM E 84 - Surface Burning Characteristics of Building Materials

ASTM E 96 - Water Vapor Transmission of Materials

ASTM E 119 - Fire Tests of Building and Construction Materials

ASTM E 736 - Cohesion/Adhesion of Sprayed Fire-Resistive Materials
Applied to Structural Members

ASTM E 1368 - Visual Inspection of Asbestos Abatement Projects

ASTM E 1494 - Encapsulants for Spray- or Trowel- Applied Friable
Asbestos-Containing Building Materials

6. Underwriters Laboratories, Inc. (UL)

UL 586 - High-Efficiency, Particulate, Air Filter Units

1.5 DOCUMENTATION

A. Submit two copies of the following documentation to ensure compliance with the applicable regulations. An up- to- date copy shall be retained at the job site at all times. Submission must be made prior to the Pre-abatement Meeting, which will be held two weeks prior to the start of abatement. The General Contractor, Abatement Contractor, Architect, Asbestos Project Designer and Owners Representative shall be present at the meeting.

B. Manufacturer's Catalog Data:

Local Exhaust Equipment
Vacuum Equipment
Respirators
Pressure Differential Automatic Recording Instrument
Surfactant

Chemical Encapsulant
Polyethylene Sheeting
Airless Sprayers
Portable Shower Units
MSDS for All Materials Delivered to the Site
Letters of Compatibility for Encapsulant and Coating Materials

C. Statements:

Notification to State of Connecticut Department of Public Health
(ten (10) days before the start of asbestos abatement)

Notification to EPA Region 1
(ten (10) days before the start of asbestos abatement)

Worker Medical Certification

Worker Training Certification

Worker Respirator Fit Testing

OSHA Laboratory Certification

Contractor's Project Monitor Certification

Landfill Approval

Safety Plan

Respirator Protection Plan

Initial Exposure Assessment

1. Copies of all required notifications, approvals and permits for the removal, disposal and transport asbestos-containing or contaminated materials.
2. Documentation from a physician certifying that all employees who may be exposed to airborne asbestos in excess of the background level have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring required in 29 CFR 1926.1101. They shall also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform as well as special work place conditions such as high temperature, high humidity and chemical contaminants which to which he/she may be exposed.
3. Documentation certifying that all employees have received training in the

proper handling of materials that contain asbestos; understand the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis.

4. Documentation of respiratory fit testing for all employees who must enter the Work Area. This fit testing shall be in accordance with qualitative procedures as detailed in 29 CFR 1926.1101.
5. Establish and supervise in accordance with 29 CFR 1926.21, a program for the education and training of workers in the recognition, avoidance and prevention of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury. Include any site-specific information to address health and safety procedures unique to this project.
6. Establish a written Respiratory Protection Plan in accordance with 29 CFR 1910.134. This plan shall establish procedures governing the selection and use of respirators and shall include such information as training in the proper use of respirators; medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required; training in proper use and limitations of respirators; respirator fit testing; regular inspection and evaluation of the continued effectiveness of the program; and other elements included in the standard.
7. Demonstrate that employee's exposures will be below the PELs for Class I asbestos work until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise make a Negative Exposure Assessment.

D. Construction Schedule:

A construction schedule which shows how the flooring removal and installation will be coordinated and completed within the construction timeline provided. Include the removal and return and storage locations of furniture, equipment and supplies for each phase as well.

E. Records:

Sign-in/out Logs
Pressure Differential Recording Data
NPE Inspection and Smoke Test Logs
Rental Equipment Statements

When rental equipment is to be used in removal areas or to transport waste materials, submit a copy of written notification provided to the rental company informing them of the nature of use of the rented equipment.

F. During the asbestos abatement, submit to the Asbestos Project Designer and receive acknowledgment of the following:

1. Results of the personal air sampling data within one (1) working day of when the sampling was done.
2. Copies of all waste shipment records of asbestos waste that is transported from the facility site.

G. At the conclusion of the project, submit to the Asbestos Project Designer and receive acknowledgment of the following:

1. The original copy of all completed waste shipment records. This shall be submitted to the Asbestos Project Designer within 35 days from the date the waste was transported from the facility site.

1.6 PERSONNEL PROTECTION

- A. Instruct workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- B. Ensure workers are fully protected with respirators and protective clothing during work in the Asbestos Control Area, where there is the possibility of disturbing asbestos-containing or asbestos-contaminated materials.
- C. Respiratory protection shall meet the requirements of OSHA as required in 29

CFR 1910.134 and 29 CFR 1926.1101. Provide appropriate respiratory protection for each worker and ensure usage during potential asbestos exposure. As a minimum, workers shall be equipped with powered air-purifying respirators (PAPR) with HEPA filters.

D. Select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11. Provide an adequate supply of filter elements for respirators in use.

E. Minimum respiratory protection shall be as follows:

Airborne concentration of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals	Required Respirator
Not in excess of 1 f/cc (10 × PEL) or otherwise as required	Half mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 × PEL)	Full face piece air purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc equipped with (100 × PEL)	Any powered air-purifying respirator high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1000 × PEL)	Full face piece supplied air respirator operated in pressure demand mode.

- Note: 1. Respirators assigned for higher airborne fiber concentrations may be used at lower concentrations.
2. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

3. The Contractor shall provide a full face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus for all persons within the regulated area where apparatus for all persons within the regulated area where Class I work is being performed for which a negative exposure assessment has not been produced and, the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full-face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.
 4. If compressed air is used for supplied air respirators, this air will meet the requirements for grade D breathing air as described by the Compressed Gas Association Commodity Specification G-7.1-1996. The compressor will be equipped with the necessary safety devices and absorbents/filters and be situated to avoid entry of contaminated air. In addition, the compressor will be equipped with alarms to indicate failure or overheating, and additional alarms for indicating the presence of carbon monoxide. Airline couplings will be incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with non-respirable gases.
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- F. Provide and require all workers to wear protective clothing in Work Areas where asbestos fiber concentrations exceed permissible limits established by OSHA. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
 - G. Provide all authorized persons entering contaminated areas with proper respirators and protective clothing.
 - H. Ensure that all workers and authorized persons enter and leave the Asbestos Control Area through the Worker Decontamination Enclosure System.
 - I. Ensure all contaminated protective clothing remains in the Equipment Room for reuse or disposal of as contaminated waste.
 - J. Ensure workers do not eat, drink, smoke or chew gum or tobacco while in the Asbestos Control Area.

1.7 EQUIPMENT REMOVAL PROCEDURE

- A. Clean surfaces of contaminated containers and equipment thoroughly by vacuuming with HEPA filtered equipment and wet wiping before moving such items into the Equipment Decontamination Enclosure System for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave the Asbestos Control Area through the Equipment Decontamination Enclosure System.

1.8 SEQUENCE OF WORK

- A. Proceed in accordance with the sequence of work as mutually agreed upon with East Hartford Public Schools.
- B. The following sequence of work shall be used for the asbestos abatement work:
 - 1. A visual inspection of the Work Area to determine pre-existing damage to facility components. (Movable objects (furniture, equipment & supplies) will be removed by the Owner prior to Work Area being turned over to the Contractor.)
 - 2. Release of work area to the Contractor.
 - 3. All temporary utilities required for the project shall be on site and operational prior to the initiation of asbestos work.
 - 4. Abatement of all asbestos-containing materials by the Contractor.
 - 5. Air sampling by East Hartford Public School's Project Monitor for re-occupancy.
 - 6. Cleanup by the Contractor. Work Areas must be returned to their original condition or better.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.

Do not use damaged or deteriorating materials. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire retardant polyethylene sheet in roll size to minimize the frequency of joints, shall be delivered to job site with factory label indicating four (4) or six (6) mil.
- B. Polyethylene disposable bags shall be six (6) mil with pre-printed label. Disposable bags shall be opaque.
- C. Tape shall be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces. Tape must be capable of adhering under both dry and wet conditions.
- D. Surfactant (wetting agent) shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration one (1) ounce surfactant to five (5) gallons of water or as directed by the manufacturer.
- E. Containers must be impermeable and shall be both air and watertight. Containers shall be labeled in accordance with OSHA Standard 29 CFR 1926.1101 and EPA NESHAPS 61.150 as appropriate.
- F. Labels and signs shall conform to OSHA Standard 29 CFR 1926.1101.
- G. Encapsulant shall be bridging or penetrating type which has been approved by the Design Consultant. Usage shall be in accordance with manufacturer's printed technical data. Encapsulant must be compatible with new materials being installed. Encapsulant shall be clear.
- H. Glovebag assembly shall be manufactured of six (6) mil transparent polyethylene or PVC with two (2) inward projecting long sleeve gloves, an internal pouch for tools, and an attached labeled receptacle for waste.

2.2 TOOLS AND EQUIPMENT

- A. Tools and equipment shall be suitable for asbestos removal.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter cassettes shall be provided in sufficient quantities for the project.
- C. Electrical equipment, protective devices, emergency generators and power cables shall conform to all applicable codes.
- D. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. Showers shall be equipped with hot and cold or warm running water. One shower stall shall be provided for each eight workers.
- E. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. No air movement system or air filtering equipment shall discharge unfiltered air outside the Asbestos Control Area.
- F. Pressure differential automatic recording instrument shall be provided to ensure exhaust air filtration devices provide the minimum pressure differential required between the Work Area and occupied areas of the facility.
- G. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Asbestos Control Area.
- H. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 microns in diameter or larger.
- I. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the Work Area shall be provided as appropriate for the work.

PART 3 - EXECUTION

3.1 PREPARATION OF WORK AREA ENCLOSURE SYSTEM

- A. Prior to beginning work, the Design Consultant, East Hartford Public School's Representative and Contractor shall perform a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit to the East Hartford Public School's Representative a list which shall include all damaged areas not scheduled to be repaired under this Contract and include photographs, video tapes as applicable.
- B. Post warning signs meeting the specifications of OSHA 29 CFR 1910 and 29 CFR 1926.1101 at each Regulated Area. In addition, signs shall be posted at all approaches to Regulated Areas so that an employee may read the sign and take the necessary protective steps before entering the area. Additional signs may require posting following construction of work place enclosure barriers.
- C. Utilize engineering controls and personnel protective equipment while installing enclosures and supports when asbestos-containing materials may be disturbed.
- D. When feasible, shut down and lock out electrical power, including all receptacles and light fixtures. Protect receptacles and light fixtures remaining in the Work Area with six (6) mil polyethylene and seal with tape. Protect fire alarm system components remaining in the area with six (6) mil polyethylene and seal with tape. Coordinate all power and fire alarm isolation with East Hartford Public Schools.
- E. Provide temporary power and lighting, if applicable, and ensure safe installation, including ground fault protection, of temporary power sources and equipment in compliance with applicable electrical code and OSHA requirements. The Contractor is responsible for proper connection and installation of electrical wiring.
- F. Shut down and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to other areas of the building. Seal all vents. Construct wooden platform over gas burners and gas trains to prevent damage.

- G. Pre-clean movable objects within the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such objects from Work Areas to a temporary location.
- H. Pre-clean fixed objects within the proposed Work Areas, using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with two layers of six (6) mil polyethylene sheeting sealed with tape. Objects which must remain in the Work Area and which require special ventilation or enclosure include electrical equipment, pumps, compressors, control panels, and meter equipment.
- I. Clean the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.
- J. Seal off all openings between the Work Area and the uncontaminated areas outside of the Work Area with critical barriers. Doorways and corridors, which will not be used for passage during work, must be sealed with fixed critical barriers.
- K. Conspicuously label and maintain emergency and fire exits from the Asbestos Control Area satisfactory to the Project Monitor.

3.2 WORKER DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area, a Worker Decontamination Enclosure System consisting of Equipment Room, Shower Room and Clean Room in series. Access to the Work Area shall only be through this enclosure.
- B. Access between rooms in the Worker Decontamination Enclosure System shall be through double flap curtained openings (air locks). Other effective designs are permissible. The Clean Room, Shower Room and Equipment Room located within the Worker Decontamination Enclosure, shall be completely sealed ensuring sole source of airflow into the Asbestos Control Area originates from the outside uncontaminated areas.
- C. The Clean Room shall be adequately sized to accommodate workers and shall be equipped with a suitable number of hooks, lockers, shelves, etc., for workers to store personal articles and clothing. Changing areas of the Clean Room shall be

suitably screened from areas occupied by the public.

- D. The Shower Room shall be of sufficient capacity to accommodate the number of workers. Supply warm water to showers. Provide one shower for each eight workers. No worker or other person shall leave an Asbestos Control Area without showering. Shower water shall be collected and filtered using best available technology and dumped down an approved drain.
- E. No personnel or equipment shall be permitted to leave the Asbestos Control Area unless just decontaminated by showering, wet cleaning or HEPA vacuuming to remove all asbestos debris. No asbestos-contaminated materials or persons shall enter the Clean Room.

3.3 EQUIPMENT DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area an Equipment Decontamination Enclosure System consisting of two (2) totally enclosed chambers divided by a double flap curtained opening. Other effective designs are permissible. This enclosure must be constructed so as to ensure that no personnel enter or exit through this unit.

3.4 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. Occupied areas and/or building space not within the Asbestos Control Area shall be separated from asbestos abatement Work Areas by means of airtight barriers. Barriers at openings with dimensions exceeding two (2) feet in both directions shall be blocked with fixed critical barriers.
- B. Do not impair required building exits from any occupied building area. Where normal exits have been blocked by the asbestos work, provide temporary exit signs directing building occupants to the nearest available exit location.
- C. For Class I work, visually inspect and smoke test barriers to assure an effective seal. Repair defects immediately.
- D. Create a pressure differential in the range of 0.02 to 0.04 inches of water column between the Work Area and occupied areas by the use of acceptable pressure differential equipment. Provide a sufficient quantity of units to exhaust the volume of air within the Asbestos Control Area a minimum of four times per hour. Continuously monitor the pressure differential between the Work Area and

occupied areas utilizing recording type equipment to ensure exhaust air filtration equipment maintains a minimum pressure differential of 0.02 inches of water column.

3.5 ASBESTOS REMOVAL

- A. A Competent Person shall be on the job at all times to ensure the establishment and maintenance of the negative pressure enclosure (NPE) and proper work practices throughout the project.
- B. Do not begin abatement work until authorized by the East Hartford Public School's Project Monitor. Follow the steps for abatement as outlined in Section 1.8, Sequence of Work.
- C. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches, and smoke tested for leaks, and any leaks sealed. Results of the NPE inspection shall be logged.
- D. Spray asbestos materials with amended water, using airless spray equipment capable of providing a "mist" application to reduce the release of fibers during the removal operation.
- E. In order to maintain indoor asbestos concentrations at a minimum, remove the wet asbestos in manageable sections. Materials shall not be allowed to dry out. Material drop shall not exceed 8 feet. For heights up to 15 feet provide inclined chutes or scaffolding to intercept drop. For heights exceeding 15 feet provide enclosed dust-proof chutes.
- F. Fill disposal containers (six (6) mil polyethylene bags or fiber drums) as removal proceeds, seal filled containers, apply caution labels and clean containers before removal to wash area. Bags shall be securely sealed to prevent accidental opening and leakage by taping in gooseneck fashion. Bags may be placed in drums for staging and transportation to the disposal site. Bags shall be decontaminated by wet cleaning and HEPA vacuuming before being placed in clean drums and sealed with locking ring tops. Large components removed intact may be wrapped in two (2) layers of six (6) mil polyethylene sheeting secured with tape for transport to the waste disposal site. Small components and asbestos containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) which could tear polyethylene bags and sheeting shall be placed in clean drums

and sealed with locking ring tops. Wet clean each container thoroughly before moving to Holding Area. Ensure that workers do not enter from uncontaminated areas into the Washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the Equipment Decontamination Enclosure.

- G. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet.
- H. If at any time during asbestos removal, should the East Hartford Public School's Project Monitor suspect contamination of areas outside the Work Area, the Contractor shall stop all abatement work and take steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections determine decontamination.
- I. Containerize asbestos-containing waste material removed daily. Do not allow ACM to remain on the floor overnight, allowing it to dry out
- J. Once properly containerized and removed from containment, asbestos waste shall be stored in a locked waste container.

3.6 CLEAN-UP PROCEDURE

- A. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris which may have splattered or collected on the polyethylene wall covering. Carefully remove the cleaned outer layer of polyethylene from the walls, fold inward as material is being removed, and place in disposal containers. Any debris which may have leaked behind the outer layer shall be removed by HEPA vacuuming and/or wet cleaning.
- B. Remove contamination from the exteriors of the negative air machines, scaffolding, ladders, extension cords, hoses and other equipment inside the Work Area. Cleaning may be accomplished by brushing, HEPA vacuuming and/or wet cleaning.
- C. The East Hartford Public School's Project Monitor shall conduct a thorough visual inspection utilizing a high-intensity flashlight, with the containment

barriers in place, to detect visible accumulations of dust or bulk asbestos-containing materials remaining in the Work Area. Should dust, debris or residue be detected, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate clean-up of the work site. At the conclusion of the final visual inspection, the East Hartford Public School's Project Monitor and the Contractor's supervisor shall certify that they have visually inspected the work area and have found no dust, debris or residue.

- D. Once the area has been re-cleaned, any equipment, tools or materials not required for completion of the work, shall be removed from the Work Area. Negative air filtration devices shall remain in place and operating for the remainder of the clean-up operation.
- E. Apply a lock-down encapsulant to all surfaces within the Work Area from which asbestos has been removed. The Contractor is responsible for ensuring that the encapsulant and the new floor tile mastic are compatible i.e. the new tiles will adhere to the floor.
- F. Air sampling for re-occupancy clearance shall be undertaken using aggressive sampling techniques. Analysis of clearance samples shall follow State of Connecticut Regulations, Section 19a-333-7-(h). Areas which do not comply shall continue to be cleaned by and at the Contractors expense, until the specified Standard of Cleaning is achieved as evidenced by results of air testing. When the Work Area passes the re-occupancy clearance, controls established by this specification may be removed.
- G. Remove all remaining polyethylene, including critical barriers, and Decontamination Enclosure Systems leaving negative air filtration devices in operation. HEPA vacuum and/or wet wipe any visible residue which is uncovered during this process. Dispose of poly as asbestos waste.

3.7 REINSTALLATION OF DISPLACED EQUIPMENT

- A. After re-occupancy is granted, re-secure mounted items removed during the course of the work to their former positions.
- B. Re-establish to proper working order all HVAC, mechanical and electrical

systems including lights, exit lights, fire alarm systems and sound systems.

- C. Install new filters in HVAC systems and dispose of used filters as asbestos-containing waste. All systems shall be function tested in the presence of the East Hartford Public School's Representative.

3.8 DISPOSAL OF ASBESTOS

- A. Disposal of asbestos-containing and/or asbestos contaminated material shall occur at an authorized site and must be in compliance with the requirements of, and authorized by the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, or other designated agency having jurisdiction over solid waste disposal.
- B. Disposal approval shall be obtained prior to commencement of asbestos removal.
- C. Warning signs must be attached to vehicles used to transport asbestos-containing waste. Warning signs shall be posted during loading and unloading of disposal containers. The signs must be posted so that they are plainly visible.
- D. Waste removal dumpsters and cargo areas of transport vehicles shall be lined with a layer of six (6) mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first, and shall be extended up sidewalls 12-inches. Wall sheeting shall overlap floor sheeting 24-inches and shall be taped into place.
- E. The completed waste shipment record shall be provided to the East Hartford Public School's Representative.

3.9 CONTRACTOR RESPONSIBILITY

- A. Conduct air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours collection, and shall be available for review until the job is complete.

3.10 AIR SAMPLING SCHEDULE

- A. At a minimum, air sampling by the East Hartford Public School’s Project Monitor will be conducted in accordance with the following schedule (Pre-abatement and during abatement sampling would only apply if full-time project monitoring is being performed for the project.):

Abatement Activity	Pre- Abatement	During Abatement	Post Abatement
Greater than 160 sf./260 lf.	PCM	PCM	TEM
Tent and Glovebag Procedures	PCM	PCM	PCM

- B. Frequency and duration of the air sampling during abatement will be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. This sampling is in addition to OSHA compliance monitoring (personal sampling accomplished by the Contractor) and would only be performed if full-time project monitoring is occurring for the project.
- C. Post-abatement clearance air monitoring requirements are as follows:
 - 1. Air sampling will not begin until at least 12 hours after wet cleaning has

been completed and no visible water or condensation remain.

2. Sampling equipment will be placed at random around the Work Area.
3. The representative samplers placed outside the Work Area but within the building will be located to avoid any air that might escape through the isolation barriers and will be approximately 50 feet from the entrance to the Work Area, and 25 feet from the isolation barriers.
4. The following aggressive air sampling procedures will be used within the Work Area during all air clearance monitoring:
 - a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as a 1 horsepower leaf blower) against all walls, ceilings, floors, ledges and other surfaces in the Work Area. This should take at least 5 minutes per 1000 SF of floor area.
 - b. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.
 - c. Start the sampling pumps and sample for the required time.
 - d. Turn off the pump and then the fan(s) when sampling is complete.
5. Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 f/cc of air.
6. Each homogeneous Work Area, which does not meet the clearance criteria, shall be thoroughly re-cleaned using HEPA vacuuming and/or wet cleaning, with the negative pressure ventilation system in operation. New samples shall be collected in the Work Area as described above. The process shall be repeated until the Work Area passes the test, with the **cost of repeat sampling being borne entirely by the Contractor.**
7. For an asbestos abatement project with more than one homogeneous Work Area, the release criterion shall be applied independently to each Work Area.

3.11 ACTION CRITERIA

- A. If air samples collected outside of the Work Area during abatement activities indicate airborne fiber concentrations greater than original background levels or greater than 0.050 f/cc, as determined by Phase Contrast Microscopy, whichever is larger, an examination of the Work Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Work Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.

END OF SECTION

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Replace floor tile
 - 1. Provide new floor tiles (and associated cove base) in all areas where floor tile and/or carpet was removed (See Drawing HAZ-001). Replace with similar tiles which are free of asbestos.
 - 2. Prepare substrate surface, apply tile, and clean all surfaces and areas of work. If shot blaster is utilized during floor tile mastic abatement, use a leveling compound, wait for cure cycle and then apply tile.

1.2 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.
- B. Submit two sets of 4" x 4" square samples for each tile required. In each set of samples, show the full range of exposed color and texture to be expected in the completed work. Review will be for color and texture only. Contact owner regarding color.

1.3 REFERENCES

- A. FS SS-T-312 - Tile Floor: Asphalt, Rubber Vinyl and Vinyl Composition.

1.4 GUARANTEE

- A. The work under this Section shall be part of the Contractors standard one-year guarantee.
- B. Defective work includes material or workmanship which results in warping, sagging, twisting, loss of adherence, within the time period of the guarantee.

1.5 PRODUCT HANDLING, DELIVERY AND STORAGE

- A. Deliver materials to job site in original, unopened packages, bearing manufacturers name and label identifying each type of ceiling tile. Comply with manufacturers recommendations for storage of material.
- B. Deliver two cartons of each color and pattern of floor material required for project, for maintenance use (attic stock).

PART 2 PRODUCTS

2.1 MATERIALS - GENERAL

- A. Vinyl Composite Tile: conforming to FS SS-312B(1), Type IV, Comp. 1; 12" x 12" size and 1/8" thick; Color as selected; as specified as a basis of design only. Equivalent products by Mannington and Tarkett will be considered. Equivalent tiles must be approved in writing prior to submission of bid.
- B. Cove Base: 4" conforming to FS SS-W-40 vinyl plastic.
- C. Edge Strips: beveled type; smooth finish; matching color selected.
- D. Sub-Floor Filler: leveling compound.
- E. Primers and Adhesives: waterproof, of types recommended by resilient flooring manufacturer for specific materials.
- F. Floor Finish/Wax: Floor finish will be provided by East Hartford Public Schools.
- G. Manufacturers: materials of the following manufacturers are acceptable as applicable:
 - 1. Armstrong Excelon VCT (Imperial Texture)

PART 3 EXECUTION

3.1 PREPARATION

- A. Inspect site and examine existing condition.
- B. Ensure floor surfaces are smooth and flat with maximum variation of 1/8" in 10 feet.
- C. Ensure concrete floors are dry (maximum 7% moisture content) and exhibit negative alkalinity, carbonization or dusting.
- D. Maintain maximum 70°F air temperature at flooring installation area for three days prior to, during and for 24 hours after installation.
- E. Store flooring materials in area of application. Allow three days for materials to reach equal temperature as area.
- F. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- G. Clean floor and apply, trowel and float filler to leave smooth, flat hard surface. Prohibit traffic until filler is cured.

3.2 INSTALLATION

- A. Open floor tile cartons, enough to cover each area, and mix tile to ensure shade variations do not occur within any one area.
- B. Clean substrate. Spread cement evenly in quantity recommended by manufacturer to ensure adhesion over entire area of installation. Spread only enough adhesive to permit installation of flooring before initial set.
- C. Set flooring in place, press with heavy roller to ensure full adhesion.
- D. Lay flooring with joints and seams parallel to building lines to produce minimum number of seams.
- E. Install with minimum tile width full size at room or area perimeter, to square grid

pattern with all joints aligned, with grain parallel for all units and parallel to length of room, unless otherwise indicated.

- F. Terminate resilient flooring at center line of door openings where adjacent floor finish is dissimilar.
- G. Install edge strips at unprotected or exposed edges where flooring terminates.
- H. Scribe flooring to walls, columns, cabinets, floor outlets and other appurtenances to produce tight joints.
- I. For installation of base, fit joints tight and vertical; install straight and level.

3.3 CLEANING AND PROTECTION

- A. Prohibit traffic from floor finish for 48 hours after installation.
- B. Remove excess adhesive from floor, base and wall surfaces without damage.
- C. Clean floor and base surfaces in accordance with manufacturer's recommendations and apply three (3) coats of floor finish (Floor finish to be provided by owner).

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. Install carpeting
 - 1. Review the drawings and all other sections of the specifications for requirements therein affecting the work of this section.
 - 2. Provide and install carpeting and accessories in Office 110 & Nurse Room 108-1; as described in this specification as directed by East Hartford Public Schools.
 - 3. Trim all doors to adjust for new carpet height (where applicable).

1.2 QUALITY ASSURANCE

- A. Installer Qualifications: Firm with not less than two years of experience in installation of commercial carpeting of type, quantity and installation method similar to work of this section.
- B. Manufacturer's Qualifications: Firm (carpet mill), with not less than five years production experience with carpet similar to types specified in this section, and whose published product literature clearly indicates general compliance of products with requirements of this section.
- C. General Terminology/Information Standard: Refer to current edition of "Carpet Specifier's Handbook" by The Carpet and Rug Institute for definitions of terminology not otherwise defined herein, and for general recommendations and information.
- D. Flame/Smoke-Resistance Standards: Where ratings are indicated for carpet or for carpet-plus-pad installations, provide materials complying with ratings as indicated herein.
- D. Sound Absorption Standard: Where a noise-reduction coefficient (NRC) rating is indicated for installed carpet, provide materials complying with ratings as indicated herein.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's complete technical data for each type of carpet and accessory required.

- B. Shop Drawings: Submit carpet layout and seaming drawings, clearly indicating carpet directions, locations and methods of joining seams, and locations and types of edge strips. Indicate columns, doorways, enclosing wall/partitions, built-in cabinets, furniture and locations where cut-outs are required in carpet.
- C. Samples: Submit samples of each carpet required and samples of each type of exposed edge stripping.
- D. Certification: Submit manufacturer's certification stating that carpet materials furnished comply with specified requirements.
- E. Maintenance Data: Submit manufacturer's printed maintenance recommendations, including methods and frequency recommended for maintaining carpet in optimum conditions under anticipated traffic and use conditions.

1.4 EXTRA STOCK

- A. None Required.

1.5 PRODUCT DELIVERY AND STORAGE

- A. Deliver carpeting materials in original mill protective wrapping with mill register numbers and tags attached. Store inside, in well-ventilated area, protected from weather, moisture and soiling.

1.6 WARRANTY

- A. 10-year Wear, Tuft Bind, Static, Edge Ravel, Stain Removal, Run Resistance Warranty. Provide special project warranty, signed by Contractor, Installer and Manufacturer agreeing to repair or replace defective materials and workmanship or carpeting work during ten-year warranty period following substantial completion. Attach copies of product warranties.

1.7 REFERENCES

- A. CRI 104 - (1994) Commercial Carpet Installation
- B. 16 CFR 1630 - Standard for the Surface Flammability of Carpet and Rugs

PART 2 PRODUCTS

2.1 MANUFACTURERS

Subject to compliance with requirements, provide products of the following:

ANNA E. NORRIS ELEMENTAY SCHOOL
State Project No. 043-0252CV

- A. Shaw, Color Wave: Mix, Style: Catalyst, # Size: 24" X 24" Tile #59579; as specified as a basis of design only. Equivalent products by Interface and Milliken will be considered. Equivalent carpet tiles must be approved in writing prior to submission of bid.

2.2 CARPET CONSTRUCTION

- A. Carpet construction should be determined by East Hartford Public Schools.
- B. Color and Pattern: As directed and specified by the owner, unless otherwise advised.
- C. Carpet Flammability:
 - 1. Pill Test: Provide carpet which passes the flammability test of DOC-FF-1-70 and is in accordance with 16 CFR 1630.
 - a. Meets NFPA Class 1 when tested under ASTM E-648 Glue Down. NBS smoke chamber NFPA-258: 450 or less, flaming mode.
- D. Carpet and adhesives shall bear the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) label. Carpet type bearing the label will indicate that the carpet has been tested and meets the criteria of the CRI IAQ Carpet Testing Program, and minimizes the impact on indoor air quality.

2.3 CARPET ACCESSORIES

- A. Carpet Edge Guard, Metallic: Extruded aluminum bend-down type edge guard; with concealed gripper teeth and minimum 1-1/2-inch wide punched anchorage flange and minimum 5/8-inch wide face flange. Provide in hammered texture with anodized aluminum finish of colors selected by the owner from among standard colors available within the industry. Carpet edge guard shall be painted where indicated herein.
- B. Installation Adhesive: Water-resistant, non-staining releasable type as recommended by carpet manufacturer, and which complies with flammability requirements for installed carpet. Adhesive shall be suitable for installation to each of the substrates indicated herein.
- D. Seaming Cement: Seaming adhesive or similar product recommended by carpet manufacturer, for taping seams and buttering cut edges at backing to form secure seams and prevent pile loss at seams.

- D. Miscellaneous Materials: As recommended by manufacturers of carpet and other carpeting products, and selected by installer to meet project circumstance and requirements.
- E. Cove Base: Match existing base in all areas.

PART 3 EXECUTION

3.1 PRE-INSTALLATION REQUIREMENTS

- A. Examine substrates for moisture content, remnant mastic remover and other conditions under which carpeting is to be installed. Repair minor holes, cracks, depressions or rough areas using material recommended by carpet or adhesive manufacturer. Slab conditions shall be approved by the owner prior to carpet system installation. Do not proceed until unsatisfactory conditions have been corrected.
- B. Clear away debris and scrape up cementitious deposits from surfaces to receive carpeting; vacuum-clean immediately before installation. Check concrete surfaces to ensure no “dusting” through installed carpet; apply sealer where required to prevent dusting.
- C. Sequence carpeting with other work so as to minimize possibility of damage and soil of carpet during remainder of construction period.
- D. Areas in which carpeting shall be installed shall be maintained at a temperature above 60 degrees F for 2 days before installation, during installation, and for 2 days after installation.

3.2 INSTALLATION

- A. General
 - 1. Comply with manufacturer’s instructions and recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doors, center seams under doors; do not place seams in traffic direction at doorways.
 - 2. Extend carpet under open-bottomed obstructions and under removable flanges and furnishings, and into alcoves of each space.
 - 3. Provide cut-outs where required, and bind cut edges properly where not concealed by protective edge guards or overlapping flanges.

4. Install carpet edge guard where edge of carpet is exposed, including walls, benches and platforms; anchor guards to substrate.
5. Expansion Joints: Do not bridge building expansion joints with continuous carpeting; provide for movement.

B. Glue-Down Installation

1. Fit sections of carpet into each space prior to application of adhesive. Trim edges and butter cuts with seaming cement.
2. Apply adhesive uniformly to substrate in accordance with manufacturer's instructions. Butt carpet edge tightly together to form seams without gaps. Roll entire carpet area lightly to eliminate air pockets and ensure uniform bond. Remove adhesive promptly from face of carpet.

C. Miscellaneous Installations

1. Benches and Platforms: Install by secure method, recognized to be durable and safe. Conceal edges and avoid making seams in areas of high wear. Match adjoining carpet installation in every way possible.

3.3 CLEANING AND PROTECTION

- A. Remove and dispose of debris and unusable scraps.
- B. Vacuum floor carpet using commercial machine with face-beater element. Remove spots and replace carpet where spots cannot be removed. Remove any protruding face yarn using sharp scissors.
- C. Advise the owner of the protection methods and materials needed.
- E. Maintenance Materials: Deliver specified overrun (if any) and usable scraps of carpet to owner's designated storage space, properly packaged (paper wrapped) and identified. Usable scraps are defined to include roll ends of less than 9'0" length, and pieces of more than 3 square feet and more than eight inches wide. Dispose of smaller pieces as "construction waste".
- E. Repairing: Return to installation after approximately six months of occupancy and use; check carpet installation in each space, repair faults in glue-down installation, in seaming, trim and adjust carpeting at edges.

END OF SECTION

FLOORING ABATEMENT AND REPLACEMENT PROJECT

**ANNA E. NORRIS ELEMENTARY SCHOOL
40 REMINGTON ROAD
EAST HARTFORD, CT 06108**

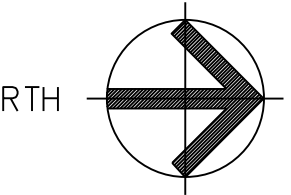
**SDE PROJECT NUMBER 043-0252CV
MARCH 8, 2024**

**TRC ENVIRONMENTAL CORPORATION
21 GRIFFIN RD NORTH
WINDSOR, CT 06095**

Certifications of Local Approval:		
I certify that I have local jurisdiction over the State Building Code and that the plans and project manual dated <u>March 8, 2024</u> for the above referenced project comply with all applicable building codes.		
<u>Milton Gregory Grew</u>	_____	_____
Local Building Official's Name	Signature	Date
I certify that I have local jurisdiction over the State Fire Safety Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable fire codes.		
<u>John Felow</u>	_____	_____
Local Fire Marshal's Name	Signature	Date
I certify that I have local jurisdiction over the State Health Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable health codes.		
<u>Laurence Burnsed, MPH</u>	_____	_____
Local Health Official's Name	Signature	Date
I certify that I have local jurisdiction over Section 504 of the Rehabilitation Act of 1973 , and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated _____ for the above referenced project comply with all applicable accessibility codes.		
<u>Tyren Harris</u>	_____	_____
Local Federal 504 Official's Name	Signature	Date

INDEX OF DRAWINGS

NO.	TITLE
T-1 HAZ-001	TITLE SHEET ASBESTOS ABATEMENT AND RELATED WORK FIRST FLOOR



STATE PROJECT
NO. 043-0252 CV



DESCRIPTION	DATE	BY

FLOORING ABATEMENT AND REPLACEMENT PROJECT
ANNA E. NORRIS ELEMENTARY SCHOOL
TITLE SHEET
40 REMINGTON ROAD
EAST HARTFORD CT 06108

GK	RRH	EP
DESIGNED	DRAWN	CHECKED
SCALE		
DATE MARCH 8, 2024		
PROJECT NO. 569233		
DRAWING NO. -		

T-1

LEGEND OF SYMBOLS

 = ACM FLOOR TILE/MASTIC

GENERAL NOTES (Refer to Section 02080)

Work Area 1 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic (CB2)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

Work Area 2 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic (CB2)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

Work Area 3 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic (CB2)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic (CB2) is presumed in all areas where ACM floor tile/mastic is being removed. Chemical methods of mastic removal are prohibited.

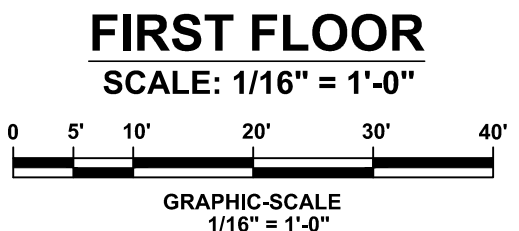
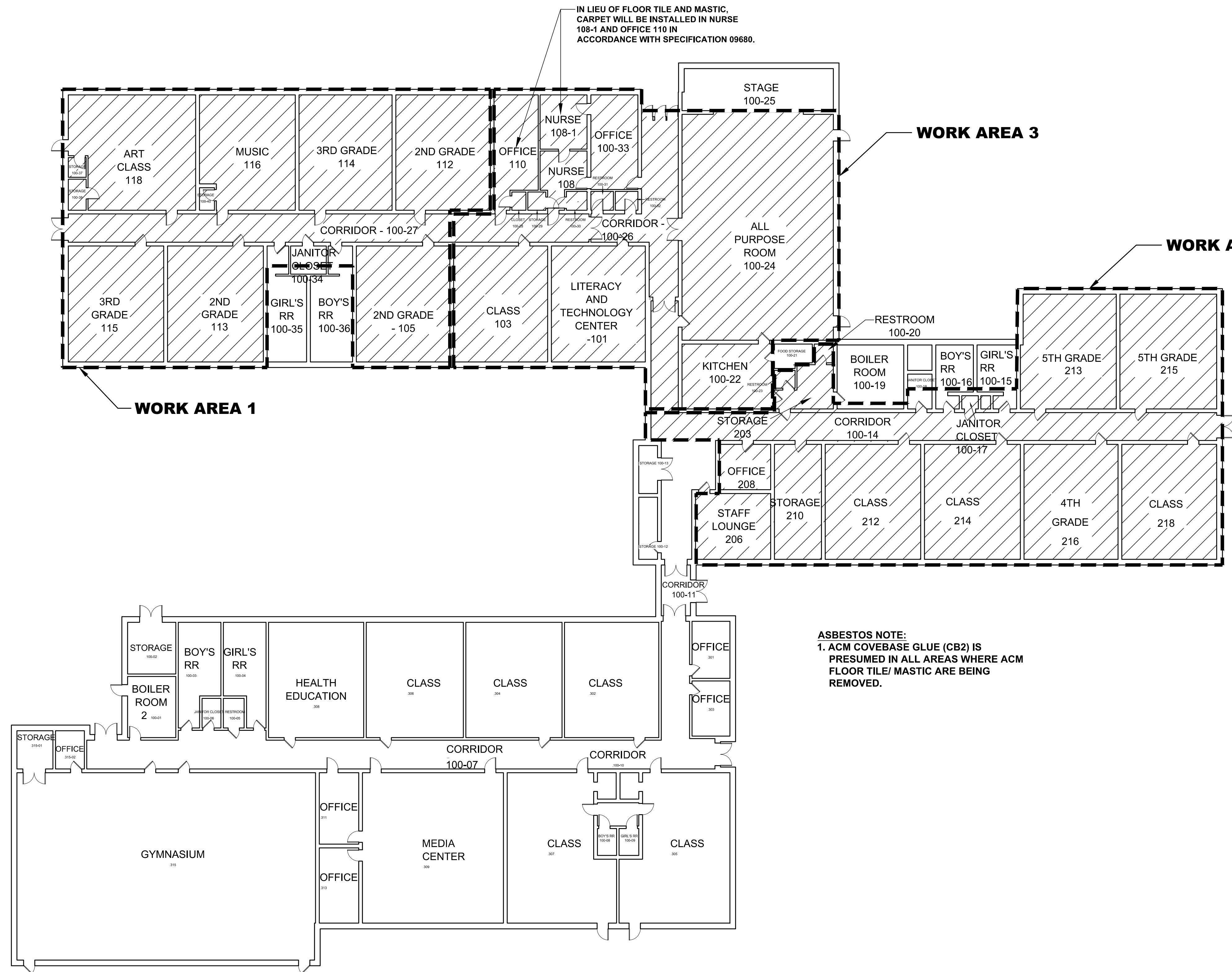
IN LIEU OF FLOOR TILE AND MASTIC, CARPET WILL BE INSTALLED IN NURSE 108-1 AND OFFICE 110 IN ACCORDANCE WITH SPECIFICATION 09680.

WORK AREA 3

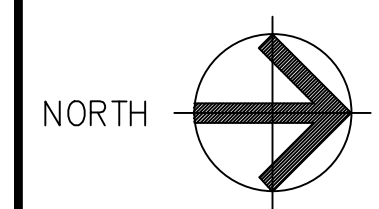
WORK AREA 2

WORK AREA 1

ASBESTOS NOTE:
1. ACM COVEBASE GLUE (CB2) IS PRESUMED IN ALL AREAS WHERE ACM FLOOR TILE/ MASTIC ARE BEING REMOVED.



NOTE: SCALE IS APPROXIMATE. FIELD VERIFY EXACT DIMENSIONS ON SITE.



STATE PROJECT NO. 043-0252 CV



DATE	BY	DESCRIPTION

FLOORING ABATEMENT AND REPLACEMENT PROJECT
 ANNA E. NORRIS ELEMENTARY SCHOOL
 ASBESTOS ABATEMENT AND RELATED WORK
 40 REMINGTON ROAD
 EAST HARTFORD CT 06108

GK	RRH	EP
DESIGNED	DRAWN	CHECKED
SCALE		
DATE MARCH 8, 2024		
PROJECT NO. 569233		
DRAWING NO.		

HAZ-001



LOCAL PLAN REVIEW AND SIGN-OFF ON “REQUEST FOR REVIEW OF FINAL PLANS” FORM SCG-042

EAST HARTFORD MIDDLE SCHOOL PARTIAL FLOORING ABATEMENT AND REPLACEMENT STATE PROJECT #043-0251 CV

DATE: *TBD*

SUBMITTED TO: *Public Building Commission*

SUBMITTED BY: *James Rovezzi, Acting Director of Facilities*

ENCLOSURES: *Project Manual (Plans, Specifications) and Form SCG-042 (working copy)*
State OSCGR Process Requirement

REASON:

BACKGROUND:

Plans and specifications for the East Hartford Middle School project were produced by TRC Environmental Corporation and combined into a “project manual” dated March 8, 2024. A cost estimate was produced by TRC Environmental Corporation on October 16, 2023. Prior to going out to bid, the final plans must be reviewed by the State DAS Office of School Construction Grants and Review after a “local review” is completed by select Town of East Hartford personnel.

All required “certifications of local approval” of the plans, specs, and estimate have been obtained, including the local Building Official, Fire Marshal, Health Official, local Federal 504 Official and Chairperson of the Public Building Commission. Form SCG-042 has been signed by these individuals.

This request will be presented to the BOE Facilities Committee and full Board of Education for approval on April 15, 2024. Once signed off by the district, the final certification/signature needed on Form SCG-042 is from the Chairperson of the Public Building Commission. Facilities will then submit the form to DAS OSCGR so they may conduct a final plan review prior to public bidding the construction phase of the project.

ACTION: *Accept or Reject*



DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME: East Hartford Public Schools	FACILITY NAME AND ADDRESS: East Hartford Middle School 777 Burnside Ave East Hartford, CT 06108	STATE PROJECT NUMBER: 043-0251 CV
		PHASE NUMBER: 1 of 1

Estimated date* to begin construction 06/12/24 Estimated date to complete construction 08/16/24

* NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	<u> / / </u>	<u> / / </u>
School Building Committee	<u> / / </u>	<u> / / </u>

We hereby certify that these **final plans and project manual(s)** as prepared for bidding and dated 3/8/2024, and the **professional cost estimate**, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 3/8/2024, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Tyron V. Harris

Chairperson's Name (Type or print)

Signature

Date

**

For the School Building Committee:

Henry J. Pawlowski Jr.

Chairperson's Name (Type or print)

Signature

Date

**

** Signature dates cannot precede the date on the submitted plans.

For the Project Architect/Engineering Firm:

TRC Companies, INC

Firm Name (Type or print)

Signature

860-298-6294

Telephone No.

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Thomas Anderson

Superintendent's Name (Type or print)

Signature

Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER \$10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 043-0251 CV

Project Name: East Hartford Middle School Flooring Abatement

Name of Contact Person: James Rovezzi	Telephone: 860-622-5952	Date: March 11,2024
--	----------------------------	------------------------

Certifications of Local Approval:		
I certify that I have local jurisdiction over the State Building Code and that the plans and project manual dated <u>March 8, 2024</u> for the above referenced project comply with all applicable building codes.		
<u>Milton Gregory Grew</u> Local Building Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Fire Safety Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable fire codes.		
<u>John Pelow</u> Local Fire Marshal's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Health Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable health codes.		
<u>Laurence Burnsed, MPH</u> Local Health Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over Section 504 of the Rehabilitation Act of 1973 , and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated _____ for the above referenced project comply with all applicable accessibility codes.		
<u>Tyron Harris</u> Local Federal 504 Official's Name	_____ Signature	_____ Date

- NOTES:** 1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.
- 2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.
- 3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
 The Office of School Construction Grants & Review
 450 Columbus Blvd., Suite 1503
 Hartford, CT 06103

PROJECT MANUAL

**EAST HARTFORD PUBLIC SCHOOLS
PARTIAL FLOORING ABATEMENT AND REPLACEMENT PROJECT AT
EAST HARTFORD MIDDLE SCHOOL
777 Burnside Avenue
East Hartford, CT 06108**

**Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, CT 06108**

State Project No. 043-0251 CV

TOWN OF EAST HARTFORD

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

Prepared by:
TRC Environmental Corporation
21 Griffin Road, North
Windsor, CT 06095

PROJECT MANUAL DIRECTORY

PROJECT: Partial Flooring Abatement and Replacement
East Hartford Middle School
777 Burnside Avenue
East Hartford, CT 06108

ALL QUESTIONS REGARDING THIS PROJECT MUST BE DIRECTED TO THE ARCHITECT

OWNER: East Hartford Public Schools
Department of Facilities
734 Tolland Street
East Hartford, CT 06108

ARCHITECT: TRC Environmental Corporation Office # (860)298-9692
21 Griffin Road, North
Windsor, Connecticut 06095
Gregory Kaczynski
Project Manager

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

	<u># OF PAGES</u>
Procurement and Contracting Requirements	3
Indemnification and Insurance Requirements	4
Affirmative Action / Equal Opportunity Policy Statement	1
AIA A104: Standard Abbreviated Form of Agreement Between Owner and Contractor.....	26
CHRO Contract Compliance Regulations.....	5

TECHNICAL SPECIFICATIONS

<u>DIVISION 1</u>	<u>GENERAL REQUIREMENTS</u>	<u>PAGES</u>
SECTION 01000	General Conditions	15
<u>DIVISION 2</u>	<u>SITE WORK</u>	
SECTION 02080	Asbestos Abatement.....	35
<u>DIVISION 3-8</u>	Not Used	
<u>DIVISION 9</u>	<u>FINISHES</u>	
SECTION 09650	Floor Tile Replacement.....	4
<u>DIVISION 10-16</u>	Not Used	

ATTACHMENTS

Hazardous Building Materials Investigation Report for East Hartford Middle School – March 8, 2022

DRAWINGS

T-1 – Title Sheet
HAZ-001 - Asbestos Abatement and Related Work (Basement & First Floor)
HAZ-002 – Asbestos Abatement and Related Work (Second Floor)

East Hartford Public Schools
Partial Flooring Abatement and Replacement at EH Middle School

Division 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00.1 Procurement Using DAS Contracts

Project will be constructed using contractors that are on the Statewide CT DAS Contract as follows (to obtain minimum 3 quotes per work classification):

Work Classification 1: Abatement of existing floor tile (per project specification)

Use: Asbestos Abatement Contract #DAS-20PSX0154

Work Classification 2: Supply and Install New Vinyl Composition Floor tile (per project Specifications)

Use: Flooring Contract #DAS-20PSX0088

00.2 Requirements for Procuring Requests for Quotes with DAS Contractors:

Prevailing Wage: Estimated costs for both work classifications combined above are expected to reach the thresholds requiring prevailing wage rates to be applied to this project. Contractors shall comply with section 31-57f of the CT General Statutes.

CHRO Compliance: This project is funding using CT State Grant funds therefor all applicable requirements will be adhered to by contractors. Compliance with CONN. Gen. STAT. 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f inclusive, as amended by June 2015 Special Session Public Act 15-5(See CHRO attachment included in this project manual)

Insurance Requirements: Contractors are required to agree to and provide all insurance and indemnification requirements as established by the East Hartford Board of Education. (See Indemnification and Insurance Requirements).

Project Documents: Contract documents for this project consist of: 1.) Construction drawings dated: March 8, 2024, and Specifications dated: March 8, 2024 developed by TRC Environmental. Contractors will use these documents to develop their quotes. These documents serve as the “Statement of Work” (SOW)

Dates for Construction: Start date of construction is expected to be **June 12, 2024** (barring any unforeseen events which may cause delays) and must be completed by **August 16th, 2024**. Contractors quotes will be applicable to cover the dates of construction.

Work Hours: Normal work hours shall be between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, excluding Federal and State recognized holidays, unless alternate hours are agreed upon by Facilities and the Contractor(s) in writing. Any Services Performed outside the normal hours of work must be authorized in writing by Facilities prior to the commencement of such work.

AIA Document A104-2017: Contract will be the “Standard Abbreviated form of Agreement Between Owner and Contractor” top form the basis of the contract between EHPS and the contractor.

Payment Terms & Invoicing: Certified payment applications shall be used and when received by the 15th of the month will be paid by the 15th of the following month. If received on the above schedule, payment will be made within 30 days of receipt. Retainage will be 5%. These figures will be added to sections 4.1.3 and 4.1.4 of the resulting AIA A104 contract.

Licenses: Contractors must be properly licensed by the State of Connecticut

Payment Bond: A payment bond will be required by the contractor for the full contract amount.

Performance Bond: A performance bond will be required by the contractor for the full contract amount.

Pricing: DAS Contractors will submit quotes on their letterhead, noting the applicable State DAS Contract #, and noting the basis of the work shall be in accordance to the plans and specification for that project, using the applicable pricing schedule as indicated in the associated DAS contract.

Purchase Orders: Purchase order(s) will be issued only after approval from the East Hartford Board of Education. No work shall begin until the purchase order has been assigned to the contractor.

Site Visit: Contractor(s), upon receipt of the project plans and specifications, shall schedule a site visit with EHPS Facilities to view existing conditions of the job site at the school. Contractor(s) shall take their own field measurements to determine the accuracy of all information in the plans. EHPS shall not be responsible for the accuracy of any measurements required to Perform the Services. Contractor(s) will be accompanied by an authorized Facilities representative during all site visits. Site visits can be scheduling by calling 860-622-5952

Warranty: Contractor(s) shall warranty all Services against defects and workmanship including all materials and labor for a period of one (1) year from the acceptance date of Service provided (the “Warranty Period”). The warranty must include the full cost of parts, materials, labor, packaging, handling, shipping and other costs incurred to repair the defective Services, at no charge to East Hartford Public Schools. Contractor(s) shall replace and repair any defective materials and parts during the Warranty Period. If any part installed under this **Warranty (Cont.):** Contract fails or does not function properly due to any fault in material or workmanship, Contractor(s) shall, upon notice from the East Hartford Public Schools, proceed to repair or replace the faulty item within twenty-four (24) hours or as mutually agreed, at no

charge to the EHPS. Contractor(s) shall be responsible for all aspects of warranty administration and shall ensure that Services are Performed according to warranty procedure. Manufacturers material warranties will apply separately as required and will carry their own warranty periods.

Note: Section 00.2 above is in addition to the applicable DAS contract language and is intended to clarify terms and conditions of this particular project. In cases of dispute the DAS Contract will supersede.



**East
Hartford
Public
Schools**

East Hartford Board of Education



INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES

A. INDEMNIFICATION

BIDDERS AND PROPOSERS ARE REQUIRED TO AGREE TO THE FOLLOWING INDEMNIFICATION LANGUAGE BY NOTARIZING BELOW

To the fullest extent permitted by law, THE AWARDED BIDDER/PROPOSER agrees on behalf of itself and its successors and assigns, covenants and agrees at its sole cost and expense, to protect, defend, indemnify, release and hold the East Hartford Board of Education, Town of East Hartford, its agents, servants, officials, employees, volunteers and members of its boards and commissions (Collectively the “Board and Town of East Hartford”), harmless from and against any and all Losses (defined below) imposed upon or incurred by or asserted against the Board and Town of East Hartford by reason of bodily injury, personal injury, death, or property damage of whatsoever kind or nature, to any individuals or parties (including, but not limited to the Board and Town of East Hartford, the Awarded Bidder/Proposer, or any other third party) arising out of or resulting from, or alleged to arise out of or arise from Awarded Bidder’s/Proposer’s performance of its work under the contract, but only to the extent such Losses are attributable to the negligent or intentional act, error or omission of the Awarded Bidder/Proposer or any person or organization employed or engaged by Awarded Bidder/Proposer to perform all or any part of the contract. The term “Losses” includes any losses, damages, costs, fees, expenses, claims, suits, judgments, awards, liabilities (including, but not limited to, strict liabilities), obligations, debts, fines, penalties, charges, amounts paid in settlement, foreseeable and unforeseeable consequential damages, litigation costs, attorneys’ fees, expert’s fees, and investigation costs, of whatever kind or nature, and whether or not incurred in connection with any judicial or administrative proceedings, actions, claims, suits, judgments or awards.

Upon written request by the Board and Town of East Hartford, the Awarded Bidder/Proposer shall defend and provide legal representation to the Board and Town of East Hartford with respect to any of the matters referenced above. Notwithstanding the foregoing, the Board and Town of East Hartford may, in its sole and absolute discretion, engage its own attorneys and other professionals to defend or assist it with respect to such matters and, at the option of the Board and Town of East Hartford, its attorneys shall control the resolution of such matters. Upon demand, the Awarded Bidder/Proposer shall pay or, in the sole and absolute discretion of the Board and Town of East Hartford, reimburse, the Board and Town of East Hartford for the payment of reasonable fees and disbursements of attorneys and other professionals in connection with this contract.

THE BOARD and TOWN OF EAST HARTFORD WILL NOT AGREE TO INDEMNIFY THE AWARDED BIDDER/PROPOSER; SUBCONTRACTOR(S); OR INDEPENDENT CONTRACTOR(S)

STATE OF CONNECTICUT
COUNTY OF:

Signature _____

Name: _____

Company Name: _____

SEAL HERE:

Address: _____

Date: _____

Subscribes and Sworn to before me on this _____ day of _____, 202__

Notary Public _____

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

B. INSURANCE

NOTE: CERTIFICATE OF INSURANCE WILL BE REQUIRED UPON AWARD AND PRIOR TO START OF WORK OR ISSUANCE OF PURCHASE ORDER

1. GENERAL REQUIREMENTS

The AWARDED BIDDER/PROPOSER shall be responsible for maintaining insurance coverage in force for the life of this contract of the kinds and adequate amounts to secure all of the AWARDED BIDDER/PROPOSER'S obligations under this contract with an insurance company(ies) with an AM Best Rating of A-VII or better licensed to write such insurance in the State of Connecticut and acceptable to the Board and Town of East Hartford Additional Insured: The East Hartford Board of Education and the Town of East Hartford, its officials, employees, volunteers, boards and commissions must be included as an Additional Insured on the AWARDED BIDDER/PROPOSER'S Insurance Policies (except Workers' Compensation and Professional Errors & Omissions). Evidence of this must be provided upon inception of this contract and upon renewal of insurance by the AWARDED BIDDER/PROPOSER to the Board and Town of East Hartford in the form of language on a Certificate of Insurance as well as a policy endorsement.

The AWARDED BIDDER/PROPOSER shall provide the Board and Town of East Hartford with a Certificate(s) of Insurance signed by an authorized representative of the insurance company(ies) prior to the performance of this contract describing the coverage and providing that the insurer shall give the Board and Town of East Hartford written notice at least thirty (30) days in advance of any termination, expiration, or any and all changes in coverage. Such insurance or renewals or replacements thereof shall remain in force during the AWARDED BIDDER/PROPOSER'S responsibility under this contract. Failure to provide or maintain any of the insurance coverage required herein shall constitute a breach of the Contract.

2. SPECIFIC REQUIREMENTS:

a) Commercial General Liability Insurance

The AWARDED BIDDER/PROPOSER shall carry Commercial General Liability Insurance (broad form coverage) insuring against claims for bodily injury, property damage, personal injury and advertising injury that shall be no less comprehensive and no more restrictive than the coverage provided by Insurance Services Office (ISO) form for Commercial General (CG 0001 04/2013). By its terms or appropriate endorsements such insurance shall include the following coverage, to wit: Bodily Injury, Property Damage, Fire Legal Liability (not less than the replacement value of the portion of the premises occupied), Personal & Advertising Injury, Blanket Contractual, Independent Contractor's, Premises Operations, Products and Completed Operations (for a minimum of two (2) years following Final Completion of the Project). Any deviations from the standard unendorsed form will be noted on the Certificate of Insurance.

Type of Coverage:	Occurrence Basis
Minimum Amount of Coverage:	\$1,000,000 per occurrence \$2,000,000 aggregate
Policy Period:	Annual Policy

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

b) Workers' Compensation and Employer's Liability Insurance

The AWARDED BIDDER/PROPOSER shall provide Statutory Workers' Compensation Insurance as required by the State of Connecticut, including Employer's Liability.

Amount of Coverage: Coverage A:	Statutory
Coverage B (Employer Liability):	\$500,000 Each Accident
	\$500,000 Disease, Policy Limit
	\$500,000 Disease, Each Employee

c) Commercial Automobile Liability Insurance

The AWARDED BIDDER/PROPOSER shall carry Commercial Automobile Liability Insurance insuring against claims for bodily injury and property damage and covering the ownership, maintenance or use of any auto or all owned/leased and non-owned and hired vehicles used in the performance of the Work, both on and off the Project Site, including loading and unloading. The coverage should be provided by Insurance Services Office form for Commercial Auto Coverage (CA CA0001 10/2013) or equivalent. "Auto" (symbol 1 or equivalent) is required. Any deviations from the standard unendorsed form will be noted on the Certificate of Insurance.

Type of Coverage:	Occurrence Basis
Minimum Amount of Coverage:	\$1,000,000 combined single limit
Policy Period:	Annual Policy

d) Umbrella Liability Insurance

The AWARDED BIDDER shall carry an umbrella liability insurance policy of **\$5,000,000**.

3. PROFESSIONAL SERVICE CONTRACTOR REQUIRMENTS
(e.g., Architects, Engineers, et al.)

The AWARDED BIDDER/PROPOSER shall carry Errors & Omissions coverage in the **minimum** amount \$1,000,000 per claim/\$1,000,000 annual aggregate for all professional services contracts. If the insurance coverage is written on a Claims-Made basis, an extended reporting period of at least 3 years after substantial completion of the project is required. Increased coverage limits may be required based on the scope, price and duration of the work to be performed. The East Hartford Board of Education or Town of East Hartford will inform the **AWARDED BIDDER/PROPOSER** as to the required limits for this insurance as soon as practicable, and has sole discretion of the limits to be required.

East Hartford Board of Education

INDEMNIFICATION AND INSURANCE REQUIREMENTS FOR
CONSTRUCTION, PROFESSIONAL OR LABOR SERVICES
(cont'd)

4. SUBCONTRACTOR REQUIREMENTS:

The AWARDED BIDDER/PROPOSER shall require all subcontractors and independent contractors to carry the coverages set forth in section B. INSURANCE and will obtain appropriate Certificates of Insurance before the subcontractors and independent contractors are permitted to begin work.

The AWARDED BIDDER/PROPOSER shall require that East Hartford Board of Education and The Town of East Hartford, its officials, employees, volunteers, boards and commissions be included as an Additional Insured on all subcontractors and independent contractors' insurance (except Workers' Compensation and Professional Errors & Omissions) before permitted to begin work.

The AWARDED BIDDER/PROPOSER and all subcontractors and independent contractors and their insurers shall waive all rights of subrogation against the East Hartford Board of Education and Town of East Hartford, and its officers, agents, servants and employees for losses arising from work performed by each on this contract.

**THE EAST HARTFORD BOARD OF EDUCATION OR TOWN OF EAST HARTFORD
RESERVES THE RIGHT TO AMEND THE AMOUNTS OF COVERAGE REQUIRED AND
TYPE OF COVERAGE PROVIDED BASED ON THE FINAL AGREED UPON SCOPE OF
SERVICES**



AFFIRMATIVE ACTION / EQUAL OPPORTUNITY POLICY STATEMENT

East Hartford Public Schools is an Equal Opportunity Employer and will not transact business with firms that are not in compliance with all Federal and State Statutes and Executive Orders pertaining to non-discrimination.

This form is required to be filled in (enter company name above lines below), signed and returned with any Invitation to Bid, Request for Proposal, or other public solicitation document in order to transact any business with East Hartford Public Schools.

_____ will not make employment decisions (including decisions related to hiring, assignment, compensation, promotion, demotion, disciplinary action and termination) on the basis of race, color, religion, age, sex, marital status, sexual orientation, national origin, alienage, ancestry, disability (including pregnancy), genetic information, veteran status or gender identity or expression, except in the case of a bona fide occupational qualification.

It is the policy of _____ that any form of discrimination or harassment on the basis of race, religion, color, national origin, alienage, sex, sexual orientation, marital status, age, disability (including pregnancy), genetic information, veteran status or gender identity or expression, or any other basis prohibited by state or federal law is prohibited.

_____ will also take affirmative action as called for by applicable laws and Executive Orders to ensure that minority group individuals, females, disabled veterans, recently separated veterans, other protected veterans, Armed Forces service medal veterans, and qualified disabled persons are introduced into our workforce and considered for promotional opportunities.

_____ will remain in full compliance with the above while under contract with or performing work for East Hartford Public Schools.

Signed

Name/Title of Company Officer

Date

Business Address

Phone



AIA[®] Document A104[™] – 2017

Standard Abbreviated Form of Agreement Between Owner and Contractor

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

1	THE WORK OF THIS CONTRACT
2	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
3	CONTRACT SUM
4	PAYMENT
5	DISPUTE RESOLUTION
6	ENUMERATION OF CONTRACT DOCUMENTS
7	GENERAL PROVISIONS
8	OWNER
9	CONTRACTOR
10	ARCHITECT
11	SUBCONTRACTORS
12	CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
13	CHANGES IN THE WORK
14	TIME
15	PAYMENTS AND COMPLETION
16	PROTECTION OF PERSONS AND PROPERTY
17	INSURANCE & BONDS
18	CORRECTION OF WORK
19	MISCELLANEOUS PROVISIONS
20	TERMINATION OF THE CONTRACT
21	CLAIMS AND DISPUTES

EXHIBIT A DETERMINATION OF THE COST OF THE WORK

ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.

- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3 Substantial Completion

§ 2.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check the appropriate box and complete the necessary information.)

- Not later than () calendar days from the date of commencement of the Work.
- By the following date:

§ 2.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 2.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 2.3, liquidated damages, if any, shall be assessed as set forth in Section 3.5.

ARTICLE 3 CONTRACT SUM

§ 3.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:

(Check the appropriate box.)

- Stipulated Sum, in accordance with Section 3.2 below
- Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below
- Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)

§ 3.2 The Stipulated Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.2.2 Unit prices, if any:

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 3.2.3 Allowances, if any, included in the stipulated sum:

(Identify each allowance.)

Item	Price
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§ 3.3 Cost of the Work Plus Contractor's Fee

§ 3.3.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.3.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price

§ 3.4.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.4.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4.3 Guaranteed Maximum Price

§ 3.4.3.1 The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed (\$), subject to additions and deductions by changes in the Work as provided in the Contract Documents.

This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

(Insert specific provisions if the Contractor is to participate in any savings.)

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4.3.3 Unit Prices, if any:

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 3.4.3.4 Allowances, if any, included in the Guaranteed Maximum Price:

(Identify each allowance.)

Item	Price
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§ 3.4.3.5 Assumptions, if any, on which the Guaranteed Maximum Price is based:

§ 3.4.3.6 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

§ 3.4.3.7 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 3.4.3.5. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 3.4.3.5 and the revised Contract Documents.

§ 3.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

ARTICLE 4 PAYMENT

§ 4.1 Progress Payments

§ 4.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 4.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 4.1.3 Provided that an Application for Payment is received by the Architect not later than the _____ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the _____ day of the _____ month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than _____ () days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 4.1.4 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold retainage from the payment otherwise due as follows:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment and any terms for reduction of retainage during the course of the Work. The amount of retainage may be limited by governing law.)

§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

%

§ 4.2 Final Payment

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a Guaranteed Maximum Price; and
- .3 a final Certificate for Payment has been issued by the Architect in accordance with Section 15.7.1.

§ 4.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 5 DISPUTE RESOLUTION

§ 5.1 Binding Dispute Resolution

For any claim subject to, but not resolved by, mediation pursuant to Section 21.5, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 21.6 of this Agreement
- Litigation in a court of competent jurisdiction

Other (*Specify*)

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.

ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor.

§ 6.1.2 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(*Insert the date of the E203–2013 incorporated into this Agreement.*)

§ 6.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 6.1.4 The Specifications:
(*Either list the Specifications here or refer to an exhibit attached to this Agreement.*)

Section	Title	Date	Pages
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§ 6.1.5 The Drawings:
(*Either list the Drawings here or refer to an exhibit attached to this Agreement.*)

Number	Title	Date
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§ 6.1.6 The Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are enumerated in this Article 6.

§ 6.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 Other Exhibits:
(Check all boxes that apply.)

- Exhibit A, Determination of the Cost of the Work.
- AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)
- The Sustainability Plan:

Title	Date	Pages
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Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents.)

ARTICLE 7 GENERAL PROVISIONS

§ 7.1 The Contract Documents

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 7.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

§ 7.3 The Work

The term “Work” means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.

§ 7.4 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect’s consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 7.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service

§ 7.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

§ 7.5.2 The Contractor, Subcontractors, Sub-subcontractors and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to the protocols established pursuant to Sections 7.6 and 7.7, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

§ 7.6 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 7.7 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party’s sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 7.8 Severability

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 7.9 Notice

§ 7.9.1 Except as otherwise provided in Section 7.9.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering Notice in electronic format such as name, title and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 7.9.2 Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 7.10 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

ARTICLE 8 OWNER

§ 8.1 Information and Services Required of the Owner

§ 8.1.1 Prior to commencement of the Work, at the written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 8.1.1, the Contract Time shall be extended appropriately.

§ 8.1.2 The Owner shall furnish all necessary surveys and a legal description of the site.

§ 8.1.3 The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 8.1.4 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

§ 8.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 8.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 15.4.3, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 21.

ARTICLE 9 CONTRACTOR

§ 9.1 Review of Contract Documents and Field Conditions by Contractor

§ 9.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 9.1.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.2, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 9.1.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 9.2 Supervision and Construction Procedures

§ 9.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

§ 9.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 9.3 Labor and Materials

§ 9.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 9.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 9.3.3 The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification.

§ 9.4 Warranty

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants

that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. All other warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 15.6.3.

§ 9.5 Taxes

The Contractor shall pay sales, consumer, use, and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 9.6 Permits, Fees, Notices, and Compliance with Laws

§ 9.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 9.6.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 9.7 Allowances

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Contractor's costs for unloading and handling at the site, labor, installation, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowance.

§ 9.8 Contractor's Construction Schedules

§ 9.8.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 9.8.2 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Architect.

§ 9.9 Submittals

§ 9.9.1 The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

§ 9.9.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

§ 9.9.3 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents or unless the Contractor needs to provide such services in order to carry out the Contractor's own responsibilities. If professional design services or certifications by a design professional are specifically required, the Owner and the Architect will specify the performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional. If no criteria are specified, the design

shall comply with applicable codes and ordinances. Each Party shall be entitled to rely upon the information provided by the other Party. The Architect will review and approve or take other appropriate action on submittals for the limited purpose of checking for conformance with information provided and the design concept expressed in the Contract Documents. The Architect's review of Shop Drawings, Product Data, Samples, and similar submittals shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. In performing such review, the Architect will approve, or take other appropriate action upon, the Contractor's Shop Drawings, Product Data, Samples, and similar submittals.

§ 9.10 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 9.11 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 9.12 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus material from and about the Project.

§ 9.13 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 9.14 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 9.15 Indemnification

§ 9.15.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

§ 9.15.2 In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 10 ARCHITECT

§ 10.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction, until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 10.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 10.3 The Architect will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.4 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 10.5 Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 10.6 The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

§ 10.7 The Architect will review and approve or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 10.8 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes, and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

§ 10.9 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

ARTICLE 11 SUBCONTRACTORS

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the Subcontractors or suppliers proposed for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The term “Separate Contractor(s)” shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner’s own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 12.2 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor’s activities with theirs as required by the Contract Documents.

§ 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a Separate Contractor because of delays, improperly timed activities, or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work, or defective construction of a Separate Contractor.

ARTICLE 13 CHANGES IN THE WORK

§ 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor, and Architect, or by written Construction Change Directive signed by the Owner and Architect. Upon issuance of the Change Order or Construction Change Directive, the Contractor shall proceed promptly with such changes in the Work, unless otherwise provided in the Change Order or Construction Change Directive.

§ 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor’s cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor’s monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

§ 13.3 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work.

§ 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

ARTICLE 14 TIME

§ 14.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing this Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 14.2 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 14.3 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 14.4 The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.6.3.

§ 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) changes ordered in the Work; (2) by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably

anticipatable, unavoidable casualties, or any causes beyond the Contractor's control; or (3) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

ARTICLE 15 PAYMENTS AND COMPLETION

§ 15.1 Schedule of Values

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price pursuant to Section 3.2 or 3.4, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Stipulated Sum or Guaranteed Maximum Price to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy required by the Architect. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 15.1.2 The allocation of the Stipulated Sum or Guaranteed Maximum Price under this Section 15.1 shall not constitute a separate stipulated sum or guaranteed maximum price for each individual line item in the schedule of values.

§ 15.2 Control Estimate

§ 15.2.1 Where the Contract Sum is the Cost of the Work, plus the Contractor's Fee without a Guaranteed Maximum Price pursuant to Section 3.3, the Contractor shall prepare and submit to the Owner a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the estimated Cost of the Work plus the Contractor's Fee.

§ 15.2.2 The Control Estimate shall include:

- .1 the documents enumerated in Article 6, including all Modifications thereto;
- .2 a list of the assumptions made by the Contractor in the preparation of the Control Estimate to supplement the information provided by the Owner and contained in the Contract Documents;
- .3 a statement of the estimated Cost of the Work organized by trade categories or systems and the Contractor's Fee;
- .4 a project schedule upon which the Control Estimate is based, indicating proposed Subcontractors, activity sequences and durations, milestone dates for receipt and approval of pertinent information, schedule of shop drawings and samples, procurement and delivery of materials or equipment the Owner's occupancy requirements, and the date of Substantial Completion; and
- .5 a list of any contingency amounts included in the Control Estimate for further development of design and construction.

§ 15.2.3 When the Control Estimate is acceptable to the Owner and Architect, the Owner shall acknowledge it in writing. The Owner's acceptance of the Control Estimate does not imply that the Control Estimate constitutes a Guaranteed Maximum Price.

§ 15.2.4 The Contractor shall develop and implement a detailed system of cost control that will provide the Owner and Architect with timely information as to the anticipated total Cost of the Work. The cost control system shall compare the Control Estimate with the actual cost for activities in progress and estimates for uncompleted tasks and proposed changes. This information shall be reported to the Owner, in writing, no later than the Contractor's first Application for Payment and shall be revised and submitted with each Application for Payment.

§ 15.2.5 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in the Control Estimate. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the Control Estimate and the revised Contract Documents.

§ 15.3 Applications for Payment

§ 15.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 15.1, for completed portions of the Work. The application shall be notarized, if required; be supported by all data substantiating the Contractor's right to payment that the Owner or Architect require; shall reflect retainage if provided for in the Contract Documents; and include any revised cost control information required by Section 15.2.4. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 15.3.2 With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 15.3.3 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.3.4 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

§ 15.4 Certificates for Payment

§ 15.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.4.3.

§ 15.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluations of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.4.3 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.4.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;
- .2 third-party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 15.4.4 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 15.4.3, in whole or in part, that party may submit a Claim in accordance with Article 21.

§ 15.5 Progress Payments

§ 15.5.1 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in a similar manner.

§ 15.5.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor or supplier except as may otherwise be required by law.

§ 15.5.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 15.5.4 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 15.6 Substantial Completion

§ 15.6.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.6.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.6.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.6.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 15.7 Final Completion and Final Payment

§ 15.7.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.7.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.7.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

§ 15.7.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 15.7.4 Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of the final Application for Payment.

ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

§ 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3. The Contractor may make a claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

§ 16.2 Hazardous Materials and Substances

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 16.2.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 16.2.3 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

ARTICLE 17 INSURANCE AND BONDS

§ 17.1 Contractor's Insurance

§ 17.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in this Section 17.1 or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the insurance required by this Agreement from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 18.4, unless a different duration is stated below:

§ 17.1.2 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than (\$) each occurrence, (\$) general aggregate, and (\$) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 9.15.

§ 17.1.3 Automobile Liability covering vehicles owned by the Contractor and non-owned vehicles used by the Contractor, with policy limits of not less than (\$) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 17.1.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 17.1.2 and 17.1.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 17.1.5 Workers' Compensation at statutory limits.

§ 17.1.6 Employers' Liability with policy limits not less than (\$) each accident (\$) each employee, and (\$) policy limit.

§ 17.1.7 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.8 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.9 Coverage under Sections 17.1.7 and 17.1.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.10 The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Section 17.1 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period required by Section 17.1.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy.

§ 17.1.11 The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ 17.1.12 To the fullest extent permitted by law, the Contractor shall cause the commercial liability coverage required by this Section 17.1 to include (1) the Owner, the Architect, and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's Consultants, CG 20 32 07 04.

§ 17.1.13 Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.1, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 17.1.14 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ 17.2 Owner's Insurance

§ 17.2.1 Owner's Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 17.2.2 Property Insurance

§ 17.2.2.1 The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed or materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section 17.2.2.2, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ 17.2.2.2 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section 17.2.2.1 or, if necessary, replace the insurance policy required under Section 17.2.2.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 18.4.

§ 17.2.2.3 If the insurance required by this Section 17.2.2 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ 17.2.2.4 If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 18.4, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ 17.2.2.5 Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Section 17.2.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by this Section 17.2.2. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ 17.2.2.6 Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.2.2, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 17.2.2.7 Waiver of Subrogation

§ 17.2.2.7.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by this Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 17.2.2.7 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 17.2.2.7.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 17.2.2.7.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 17.2.2.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements, written where legally required for validity, the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 17.2.3 Other Insurance Provided by the Owner

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

§ 17.3 Performance Bond and Payment Bond

§ 17.3.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract.

§ 17.3.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 18 CORRECTION OF WORK

§ 18.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed, or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.1.7.3 in Exhibit A, Determination of the Cost of the Work.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.6.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

ARTICLE 19 MISCELLANEOUS PROVISIONS

§ 19.1 Assignment of Contract

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 19.2 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.6.

§ 19.3 Tests and Inspections

Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 19.4 The Owner's representative:

(Name, address, email address and other information)

§ 19.5 The Contractor's representative:
(Name, address, email address and other information)

§ 19.6 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

ARTICLE 20 TERMINATION OF THE CONTRACT

§ 20.1 Termination by the Contractor

If the Architect fails to certify payment as provided in Section 15.4.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 20.2 Termination by the Owner for Cause

§ 20.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 20.2.2 When any of the reasons described in Section 20.2.1 exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 20.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 20.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 20.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Owner shall pay the Contractor for Work executed; and costs incurred by reason of such termination, including costs attributable to termination of Subcontracts; and a termination fee, if any, as follows:

(Insert the amount of or method for determining the fee payable to the Contractor by the Owner following a termination for the Owner's convenience, if any.)

ARTICLE 21 CLAIMS AND DISPUTES

§ 21.1 Claims, disputes, and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.11 and Sections 15.7.3 and 15.7.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation as a condition precedent to binding dispute resolution.

§ 21.2 Notice of Claims

§ 21.2.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the Architect within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 21.2.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the other party.

§ 21.3 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action against the other and arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in this Agreement, whether in contract, tort, breach of warranty, or otherwise, within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 21.3.

§ 21.4 If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 21.5 The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 21.6 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 21.7 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the

arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 21.8 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

§ 21.9 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 21.10 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 21.11 Waiver of Claims for Consequential Damages

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.11 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

(Printed name and title)

(Printed name and title)

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes___ No___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes___ No___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes___ No___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes___ No___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes___ No___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes___ No___	9. Does your company have a mandatory retirement age for all employees? Yes___ No___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes___ No___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes___ No___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes___ No___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number. _____

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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TABLE OF CONTENTS

<u>ARTICLE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
01006	THE DESIGN CONSULTANT, HIS STATUS AND DECISION	2
01007	EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE	2
01010	SUMMARY OF WORK	2
01012	PROJECT DOCUMENTS	2
01013	DRAWINGS FURNISHED	2
01015	CONTRACTOR'S USE OF PREMISES	2
01016	OCCUPANCY	3
01035	OVERTIME	3
01040	COORDINATION	3
01090	STANDARDS, CODES, AND SPECIFICATIONS	3
01100	SPECIAL PROJECT PROCEDURES	4
01121	SALVAGEABLE MATERIALS	5
01210	PRECONSTRUCTION CONFERENCE	5
01220	PROJECT MEETINGS	5
01310	CONSTRUCTION SCHEDULE	5
01341	SAMPLES	5
01400	QUALITY CONTROL	6
01410	TESTING LABORATORY SERVICES	6
01511	TEMPORARY ELECTRICITY AND LIGHTING	7
01513	TEMPORARY HEATING, COOLING, AND VENTILATING	7
01514	TEMPORARY TELEPHONE	7
01515	TEMPORARY WATER	8
01516	TEMPORARY SANITARY FACILITIES	8
01518	FIRE PROTECTION	8
01520	CONSTRUCTION EQUIPMENT	8
01530	BARRIERS AND ENCLOSURES	9
01535	PROTECTION	9
01540	SECURITY	10
01550	TRAFFIC WAYS	10
01569	CLEANING	10
01590	FIELD OFFICES AND SHEDS	11
01610	TRANSPORTATION AND HANDLING	11
01620	STORAGE AND PROTECTION	12
01710	FINAL CLEANING	12
01720	PROJECT RECORD DOCUMENTS	13
01740	WARRANTIES AND GUARANTEES	13
01741	INSURANCE	14
01742	INDEMNIFICATION	15

01006 THE DESIGN CONSULTANT, HIS STATUS AND DECISIONS

- A. The Design Consultant is TRC Environmental Corporation (TRC), 21 Griffin Road North, Windsor, Connecticut 06095, or his/their accredited representative, and is referred to in the Contract Documents as "Design Consultant" or "Design Consultants" or by pronouns which imply them.

01007 EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE

- A. The East Hartford Public Schools Representative is:

Mr. James Rovezzi
Acting Director of Facilities
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

01010 SUMMARY OF WORK

- A. The work includes removal of ACM (and related materials) described in Section 02080 and re-installation of flooring materials as described in Section 09650.

01012 PROJECT DOCUMENTS

- A. The Specifications and Drawings describe and illustrate the materials and labor necessary for the work of this Project.

01013 DRAWINGS FURNISHED

- A. The Contractor will be given a reasonable number of sets of the Contract Documents on or about the time of execution of the Contract, free of charge.

01015 CONTRACTOR'S USE OF PREMISES

- A. The Contractor shall confine his operations, including storage of apparatus, equipment and materials to the Contract limit lines as directed by the Design Consultant.
- B. The areas and/or spaces, including access, shall be maintained free and clear throughout contract term.

- C. Parking for Contractor's employees will be readily available at the School site.

01016 OCCUPANCY

- A. The Contractor shall cooperate with the Owner in scheduling operations to minimize conflict and to facilitate Owner usage of the facility. School will not be in session and no students will be in the building; however, other areas of the School will be partially occupied by staff during the work.

01035 OVERTIME

- A. Regular working hours shall consist of an 8-hour period established by the Design Consultant between 7:00 a.m. and 4:00 p.m., Monday through Friday, excluding holidays.
- B. Work outside regular hours shall be coordinated with the East Hartford Public Schools Representative and the Design Consultant. Requests for work outside regular hours, not indicated or specified, shall be submitted in writing to East Hartford Public Schools and the Design Consultant for approval a minimum of 72 hours prior to overtime work.
- C. The Contractor shall be responsible for all costs associated with additional services and fees required to perform work, not indicated or specified herein, during other than regular working hours.

01040 COORDINATION

- A. Coordinate work to assure efficient and orderly sequence of installation of construction elements.

01090 STANDARDS, CODES AND SPECIFICATIONS

- A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. References to standard specifications and codes refer to the editions current at the bid due date. References include their addenda and errata, if any, and shall be considered a part of these specifications as if they were printed herein in full.

- C. The manufacturers' standard warranties or guarantees shall apply when their products are used on this project.

01100 SPECIAL PROJECT PROCEDURES

- A. Prior to beginning work, the Design Consultant, East Hartford Public Schools Representative and Contractor shall make a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit a list which shall include all damaged areas not scheduled for repair under this contract and include photographs and video tapes as applicable.
- B. An emergency plan shall be developed by the Contractor prior to abatement initiation. Copies of the plan showing emergency exits and indicating emergency procedures shall be posted in the Clean Room of the Worker Decontamination Enclosure System.
- C. The Contractor shall ensure that all employees use proper respiratory protection during all phases of this project as designated by 29 CFR 1926.1101. Where there has been no prior air sampling (i.e., any prep work), the workers will be required to use respiratory protection until a statistically reliable measurement of personal air sampling can be ascertained to determine if any respiratory protection is required.
- D. The Contractor shall be solely responsible for initiating, maintaining and supervising all Federal, State and Local labor, health and occupational regulations, safety precautions and programs in connection with asbestos abatement work.
- E. The Contractor shall provide an asbestos trained supervisor who is on-site at all times that abatement operations are in progress. The designated supervisor shall be available at all times to consult with the Project Monitor or Design Consultant and shall not work inside the contained areas except for short periods of time. The supervisor may also be the designated Competent Person.
- F. The Contractor shall provide a supervisor who is on-site at all times while work is being performed. The designated supervisor shall submit details of his work experience to the East Hartford Public Schools Representative at the time of the Pre-Construction Meeting. The East Hartford Public Schools Representative will review the work experience of the designated supervisor and has the right to accept or reject the Contractor's choice of supervisor, based on the supervisor's expertise, experience and knowledge of work practices and work skills related to the rework required under this Contract.

01121 SALVAGEABLE MATERIALS

- A. There are no items scheduled to be salvaged in this project.

01210 PRECONSTRUCTION CONFERENCE

- A. The Design Consultant will organize a Preconstruction Conference and notify the parties concerned.

01220 PROJECT MEETINGS

- A. A schedule of regular project meetings will be established at the Preconstruction Conference.

01310 CONSTRUCTION SCHEDULE

- A. Start date shall be June 12, 2024 and completion date shall be August 16, 2024.
- B. The Contractor shall submit a proposed project schedule for approval at the time of the Preconstruction Conference.

01341 SAMPLES

- A. Submit samples of items where specifically required. Furnish information and data for items or materials offered as equals to those specified, to establish their equality.
- B. Mark Samples to Show:
1. Name and number of project.
 2. Name or trade, type, quality or grade and any further designation necessary to identify the items or materials.
 3. Manufacturer's or producer's name.
 4. Name of Contractor and Subcontractor, if any.
- C. Submit samples of such size and/or number sufficient to show quality, type, range of color, finish and texture.
- D. Furnished materials shall be equal to approved samples.

01400 QUALITY CONTROL

- A. Comply with all manufacturers' and association or trade instructions and specifications for storage and use of their products.
- B. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from Design Consultant before proceeding.
- C. When specified require manufacturer to provide qualified personnel to observe field conditions; installation; quality of workmanship; to test, adjust and balance equipment, as applicable.
- D. Where required by the Specifications, submit certificates to the Design Consultant executed by a responsible officer of the Manufacturer, warranting that the product meets or exceeds specified requirements.
- E. When required by the Specifications, submit manufacturers' data sheets, including instructions and recommendations.

01410 TESTING LABORATORY SERVICES

- A. East Hartford Public Schools will retain the services of a Project Monitor for protection of its interests and those using the building. Pre-abatement, during abatement, and post-abatement sampling will be conducted as deemed necessary.
- B. Owner will pay for the services of an independent testing laboratory to perform inspections, tests, and other services required by the Specifications except as noted below.
 - 1. OSHA required personal air monitoring of Contractors personnel.
- C. Reports of test will be submitted to the Design Consultant indicating compliance or non-compliance with the specified standards and with the Contract Documents.
- D. Notify Design Consultant and Testing Laboratory 24-hours before expected time of testing.
- E. Make arrangement with testing laboratory and pay for additional tests if for Contractor's convenience.

- F. The Contractor shall bear the expense of any failed tests including retests, as required to obtain approval.

01511 TEMPORARY ELECTRICITY AND LIGHTING

- A. The Contractor may connect to existing service, provide branch wiring and distribution boxes located to provide power and lighting by construction grade extension cords. Utilize ground fault interrupters according to asbestos abatement regulations. Owner will pay the cost of energy used. Take measures to conserve energy. Provide lighting for construction operations. At the termination of construction, return the facilities to their original condition.

01513 TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness and, in any event, between October 15 and April 15. Maintain during said period or periods until final completion of the Contract. Windows, doors, ventilators, and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations, and to protect materials and finishes from damage by temperature or humidity. Costs shall be paid by the Contractor. See individual Sections for temperature/humidity limits.
- B. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owners approval. Coordinate the use of existing facilities with the Owner. Provide additional temporary extensions and units to satisfy the criteria given in the preceding paragraph. The Owner will pay the cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition.
- C. Temporary heating shall comply with OSHA regulations, and other applicable codes, statutes, rules and regulations.

01514 TEMPORARY TELEPHONE

- A. The Contractor shall use their own cell phones for telephone service.

01515 TEMPORARY WATER

- A. The Contractor may connect to existing facilities through an approved backflow prevention device; extend branch piping with outlets so that water is available by use of hoses. The Owner will pay for water used. The Contractor shall not waste water or use faulty equipment. The Contractor shall provide, at his own expense, all connections, extensions and other apparatus required for use of such services. Upon completion of the Contract, the Contractor shall disconnect temporary extensions and return utility to its original condition.

01516 TEMPORARY SANITARY FACILITIES

- A. Designated existing toilets may be used during construction. It is the responsibility of the Contractor to maintain the facilities in a clean and sanitary condition and return them to their original condition after use. No loitering will be permitted in these areas.

01518 FIRE PROTECTION

- A. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. No flammable material shall be stored in the structure. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of necessary fire protection measures.

01520 CONSTRUCTION EQUIPMENT

- A. The Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to ensure convenience and safety in the execution of the Contract except where this is specified in any Specification Section. All such items shall meet the approval of the Design Consultant but responsibility for design, strength, and safety shall remain with the Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the A.G.C. and the standards of the State Labor Department.

- B. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.

01530 BARRIERS AND ENCLOSURES

- A. Provide barriers to prevent public entry to construction areas and to protect existing facilities from damage by construction operations.
- B. Provide covered walkways as required for public access to existing buildings.
- C. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, materials dumping, chemically injurious materials, puddling or running water.
- D. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- E. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract.
- F. Temporary exit signs and building evacuation plans shall be prominently displayed throughout the affected areas of the building. Location of emergency exits and building evacuation plan shall be submitted for approval prior to starting.

01535 PROTECTION

- A. Protect buildings, equipment, furnishings, grounds, and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to East Hartford Public Schools. The Contractor shall leave the site in a condition equal to or better than prior to start of work.
- B. Provide protective coverings and barricades necessary to prevent damage or physical injury. The Contractor shall be held responsible for, and must make good at his own expense, any water damage or any other type of damage due to improper coverings. Protect at all times the public and building personnel from injury.

- C. Provide temporary protection for installed products. Control traffic in the immediate area to minimize damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.
- E. Provide temporary barriers to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.

01540 SECURITY

- A. Provide security program and facilities to protect work, existing facilities, and Owner's operations from unauthorized entry, vandalism and theft. Coordinate with Owner's security program.
- B. The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.

01550 TRAFFIC WAYS

- A. The Contractor may use on site paved roads and parking areas, but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, construction operations, or in any other manner.
- B. Public roads and the existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.

01569 CLEANING

- A. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.

- C. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.
- D. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.
- E. Remove waste materials, debris and rubbish from the site and dispose of legally off-site. No scrap/debris shall remain inside the building or anywhere on site upon final acceptance of the project.

01590 FIELD OFFICES AND SHEDS

- A. East Hartford Public Schools will furnish without charge, one room for the Contractors use an office in the existing building. The Contractor shall be responsible for furniture and shall keep the area clean and return it to its original condition after use. The Contractor shall provide a 5 lb ABC fire extinguisher and an approved first aid kit.
- B. Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.
- C. Remove temporary materials, equipment services, and construction before Substantial Completion.
- D. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified, or to original conditions.

01610 TRANSPORTATION AND HANDLING

- A. Materials and equipment shall be delivered, stored and handled to prevent intrusion of foreign matter and damage by weather or breakage. Packaged materials shall be delivered and stored in original, unbroken packages.
- B. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct, and products are undamaged.
- C. Packages, materials and equipment showing evidence of damage will be rejected and replaced at no additional cost to the Owner.

01620 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity range required by manufacturer.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Arrange storage to provide access for inspection. Periodically inspect to ensure products are undamaged and are maintained under required conditions. Keep log showing date, time, and problems, if any.

01710 FINAL CLEANING

- A. Before final inspection, clean the work in readiness for occupancy.
- B. Clean interior and exterior surfaces to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, HEPA vacuum carpeted and soft surfaces. Clean equipment and fixtures. Also:
 - 1. Remove tape adhesive, spray glue and encapsulant stains; wash and polish glass. Repaint or refinish to match existing all surfaces which can not be totally cleaned of material deposited during this work.
 - 2. Clean and polish tile and other glazed surfaces.
 - 3. Clean floors; wax and buff resilient tile. Clean vinyl or rubber base.
 - 4. Wash washable surfaces of equipment and fixtures.
 - 5. HEPA vacuum and/or dust walls, ceilings, lighting fixtures, ceiling diffusers, and other wall and ceiling items.
 - 6. Remove defacements, streaks, fingerprints and erection marks.
 - 7. Clean site; sweep paved areas, rake other surfaces.
- C. Remove waste and surplus materials, rubbish, and construction equipment and facilities from the site.

- D. Leave the building clean and ready for occupancy. If the Contractor fails to clean up, East Hartford Public Schools may do so with the cost charged to the Contractor.

01720 PROJECT RECORD DOCUMENTS

- A. The Contractor shall keep one copy of the Specifications, Drawings, Addenda, approved Shop Drawings, Change Orders, Schedules and Instructions, in good order at the site and marked to record all changes made during construction. The documents shall be available to the Design Consultant at all times.

01740 WARRANTIES AND GUARANTEES

- A. The Contractor shall guarantee all materials and workmanship for a period of one year from the date of acceptance of the work. In addition, the Contractor shall furnish the warranties listed below. Submit to East Hartford Public Schools in the suppliers' standard form or in the form given below if there isn't a standard form available.
- B. Submit certification that finish materials are fire rated as specified.
- C. Forms of Bonds, Guarantees, Warranties:

Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

(Project Title and Number)

I (We) hereby guarantee (or warranty) the _____ work on the referenced project for a period of ___ years from _____, 20 __ against the failures of workmanship and materials in accordance with the requirements of Division __, Page __, Paragraph __ of the Contract Specifications.

Signed _____ General Contractor
(or authorized agent)

- D. Bonds shall be by approved Surety Companies, made out to East Hartford Public Schools on company's standard form.

- E. Guarantees, warranties or bonds supplied by Subcontractors, Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the General Contractor to be the product installed on the project and be countersigned by the General Contractor.

01741 INSURANCE

- A. **The East Hartford Board of Education and the Town of East Hartford, its officials, volunteers, boards and commissions** must be named additional insured on all insurance policies and each shall be given a Certificate of Insurance evidencing such coverage.
- B. Before the contract is executed, the Contractor will be required to file with East Hartford Public Schools a Certificate of Insurance, executed by an insurance company licensed to do business satisfactory to the State of Connecticut and in a form acceptable to East Hartford Public Schools stating that with respect to the contract awarded, the Contractor carries insurance in accordance with the following requirements and stipulations: (See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** East Hartford Middle School Partial Flooring Abatement and Replacement Project.)
1. Workers Compensation:
 - a. See Bid Document #1824-23 referencing Workers Compensation
 2. Commercial General Liability (including but not limited to Premises and Operations; Independent Contractors Protection; Products and Completions; Broad Form Property Damage; and Asbestos Liability):
 - a. Bodily Injury
See Bid Document #1824-23 referencing General Liability
 - b. Personal Injury, with Employment Exclusion Deleted
See Bid Document #1824-23 referencing General Liability

- c. Property Damage
See Bid Document #1824-23 referencing General Liability
- 3. Commercial Automobile Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Automobile Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Automobile Liability Ins.
- 4. Contractual Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Contractual Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Contractual Liability Ins.
- 5. All Subcontractors on this project shall carry the same coverages as required for the General Contractor in Paragraphs 2 through 4 of this Section.

01742 INDEMNIFICATION

- A. See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** East Hartford Middle School Partial Flooring Abatement and Replacement Project.
- B. The Contractor understands that it shall reimburse and hold East Hartford Public Schools harmless against any and all delays caused by the Contractor beyond the specified contract period which causes the loss of revenues to East Hartford Public Schools as a result of that delay.

END OF SECTION

PART 1 – GENERAL

1.1 SCOPE

- A. The work specified herein shall be the abatement of asbestos-containing materials by persons who are knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of asbestos-containing material, and the subsequent cleaning of the affected environment. The Contractor shall have a Competent Person in control on the job site at all times during asbestos abatement work. This person must comply with applicable Federal, State and Local regulations that mandate work practices, and be capable of performing the work of this contract.
- B. The Contractor shall be licensed by the State of Connecticut in accordance with State of Connecticut Regulations, Sections 20-440-1 through 9. Should any portion of the work be subcontracted, the subcontractor must also be licensed in accordance with these regulations.
- C. East Hartford Public Schools will retain the services of a State of Connecticut licensed Project Monitor, TRC Environmental Corporation (TRC), for protection of its interests and those using the building. Pre-abatement, during abatement and post-abatement sampling will be conducted as deemed necessary.
- D. Deviations from this Specification require the written approval from East Hartford Public Schools.
- E. Restore all work areas and auxiliary areas utilized during abatement (or related work) to conditions equal to or better than original. Any damage caused during the performance of abatement activities (or related work) shall be repaired by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, removal of ceiling tiles or concrete blocks, broken glass, etc.) at no additional expense to East Hartford Public Schools. The Contractor is responsible for protecting all objects in work areas that are permanent fixtures or too large to remove.

The Contractor shall be responsible for the following general requirements:

1. Obtain all approvals and permits, and submit all notifications required.
 2. Provide, erect, and maintain all planking, bracing, shoring, barricades, and warning signs.
 3. Unless otherwise specified, all equipment, fixtures, piping and debris resulting from demolition shall become the property of the Contractor and shall be removed from the premises.
 4. Materials to be reused shall be removed with the utmost care to prevent damage of any kind. All material to be reused shall be stored as directed. The Contractor shall coordinate with East Hartford Public Schools as to the storage location.
 5. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
- F. It shall be the responsibility of the Contractor to protect and preserve in operating condition, all utilities traversing the building and site. Damage to any utility due to work under this Contract shall be repaired to the satisfaction of East Hartford Public Schools at no cost to East Hartford Public Schools.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall supply all labor, materials, equipment, services, insurance (with specific coverage for work on asbestos), and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations and these specifications.
- B. The asbestos abatement work shall include the removal of asbestos-containing materials as specified herein. This abatement project was designed by Mr. Gregory Kaczynski, a State of Connecticut licensed Asbestos Project Designer (#000328) from TRC. TRC is the Designer/Consultant for the project.

Work Area 1 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (Non-ACM)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base is limited to stairwells and side corridors. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 2 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (Non-ACM)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 3 – As Shown on Drawing HAZ-002

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (Non-ACM)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base is limited to side corridors. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 4 – As Shown on Drawing HAZ-002

Remove ACM in the form of:

- **Floor tile and associated mastic**
- **Cove base and associated mastic (Non-ACM)**

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 5 – As Shown on Drawing HAZ-001

Remove **Non-ACM** flooring in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic

Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.

Work Area 6 – As Shown on Drawing HAZ-001

Remove **Non-ACM** flooring in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic

Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.

Work Area 7 – As Shown on Drawing HAZ-002

Remove **Non-ACM** flooring in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic

Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.

1.3 **DEFINITIONS**

Accessible - A space easily accessed and which can be entered or seen without demolition.

Adequately Wet - Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

AHERA - Asbestos Hazard Emergency Response Act - U. S. EPA regulation 40 CFR Part 763 under Section 203 of Title II of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2643. This rule mandates inspections, accreditations of persons involved with asbestos, and -final air clearances following abatement in public and private schools, and public and commercial buildings.

Asbestos - The term asbestos includes chrysotile, amosite, crocidolite, asbestiform tremolite, asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered.

Asbestos Abatement - The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials.

Asbestos-Containing Waste Materials (ACM Waste) - Any waste that either contains or is contaminated with asbestos. This term includes asbestos-containing materials and materials contaminated with asbestos including disposable equipment and clothing, filters from control devices, polyethylene sheeting generated from disassembly of a containment structure, and any other items from within regulated areas which cannot be properly decontaminated.

Asbestos Control Area - An area where asbestos abatement operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glovebag".

Asbestos Fiber - A particulate form of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals having a length of five micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Authorized Asbestos Disposal Facility - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or

by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

Category I Non-Friable Asbestos-Containing Material (ACM) - Asbestos-containing packings, gaskets, resilient Floor coverings and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II Non-Friable ACM - Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Class I Asbestos Work - Activities involving the removal of TSI and surfacing ACM and PACM.

Class II Asbestos Work - Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

Class IV Asbestos Work - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Competent Person - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition, for Class I and Class II work who is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763). The Asbestos Abatement Site Supervisor as defined in RCSA>

Concealed Space - Space which is out of sight. Examples of a concealed space include area above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

Confined Space - See Permit Required Confined Spaces (PRCS).

Critical Barrier - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the Work Area and uncontaminated areas outside of the Work Area, including the outside of the building.

Decontamination Enclosure System - A series of rooms separated from the Work Area and from each other by air locks, for the decontamination of workers and equipment.

Demolition - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DEEP - The Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106.

DPH - The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06106.

Differential Pressure - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

Encapsulant - Specific materials in various forms used to chemically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulant as follows:

1. Removal Encapsulant (can be used as a wetting agent).
2. Bridging Encapsulant (used to provide a tough durable surface coating to asbestos-containing material).
3. Penetrating Encapsulant (used to penetrate the asbestos containing material down to substrate, encapsulating all asbestos fibers).
4. Lock-down Encapsulant (used to seal off "lock-down" minute asbestos fibers left on surfaces from which asbestos containing materials have been removed).

Encapsulation - The application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

Engineering Controls - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

Equipment Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

Exposed - Open to view.

Finished Space - Space used for habitation or occupancy where rough surfaces are plastered, paneled or otherwise treated to provide a pleasing appearance.

Fixed Critical Barrier - Barrier constructed of 2" x 4" wood or metal framing 16" O.C., with 2" plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Work Area side to prevent unauthorized access or air flow.

Fixed Object - A piece of equipment or furniture in the Work Area which cannot be removed from the Work Area, as determined by the Project Monitor.

Friable Asbestos Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy, that when dry can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Full Containment – Two layers of six (6) mil poly on walls and floors, contiguous decontamination units, pressure differential between work area and adjacent area and engineering controls.

Glovebag - A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used glovebags provide a small Work Area enclosure typically used for small scale asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101).

Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. This technique requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

HEPA Filter Equipment - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

Inaccessible - A space not accessible and which cannot be entered or seen without demolition.

Lock-Down - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

Mini-Containment - A procedure using a single layer of polyethylene sheeting to contain the Work Area. Access to the mini-containment is controlled by an air lock which also serves as a Holding Area. This procedure requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

Movable Object - A piece of equipment or furniture in the Work Area which can be removed from the Work Area, as determined by the Project Monitor.

Negative Exposure Assessment - For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

1. Objective data demonstrating that the product or material containing asbestos

minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or

2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are not more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

Non-Friable Asbestos-Containing Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that when dry cannot be crumbled, pulverized or reduced to powder by hand pressure.

NPE - Negative pressure enclosure.

Owner or Operator of a Demolition or Renovation Activity - Any person who owns, leases, operates, controls and supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation, or both.

Permissible Exposure Limit (PEL) - (1) time-weighted average unit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) or air as an eight (8) hour time-weighted average time (TWA). (2) excursion limit. The employer shall ensure that no

employee is exposed to an airborne concentration of asbestos in excess of 1.0 fibers per cubic centimeter of air (f/cc) as averaged over a sampling period of thirty (30) minutes.

Permit Required Confined Spaces (PRCS) - A confined space that has the potential to cause harm to the entrants. These spaces could contain a hazardous atmosphere, material that could engulf the entrant, have an internal configuration that could entrap an entrant and any other serious safety or health hazard. PRCS require special entry precautions which could include retrieval systems, ventilation, monitoring and air line respirators. A written permit is required to be completed prior to entry. All TRC personnel entering a PRCS must follow TRC's health and safety program and the requirements for entering PRCS.

Personal Monitoring - Air sampling within the breathing zone of an employee.

Pre-Clean - The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

Presumed Asbestos-Containing Material (PACM) - TSI and surfacing material found in buildings constructed no later than 1980.

Project Monitor - The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut DPH regulations (Sections 20-440-1 through 20-440-9, inclusive). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts Registry.

Regulated Area - Area established by the employer to demarcate areas where Class I, II and III work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the Permissible Exposure Limit.

Regulated Asbestos-Containing Material (RACM) - (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM

that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Renovation - Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting members are wrecked or taken out are demolitions.

Repair - Overhauling, rebuilding, reconstructing or reconditioning of structures or substrates where asbestos, is present.

Thermal System Insulation (TSI) - Materials applied to pipes, fittings, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Unfinished Space - Space used for storage, utilities or work area where appearance is not a factor. Examples of an unfinished space include crawlspace; pipe tunnel and similar spaces.

Visible Emissions - Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Visible Residue - Any debris or dust on surfaces in areas within the Work Area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos.

Waste Generator - Any owner or operator of a source whose act or process produces asbestos-containing waste material.

Waste Shipment Record - The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area - Specific area or location where the actual work is being performed or such other area of a facility which the Commissioner determines may be hazardous to public health as a result of such asbestos abatement.

Worker Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled passage of workers and authorized visitors, typically consisting of a Clean Room, a Shower Room and an Equipment Room that is under negative pressure.

1.4 REFERENCES

A. The current issue of each document shall govern. Where conflict among requirements or with these specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1001 - Asbestos, Tremolite, Anthophyllite, and Actinolite

29 CFR 1910.134 - Respiratory Protection

29 CFR 1926.21 - Safety Training and Education

29 CFR 1926.32 - Competent Person

29 CFR 1926.51 – Sanitation

29 CFR 1926.59 - Hazard Communication.

29 CFR 1926.62 - Lead in Construction

29 CFR 1926.200 - Accident Prevention Signs and Tags

29 CFR 1926.417 - Lockout and Tagging of Circuits

29 CFR 1926.1101 - Asbestos

2. Environmental Protection Agency (EPA)

40 CFR 61, Subpart M - National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule

40 CFR 763, Subpart E - Asbestos Hazard Emergency Response Act (AHERA)

40 CFR 763, Subpart G - Worker Protection Rule
3. State of Connecticut, Department of Public Health (DPH) Regulations

Section 20-440-1 through 20-440-9- Standards for Asbestos Abatement

Section 22a-209-1; 22a-209-8(i); 22a-449(c)-11; and 22a-449(c)-100 - Hazardous Waste Management Regulations
4. American National Standards Institute (ANSI)

ANSI Z9.2 - Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2 - Respiratory Protection
5. American Society of Testing and Materials (ASTM)

ASTM E 84 - Surface Burning Characteristics of Building Materials

ASTM E 96 - Water Vapor Transmission of Materials

ASTM E 119 - Fire Tests of Building and Construction Materials

ASTM E 736 - Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

ASTM E 1368 - Visual Inspection of Asbestos Abatement Projects

ASTM E 1494 - Encapsulants for Spray- or Trowel- Applied Friable
Asbestos-Containing Building Materials

6. Underwriters Laboratories, Inc. (UL)

UL 586 - High-Efficiency, Particulate, Air Filter Units

1.5 DOCUMENTATION

A. Submit two copies of the following documentation to ensure compliance with the applicable regulations. An up- to- date copy shall be retained at the job site at all times. Submission must be made prior to the Pre-abatement Meeting, which will be held two weeks prior to the start of abatement. The General Contractor, Abatement Contractor, Architect, Asbestos Project Designer and Owners Representative shall be present at the meeting.

B. Manufacturer's Catalog Data:

Local Exhaust Equipment
Vacuum Equipment
Respirators
Pressure Differential Automatic Recording Instrument
Surfactant
Chemical Encapsulant
Polyethylene Sheeting
Airless Sprayers
Portable Shower Units
MSDS for All Materials Delivered to the Site
Letters of Compatibility for Encapsulant and Coating Materials

C. Statements:

Notification to State of Connecticut Department of Public Health
(ten (10) days before the start of asbestos abatement)
Notification to EPA Region 1
(ten (10) days before the start of asbestos abatement)
Worker Medical Certification
Worker Training Certification
Worker Respirator Fit Testing
OSHA Laboratory Certification

Contractor's Project Monitor Certification
Landfill Approval
Safety Plan
Respirator Protection Plan
Initial Exposure Assessment

1. Copies of all required notifications, approvals and permits for the removal, disposal and transport asbestos-containing or contaminated materials.
2. Documentation from a physician certifying that all employees who may be exposed to airborne asbestos in excess of the background level have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring required in 29 CFR 1926.1101. They shall also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform as well as special work place conditions such as high temperature, high humidity and chemical contaminants which to which he/she may be exposed.
3. Documentation certifying that all employees have received training in the proper handling of materials that contain asbestos; understand the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis.
4. Documentation of respiratory fit testing for all employees who must enter the Work Area. This fit testing shall be in accordance with qualitative procedures as detailed in 29 CFR 1926.1101.
5. Establish and supervise in accordance with 29 CFR 1926.21, a program for the education and training of workers in the recognition, avoidance and prevention of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury. Include any site-specific information to address health

and safety procedures unique to this project.

6. Establish a written Respiratory Protection Plan in accordance with 29 CFR 1910.134. This plan shall establish procedures governing the selection and use of respirators and shall include such information as training in the proper use of respirators; medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required; training in proper use and limitations of respirators; respirator fit testing; regular inspection and evaluation of the continued effectiveness of the program; and other elements included in the standard.
7. Demonstrate that employee's exposures will be below the PELs for Class I asbestos work until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise make a Negative Exposure Assessment.

D. Construction Schedule:

A construction schedule which shows how the flooring removal and installation will be coordinated and completed within the construction timeline provided. Include the removal and return and storage locations of furniture, equipment and supplies for each phase as well.

E. Records:

Sign-in/out Logs
Pressure Differential Recording Data
NPE Inspection and Smoke Test Logs
Rental Equipment Statements

When rental equipment is to be used in removal areas or to transport waste materials, submit a copy of written notification provided to the rental company informing them of the nature of use of the rented equipment.

F. During the asbestos abatement, submit to the Asbestos Project Designer and receive acknowledgment of the following:

1. Results of the personal air sampling data within one (1) working day of when the sampling was done.

2. Copies of all waste shipment records of asbestos waste that is transported from the facility site.
- G. At the conclusion of the project, submit to the Asbestos Project Designer and receive acknowledgment of the following:
1. The original copy of all completed waste shipment records. This shall be submitted to the Asbestos Project Designer within 35 days from the date the waste was transported from the facility site.

1.6 PERSONNEL PROTECTION

- A. Instruct workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- B. Ensure workers are fully protected with respirators and protective clothing during work in the Asbestos Control Area, where there is the possibility of disturbing asbestos-containing or asbestos-contaminated materials.
- C. Respiratory protection shall meet the requirements of OSHA as required in 29 CFR 1910.134 and 29 CFR 1926.1101. Provide appropriate respiratory protection for each worker and ensure usage during potential asbestos exposure. As a minimum, workers shall be equipped with powered air-purifying respirators (PAPR) with HEPA filters.
- D. Select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11. Provide an adequate supply of filter elements for respirators in use.

E. Minimum respiratory protection shall be as follows:

Airborne concentration of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals	Required Respirator
Not in excess of 1 f/cc (10 × PEL) or otherwise as required	Half mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 × PEL)	Full face piece air purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc equipped with (100 × PEL)	Any powered air-purifying respirator high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1000 × PEL)	Full face piece supplied air respirator operated in pressure demand mode.

- Note:
1. Respirators assigned for higher airborne fiber concentrations may be used at lower concentrations.
 2. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.
 3. The Contractor shall provide a full face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus for all persons within the regulated area where apparatus for all persons within the regulated area where Class I work is being performed for which a negative exposure assessment has not been produced and, the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full-face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.

4. If compressed air is used for supplied air respirators, this air will meet the requirements for grade D breathing air as described by the Compressed Gas Association Commodity Specification G-7.1-1996. The compressor will be equipped with the necessary safety devices and absorbents/filters and be situated to avoid entry of contaminated air. In addition, the compressor will be equipped with alarms to indicate failure or overheating, and additional alarms for indicating the presence of carbon monoxide. Airline couplings will be incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with non-respirable gases.
-

- F. Provide and require all workers to wear protective clothing in Work Areas where asbestos fiber concentrations exceed permissible limits established by OSHA. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
- G. Provide all authorized persons entering contaminated areas with proper respirators and protective clothing.
- H. Ensure that all workers and authorized persons enter and leave the Asbestos Control Area through the Worker Decontamination Enclosure System.
- I. Ensure all contaminated protective clothing remains in the Equipment Room for reuse or disposal of as contaminated waste.
- J. Ensure workers do not eat, drink, smoke or chew gum or tobacco while in the Asbestos Control Area.

1.7 EQUIPMENT REMOVAL PROCEDURE

- A. Clean surfaces of contaminated containers and equipment thoroughly by vacuuming with HEPA filtered equipment and wet wiping before moving such items into the Equipment Decontamination Enclosure System for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave the Asbestos Control Area through the Equipment Decontamination Enclosure System.

1.8 SEQUENCE OF WORK

- A. Proceed in accordance with the sequence of work as mutually agreed upon with East Hartford Public Schools.
- B. The following sequence of work shall be used for the asbestos abatement work:
 - 1. A visual inspection of the Work Area to determine pre-existing damage to facility components. (Movable objects (furniture, equipment & supplies) will be removed by the Owner prior to Work Area being turned over to the Contractor.)
 - 2. Release of work area to the Contractor.
 - 3. All temporary utilities required for the project shall be on site and operational prior to the initiation of asbestos work.
 - 4. Abatement of all asbestos-containing materials by the Contractor.
 - 5. Air sampling by East Hartford Public School's Project Monitor for re-occupancy.
 - 6. Cleanup by the Contractor. Work Areas must be returned to their original condition or better.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description. Do not use damaged or deteriorating materials. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire retardant polyethylene sheet in roll size to minimize the frequency of joints, shall be delivered to job site with factory label indicating four (4) or six (6) mil.
- B. Polyethylene disposable bags shall be six (6) mil with pre-printed label. Disposable bags shall be opaque.
- C. Tape shall be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces. Tape must be capable of adhering under both dry and wet conditions.
- D. Surfactant (wetting agent) shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration one (1) ounce surfactant to five (5) gallons of water or as directed by the manufacturer.
- E. Containers must be impermeable and shall be both air and watertight. Containers shall be labeled in accordance with OSHA Standard 29 CFR 1926.1101 and EPA NESHAPS 61.150 as appropriate.
- F. Labels and signs shall conform to OSHA Standard 29 CFR 1926.1101.
- G. Encapsulant shall be bridging or penetrating type which has been approved by the Design Consultant. Usage shall be in accordance with manufacturer's printed technical data. Encapsulant must be compatible with new materials being installed. Encapsulant shall be clear.
- H. Glovebag assembly shall be manufactured of six (6) mil transparent polyethylene or PVC with two (2) inward projecting long sleeve gloves, an internal pouch for tools, and an attached labeled receptacle for waste.

2.2 TOOLS AND EQUIPMENT

- A. Tools and equipment shall be suitable for asbestos removal.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter

cassettes shall be provided in sufficient quantities for the project.

- C. Electrical equipment, protective devices, emergency generators and power cables shall conform to all applicable codes.
- D. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. Showers shall be equipped with hot and cold or warm running water. One shower stall shall be provided for each eight workers.
- E. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. No air movement system or air filtering equipment shall discharge unfiltered air outside the Asbestos Control Area.
- F. Pressure differential automatic recording instrument shall be provided to ensure exhaust air filtration devices provide the minimum pressure differential required between the Work Area and occupied areas of the facility.
- G. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Asbestos Control Area.
- H. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 microns in diameter or larger.
- I. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the Work Area shall be provided as appropriate for the work.

PART 3 - EXECUTION

3.1 PREPARATION OF WORK AREA ENCLOSURE SYSTEM

- A. Prior to beginning work, the Design Consultant, East Hartford Public School's Representative and Contractor shall perform a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit to the East Hartford Public School's Representative a list which shall include all damaged areas not scheduled to be repaired under this Contract and include photographs, video tapes as applicable.
- B. Post warning signs meeting the specifications of OSHA 29 CFR 1910 and 29 CFR 1926.1101 at each Regulated Area. In addition, signs shall be posted at all approaches to Regulated Areas so that an employee may read the sign and take the necessary protective steps before entering the area. Additional signs may require posting following construction of work place enclosure barriers.
- C. Utilize engineering controls and personnel protective equipment while installing enclosures and supports when asbestos-containing materials may be disturbed.
- D. When feasible, shut down and lock out electrical power, including all receptacles and light fixtures. Protect receptacles and light fixtures remaining in the Work Area with six (6) mil polyethylene and seal with tape. Protect fire alarm system components remaining in the area with six (6) mil polyethylene and seal with tape. Coordinate all power and fire alarm isolation with East Hartford Public Schools.
- E. Provide temporary power and lighting, if applicable, and ensure safe installation, including ground fault protection, of temporary power sources and equipment in compliance with applicable electrical code and OSHA requirements. The Contractor is responsible for proper connection and installation of electrical wiring.
- F. Shut down and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to other areas of the building. Seal all vents. Construct wooden platform over gas burners and gas trains to prevent damage.
- G. Pre-clean movable objects within the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such

objects from Work Areas to a temporary location.

- H. Pre-clean fixed objects within the proposed Work Areas, using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with two layers of six (6) mil polyethylene sheeting sealed with tape. Objects which must remain in the Work Area and which require special ventilation or enclosure include electrical equipment, pumps, compressors, control panels, and meter equipment.
- I. Clean the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.
- J. Seal off all openings between the Work Area and the uncontaminated areas outside of the Work Area with critical barriers. Doorways and corridors, which will not be used for passage during work, must be sealed with fixed critical barriers.
- K. Conspicuously label and maintain emergency and fire exits from the Asbestos Control Area satisfactory to the Project Monitor.

3.2 WORKER DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area, a Worker Decontamination Enclosure System consisting of Equipment Room, Shower Room and Clean Room in series. Access to the Work Area shall only be through this enclosure.
- B. Access between rooms in the Worker Decontamination Enclosure System shall be through double flap curtained openings (air locks). Other effective designs are permissible. The Clean Room, Shower Room and Equipment Room located within the Worker Decontamination Enclosure, shall be completely sealed ensuring sole source of airflow into the Asbestos Control Area originates from the outside uncontaminated areas.
- C. The Clean Room shall be adequately sized to accommodate workers and shall be equipped with a suitable number of hooks, lockers, shelves, etc., for workers to store personal articles and clothing. Changing areas of the Clean Room shall be suitably screened from areas occupied by the public.

- D. The Shower Room shall be of sufficient capacity to accommodate the number of workers. Supply warm water to showers. Provide one shower for each eight workers. No worker or other person shall leave an Asbestos Control Area without showering. Shower water shall be collected and filtered using best available technology and dumped down an approved drain.
- E. No personnel or equipment shall be permitted to leave the Asbestos Control Area unless just decontaminated by showering, wet cleaning or HEPA vacuuming to remove all asbestos debris. No asbestos-contaminated materials or persons shall enter the Clean Room.

3.3 EQUIPMENT DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area an Equipment Decontamination Enclosure System consisting of two (2) totally enclosed chambers divided by a double flap curtained opening. Other effective designs are permissible. This enclosure must be constructed so as to ensure that no personnel enter or exit through this unit.

3.4 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. Occupied areas and/or building space not within the Asbestos Control Area shall be separated from asbestos abatement Work Areas by means of airtight barriers. Barriers at openings with dimensions exceeding two (2) feet in both directions shall be blocked with fixed critical barriers.
- B. Do not impair required building exits from any occupied building area. Where normal exits have been blocked by the asbestos work, provide temporary exit signs directing building occupants to the nearest available exit location.
- C. For Class I work, visually inspect and smoke test barriers to assure an effective seal. Repair defects immediately.
- D. Create a pressure differential in the range of 0.02 to 0.04 inches of water column between the Work Area and occupied areas by the use of acceptable pressure differential equipment. Provide a sufficient quantity of units to exhaust the volume of air within the Asbestos Control Area a minimum of four times per hour. Continuously monitor the pressure differential between the Work Area and occupied areas utilizing recording type equipment to ensure exhaust air filtration equipment maintains a minimum pressure differential of 0.02 inches of water

column.

3.5 ASBESTOS REMOVAL

- A. A Competent Person shall be on the job at all times to ensure the establishment and maintenance of the negative pressure enclosure (NPE) and proper work practices throughout the project.
- B. Do not begin abatement work until authorized by the East Hartford Public School's Project Monitor. Follow the steps for abatement as outlined in Section 1.8, Sequence of Work.
- C. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches, and smoke tested for leaks, and any leaks sealed. Results of the NPE inspection shall be logged.
- D. Spray asbestos materials with amended water, using airless spray equipment capable of providing a "mist" application to reduce the release of fibers during the removal operation.
- E. In order to maintain indoor asbestos concentrations at a minimum, remove the wet asbestos in manageable sections. Materials shall not be allowed to dry out. Material drop shall not exceed 8 feet. For heights up to 15 feet provide inclined chutes or scaffolding to intercept drop. For heights exceeding 15 feet provide enclosed dust-proof chutes.
- F. Fill disposal containers (six (6) mil polyethylene bags or fiber drums) as removal proceeds, seal filled containers, apply caution labels and clean containers before removal to wash area. Bags shall be securely sealed to prevent accidental opening and leakage by taping in gooseneck fashion. Bags may be placed in drums for staging and transportation to the disposal site. Bags shall be decontaminated by wet cleaning and HEPA vacuuming before being placed in clean drums and sealed with locking ring tops. Large components removed intact may be wrapped in two (2) layers of six (6) mil polyethylene sheeting secured with tape for transport to the waste disposal site. Small components and asbestos containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) which could tear polyethylene bags and sheeting shall be placed in clean drums and sealed with locking ring tops. Wet clean each container thoroughly before moving to Holding Area. Ensure that workers do not enter from uncontaminated

areas into the Washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the Equipment Decontamination Enclosure.

- G. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet.
- H. If at any time during asbestos removal, should the East Hartford Public School's Project Monitor suspect contamination of areas outside the Work Area, the Contractor shall stop all abatement work and take steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections determine decontamination.
- I. Containerize asbestos-containing waste material removed daily. Do not allow ACM to remain on the floor overnight, allowing it to dry out.
- J. Once properly containerized and removed from containment, asbestos waste shall be stored in a locked waste container.

3.6 CLEAN-UP PROCEDURE

- A. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris which may have splattered or collected on the polyethylene wall covering. Carefully remove the cleaned outer layer of polyethylene from the walls, fold inward as material is being removed, and place in disposal containers. Any debris which may have leaked behind the outer layer shall be removed by HEPA vacuuming and/or wet cleaning.
- B. Remove contamination from the exteriors of the negative air machines, scaffolding, ladders, extension cords, hoses and other equipment inside the Work Area. Cleaning may be accomplished by brushing, HEPA vacuuming and/or wet cleaning.
- C. The East Hartford Public School's Project Monitor shall conduct a thorough visual inspection utilizing a high-intensity flashlight, with the containment barriers in place, to detect visible accumulations of dust or bulk asbestos-containing materials remaining in the Work Area. Should dust, debris or residue

be detected, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate clean-up of the work site. At the conclusion of the final visual inspection, the East Hartford Public School's Project Monitor and the Contractor's supervisor shall certify that they have visually inspected the work area and have found no dust, debris or residue.

- D. Once the area has been re-cleaned, any equipment, tools or materials not required for completion of the work, shall be removed from the Work Area. Negative air filtration devices shall remain in place and operating for the remainder of the clean-up operation.
- E. Apply a lock-down encapsulant to all surfaces within the Work Area from which asbestos has been removed. The Contractor is responsible for ensuring that the encapsulant and the new floor tile mastic are compatible i.e. the new tiles will adhere to the floor.
- F. Air sampling for re-occupancy clearance shall be undertaken using aggressive sampling techniques. Analysis of clearance samples shall follow State of Connecticut Regulations, Section 19a-333-7-(h). Areas which do not comply shall continue to be cleaned by and at the Contractors expense, until the specified Standard of Cleaning is achieved as evidenced by results of air testing. When the Work Area passes the re-occupancy clearance, controls established by this specification may be removed.
- G. Remove all remaining polyethylene, including critical barriers, and Decontamination Enclosure Systems leaving negative air filtration devices in operation. HEPA vacuum and/or wet wipe any visible residue which is uncovered during this process. Dispose of poly as asbestos waste.

3.7 REINSTALLATION OF DISPLACED EQUIPMENT

- A. After re-occupancy is granted, re-secure mounted items removed during the course of the work to their former positions.
- B. Re-establish to proper working order all HVAC, mechanical and electrical systems including lights, exit lights, fire alarm systems and sound systems.

- C. Install new filters in HVAC systems and dispose of used filters as asbestos-containing waste. All systems shall be function tested in the presence of the East Hartford Public School's Representative.

3.8 DISPOSAL OF ASBESTOS

- A. Disposal of asbestos-containing and/or asbestos contaminated material shall occur at an authorized site and must be in compliance with the requirements of, and authorized by the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, or other designated agency having jurisdiction over solid waste disposal.
- B. Disposal approval shall be obtained prior to commencement of asbestos removal.
- C. Warning signs must be attached to vehicles used to transport asbestos-containing waste. Warning signs shall be posted during loading and unloading of disposal containers. The signs must be posted so that they are plainly visible.
- D. Waste removal dumpsters and cargo areas of transport vehicles shall be lined with a layer of six (6) mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first, and shall be extended up sidewalls 12-inches. Wall sheeting shall overlap floor sheeting 24-inches and shall be taped into place.
- E. The completed waste shipment record shall be provided to the East Hartford Public School's Representative.

3.9 CONTRACTOR RESPONSIBILITY

- A. Conduct air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours collection, and shall be available for review until the job is complete.

3.10 AIR SAMPLING SCHEDULE

- A. At a minimum, air sampling by the East Hartford Public School’s Project Monitor will be conducted in accordance with the following schedule (Pre-abatement and during abatement sampling would only apply if full-time project monitoring is being performed for the project.):

Abatement Activity	Pre- Abatement	During Abatement	Post Abatement
Greater than 160 sf./260 lf.	PCM	PCM	TEM
Tent and Glovebag Procedures	PCM	PCM	PCM

- B. Frequency and duration of the air sampling during abatement will be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. This sampling is in addition to OSHA compliance monitoring (personal sampling accomplished by the Contractor) and would only be performed if full-time project monitoring is occurring for the project.

- C. Post-abatement clearance air monitoring requirements are as follows:

1. Air sampling will not begin until at least 12 hours after wet cleaning has been completed and no visible water or condensation remain.
2. Sampling equipment will be placed at random around the Work Area.
3. The representative samplers placed outside the Work Area but within the building will be located to avoid any air that might escape through the isolation barriers and will be approximately 50 feet from the entrance to the Work Area, and 25 feet from the isolation barriers.
4. The following aggressive air sampling procedures will be used within the Work Area during all air clearance monitoring:

- a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as a 1 horsepower leaf blower) against all walls, ceilings, floors, ledges and other surfaces in the Work Area. This should take at least 5 minutes per 1000 SF of floor area.
 - b. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.
 - c. Start the sampling pumps and sample for the required time.
 - d. Turn off the pump and then the fan(s) when sampling is complete.
5. Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 f/cc of air.
 6. Each homogeneous Work Area, which does not meet the clearance criteria, shall be thoroughly re-cleaned using HEPA vacuuming and/or wet cleaning, with the negative pressure ventilation system in operation. New samples shall be collected in the Work Area as described above. The process shall be repeated until the Work Area passes the test, with the **cost of repeat sampling being borne entirely by the Contractor.**
 7. For an asbestos abatement project with more than one homogeneous Work Area, the release criterion shall be applied independently to each Work Area.

3.11 ACTION CRITERIA

- A. If air samples collected outside of the Work Area during abatement activities indicate airborne fiber concentrations greater than original background levels or greater than 0.050 f/cc, as determined by Phase Contrast Microscopy, whichever is larger, an examination of the Work Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Work Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.

END OF SECTION

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Replace floor tile
 - 1. Provide new floor tiles (and associated cove base) in all areas where floor tile was removed (See Drawings HAZ-001-002). Replace with similar tiles which are free of asbestos.
 - 2. Prepare substrate surface, apply tile, and clean all surfaces and areas of work. If shot blaster is utilized during floor tile mastic abatement, use a leveling compound, wait for cure cycle and then apply tile.

1.2 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.
- B. Submit two sets of 4" x 4" square samples for each tile required. In each set of samples, show the full range of exposed color and texture to be expected in the completed work. Review will be for color and texture only. Contact owner regarding color.

1.3 REFERENCES

- A. FS SS-T-312 - Tile Floor: Asphalt, Rubber Vinyl and Vinyl Composition.

1.4 GUARANTEE

- A. The work under this Section shall be part of the Contractors standard one-year guarantee.
- B. Defective work includes material or workmanship which results in warping, sagging, twisting, loss of adherence, within the time period of the guarantee.

1.5 PRODUCT HANDLING, DELIVERY AND STORAGE

- A. Deliver materials to job site in original, unopened packages, bearing manufacturers name and label identifying each type of ceiling tile. Comply with manufacturers recommendations for storage of material.
- B. Deliver two cartons of each color and pattern of floor material required for project, for maintenance use (attic stock).

PART 2 PRODUCTS

2.1 MATERIALS - GENERAL

- A. Vinyl Composite Tile: conforming to FS SS-312B(1), Type IV, Comp. 1; 12" x 12" size and 1/8" thick; Color as selected; as specified as a basis of design only. Equivalent products by Mannington and Tarkett will be considered. Equivalent tiles must be approved in writing prior to submission of bid.
- B. Cove Base: 4" conforming to FS SS-W-40 vinyl plastic.
- C. Edge Strips: beveled type; smooth finish; matching color selected.
- D. Sub-Floor Filler: leveling compound.
- E. Primers and Adhesives: waterproof, of types recommended by resilient flooring manufacturer for specific materials.
- F. Floor Finish/Wax: Floor finish will be provided by East Hartford Public Schools.
- G. Manufacturers: materials of the following manufacturers are acceptable as applicable:
 - 1. Armstrong Excelon VCT (Imperial Texture)

PART 3 EXECUTION

3.1 PREPARATION

- A. Inspect site and examine existing condition.

- B. Ensure floor surfaces are smooth and flat with maximum variation of 1/8" in 10 feet.
- C. Ensure concrete floors are dry (maximum 7% moisture content) and exhibit negative alkalinity, carbonization or dusting.
- D. Maintain maximum 70°F air temperature at flooring installation area for three days prior to, during and for 24 hours after installation.
- E. Store flooring materials in area of application. Allow three days for materials to reach equal temperature as area.
- F. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- G. Clean floor and apply, trowel and float filler to leave smooth, flat hard surface. Prohibit traffic until filler is cured.

3.2 INSTALLATION

- A. Open floor tile cartons, enough to cover each area, and mix tile to ensure shade variations do not occur within any one area.
- B. Clean substrate. Spread cement evenly in quantity recommended by manufacturer to ensure adhesion over entire area of installation. Spread only enough adhesive to permit installation of flooring before initial set.
- C. Set flooring in place, press with heavy roller to ensure full adhesion.
- D. Lay flooring with joints and seams parallel to building lines to produce minimum number of seams.
- E. Install with minimum tile width full size at room or area perimeter, to square grid pattern with all joints aligned, with grain parallel for all units and parallel to length of room, unless otherwise indicated.
- F. Terminate resilient flooring at center line of door openings where adjacent floor finish is dissimilar.

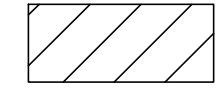
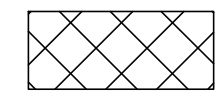
- G. Install edge strips at unprotected or exposed edges where flooring terminates.
- H. Scribe flooring to walls, columns, cabinets, floor outlets and other appurtenances to produce tight joints.
- I. For installation of base, fit joints tight and vertical; install straight and level.

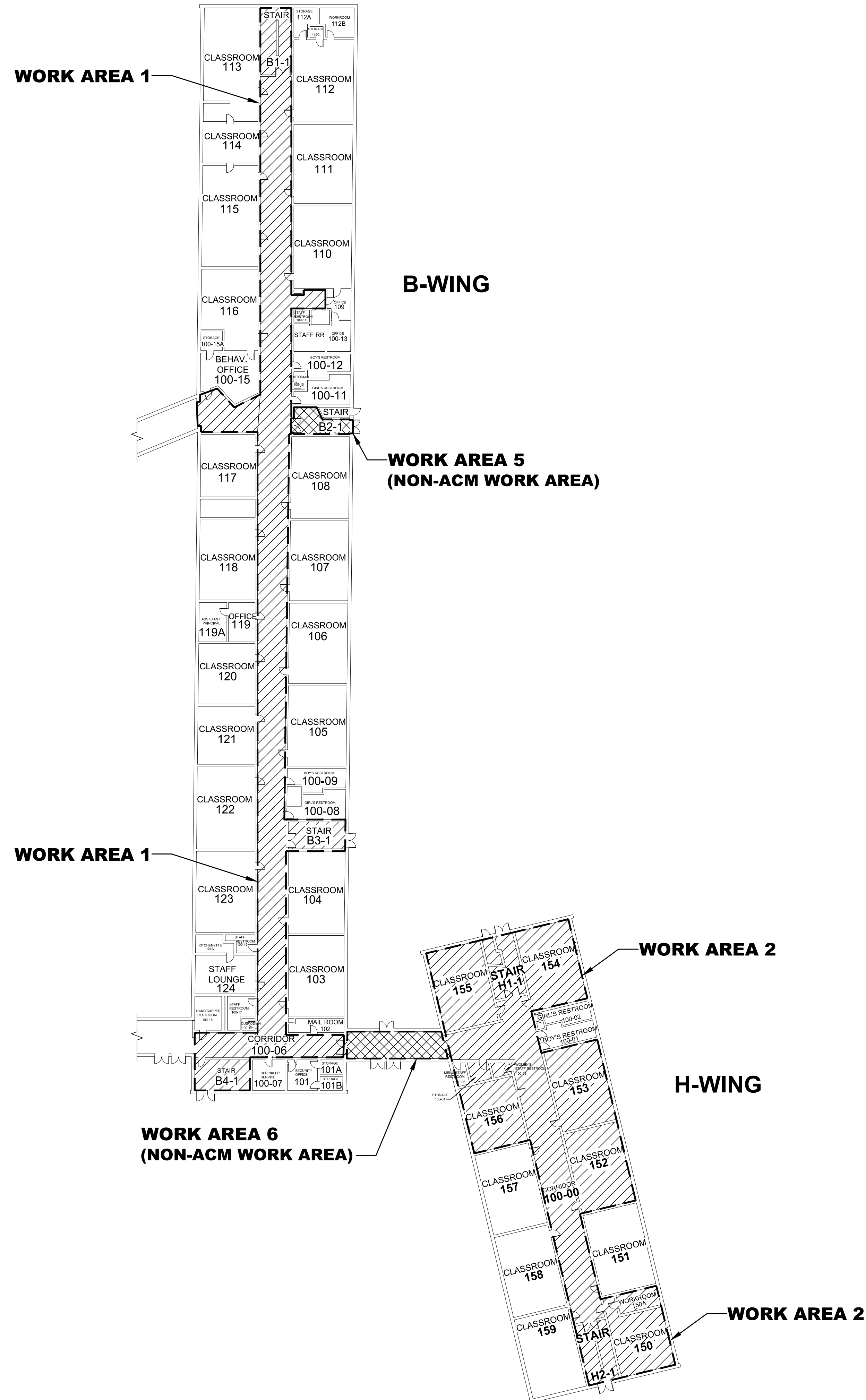
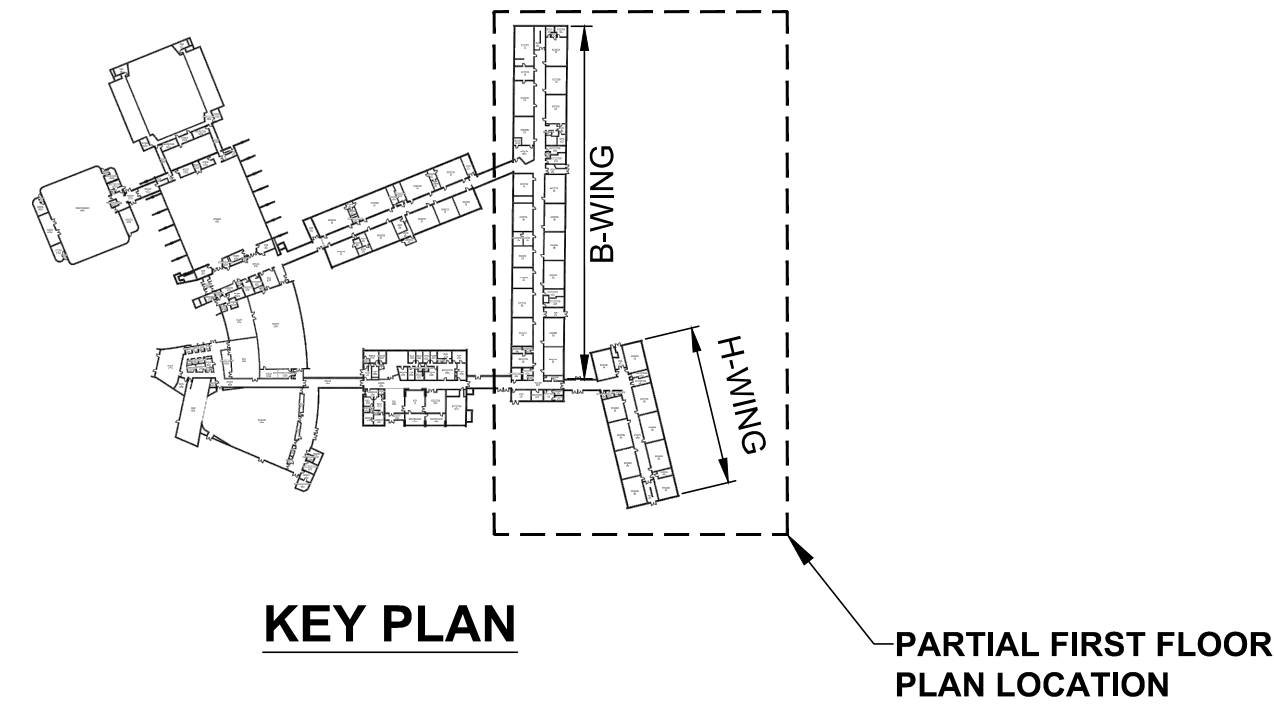
3.3 CLEANING AND PROTECTION

- A. Prohibit traffic from floor finish for 48 hours after installation.
- B. Remove excess adhesive from floor, base and wall surfaces without damage.
- C. Clean floor and base surfaces in accordance with manufacturer's recommendations and apply three (3) coats of floor finish (Floor finish to be provided by owner).

END OF SECTION

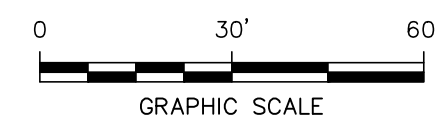
LEGEND OF SYMBOLS

-  = ACM FLOOR TILE/MASTIC
-  = NON-ACM FLOOR TILE/MASTIC AND/OR CARPET/GLUE



NOTE: SCALE IS APPROXIMATE. FIELD VERIFY EXACT DIMENSIONS ON SITE.

PARTIAL FIRST FLOOR
SCALE: 1" = 30'



GENERAL NOTES (Refer to Section 02080)

Work Area 1 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic (Non-ACM)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base is limited to stairwells and side corridors. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 2 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic (Non-ACM)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 5 - As Shown on Drawing HAZ-001

Remove Non-ACM flooring in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic

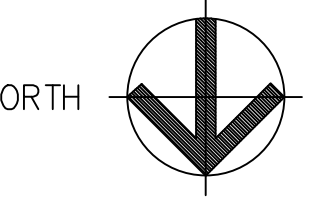
Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.

Work Area 6 - As Shown on Drawing HAZ-001

Remove Non-ACM flooring in the form of:

- Floor tile and associated mastic
- Cove base and associated mastic

Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.



STATE PROJECT
NO. 043-0251 CV



DESCRIPTION	DATE	BY

PARTIAL FLOORING ABATEMENT AND REPLACEMENT PROJECT
EAST HARTFORD MIDDLE SCHOOL
ASBESTOS ABATEMENT AND RELATED WORK (FIRST FLOOR)
777 BURNSIDE AVENUE
EAST HARTFORD, CT 06108

DESIGNED	RRH	EP
DRAWN		
CHECKED		



SCALE: MARCH 8, 2024

DATE: PROJECT NO. 569244

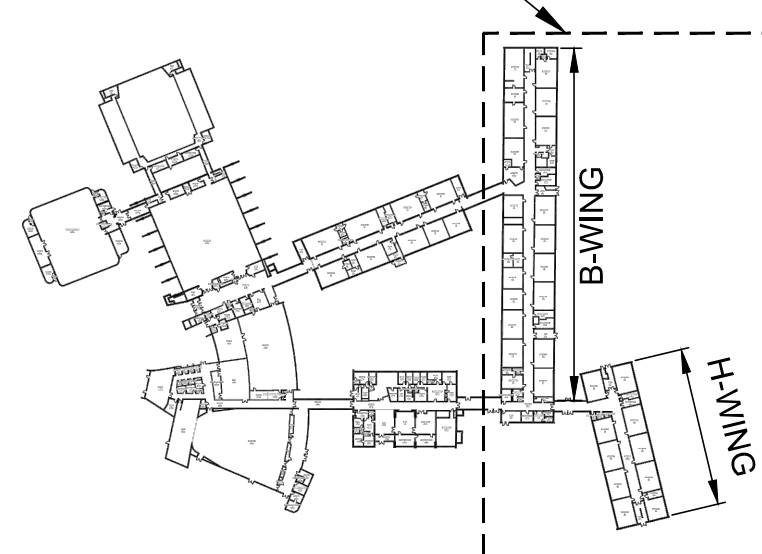
DRAWING NO. HAZ-001

SHEET NO.

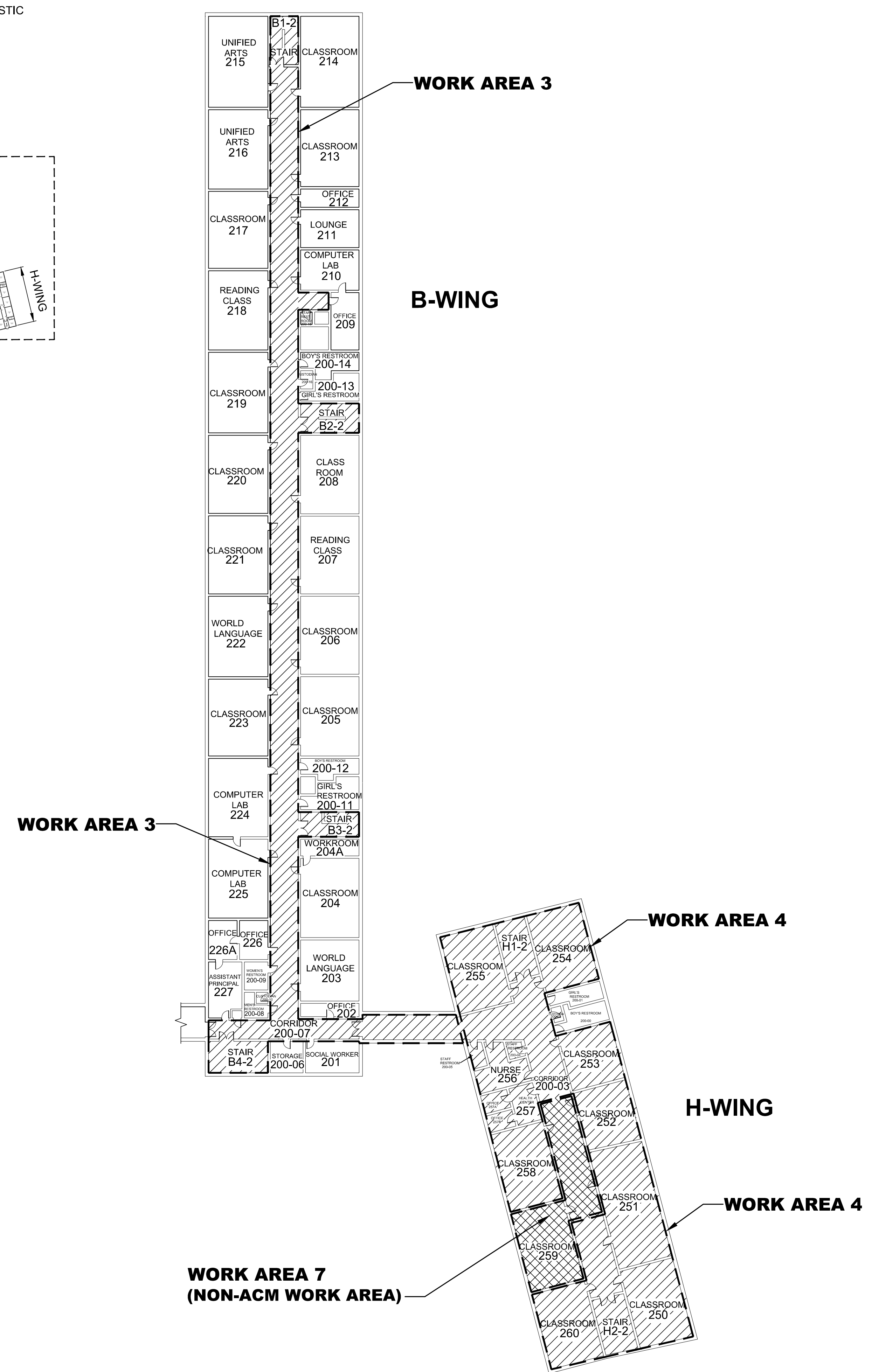
LEGEND OF SYMBOLS

-  = ACM FLOOR TILE/MASTIC
-  =NON-ACM FLOOR TILE/MASTIC AND/OR CARPET/GLUE

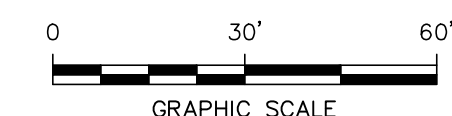
PARTIAL SECOND FLOOR PLAN LOCATION



KEY PLAN



PARTIAL SECOND FLOOR
SCALE: 1" = 30'



NOTE: SCALE IS APPROXIMATE. FIELD VERIFY EXACT DIMENSIONS ON SITE.

GENERAL NOTES (Refer to Section 02080)

Work Area 3 - As Shown on Drawing HAZ-002

- Remove ACM in the form of:
- Floor tile and associated mastic
 - Cove base and associated mastic (Non-ACM)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base is limited to side corridors. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 4 - As Shown on Drawing HAZ-002

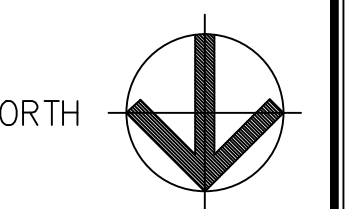
- Remove ACM in the form of:
- Floor tile and associated mastic
 - Cove base and associated mastic (Non-ACM)

Asbestos removal shall be performed under containment with a negative pressure differential and contiguous decontamination system and in accordance with CT DPH approved AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12. Unmovable casework remains. Cove base mastic need only be removed as necessary for proper installation of new cove base. Chemical methods of mastic removal are prohibited.

Work Area 7 - As Shown on Drawing HAZ-002

- Remove Non-ACM flooring in the form of:
- Floor tile and associated mastic
 - Cove base and associated mastic

Requirements specific to asbestos do apply to this work area. Cove base mastic need only be removed as necessary for proper installation of new cove base. Unmovable casework remains. Chemical methods of mastic removal are prohibited.



STATE PROJECT NO. 043-0251 CV



DESCRIPTION	DATE	BY

PARTIAL FLOORING ABATEMENT AND REPLACEMENT PROJECT
EAST HARTFORD MIDDLE SCHOOL
ASBESTOS ABATEMENT AND RELATED WORK (SECOND FLOOR)
777 BURNSIDE AVENUE
EAST HARTFORD, CT 06108

GK	RRH	EP
DESIGNED	DRAWN	CHECKED

SCALE: MARCH 8, 2024

DATE: 569244

PROJECT NO. -

DRAWING NO. -

HAZ-002

SHEET NO. Copyright Milne & MacBroom, Inc. - 2016



LOCAL PLAN REVIEW AND SIGN-OFF ON “REQUEST FOR REVIEW OF FINAL PLANS” FORM SCG-042

*EARLY CHILDHOOD LEARNING CENTER AT
HOCKANUM STEAM TUNNER ABATEMENT
STATE PROJECT #043-0250 CV*

DATE: *TBD*

SUBMITTED TO: *Public Building Commission*

SUBMITTED BY: *James Rovezzi, Acting Director of Facilities*

ENCLOSURES: *Project Manual (Plans, Specifications) and Form SCG-042 (working copy)*

REASON: *State OSCGR Process Requirement*

BACKGROUND:

Plans and specifications for the Early Childhood Learning Center at Hockanum project were produced by TRC Environmental Corporation and combined into a “project manual” dated March 8, 2024. A cost estimate was produced by TRC Environmental Corporation on October 16, 2023. Prior to going out to bid, the final plans must be reviewed by the State DAS Office of School Construction Grants and Review after a “local review” is completed by select Town of East Hartford personnel.

All required “certifications of local approval” of the plans, specs, and estimate have been obtained, including the local Building Official, Fire Marshal, Health Official, local Federal 504 Official and Chairperson of the Public Building Commission. Form SCG-042 has been signed by these individuals.

This request will be presented to the BOE Facilities Committee and full Board of Education for approval on April 15, 2024. Once signed off by the district, the final certification/signature needed on Form SCG-042 is from the Chairperson of the Public Building Commission. Facilities will then submit the form to DAS OSCGR so they may conduct a final plan review prior to public bidding the construction phase of the project.

ACTION: *Accept or Reject*



DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)

Office of School Construction Grants & Review (OSCG&R)

REQUEST FOR REVIEW OF FINAL PLANS FORM SCG-042

STATUTORY REF.: C.G.S. Sections 10-282, 10-283, 10-291, 10-294, 10-292

DISTRICT NAME: East Hartford Public Schools	FACILITY NAME AND ADDRESS: ECLC at Hockanum School 191 Main St East Hartford, CT 06108	STATE PROJECT NUMBER: 043-0250 CV
		PHASE NUMBER: 1 of 1

Estimated date* to begin construction 06/12/24 Estimated date to complete construction 08/16/24

* NOTE: Construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Cost Estimate	Site Approval (if applicable)
Local Board of Education	<u> / / </u>	<u> / / </u>
School Building Committee	<u> / / </u>	<u> / / </u>

We hereby certify that these **final plans and project manual(s)** as prepared for bidding and dated 3/8/2024, and the **professional cost estimate**, completed in accordance with Level 3 of ASTM International Standard E1557, Standard Classification of Building Elements and Related Sitework-UNIFORMAT II for this project, dated 3/8/2024, have been reviewed and approved for this project on the dates shown above.

For the Town or Regional Board of Education:

Tyron V. Harris

Chairperson's Name (Type or print)

Signature

Date

For the School Building Committee:

Henry J. Pawlowski Jr.

Chairperson's Name (Type or print)

Signature

Date

** Signature dates cannot precede the date on the submitted plans.

For the Project Architect/Engineering Firm:

TRC Environmental Corporation

Firm Name (Type or print)

Signature

860-298-9692

Telephone No.

We hereby request a review of the final Project Plans, Project Manual, Ineligible and Limited Eligible Costs Worksheet (ICW) FORM SCG-4000, and professional cost estimate as noted above. Copies of all the above referenced documents are either attached, or available.

Thomas Anderson

Superintendent's Name (Type or print)

Signature

Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT SHALL GO OUT TO BID, AND NO PURCHASE ORDER OVER \$10,000.00 SHALL BE ISSUED, UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) INDICATING APPROVAL OF FINAL PLANS, PROJECT MANUAL, AND COST ESTIMATE.

FORM SCG-042 Request for Review of Final Plans

State Project No. 043-0250 CV

Project Name: ECLC at Hockanum Steam Tunnel Abatement

Name of Contact Person: James Rovezzi	Telephone: 860-622-5952	Date: March 11,2024
--	----------------------------	------------------------

Certifications of Local Approval:		
I certify that I have local jurisdiction over the State Building Code and that the plans and project manual dated <u>March 8, 2024</u> for the above referenced project comply with all applicable building codes.		
<u>Milton Gregory Grew</u> Local Building Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Fire Safety Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable fire codes.		
<u>John Pelow</u> Local Fire Marshal's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over the State Health Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable health codes.		
<u>Laurence Burnsed, MPH</u> Local Health Official's Name	_____ Signature	_____ Date
I certify that I have local jurisdiction over Section 504 of the Rehabilitation Act of 1973 , and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated _____ for the above referenced project comply with all applicable accessibility codes.		
<u>Tyron Harris</u> Local Federal 504 Official's Name	_____ Signature	_____ Date

- NOTES:**
- 1.) THE CERTIFICATIONS OF LOCAL APPROVAL NOTED ABOVE MUST BE OBTAINED, AND ARE REQUIRED TO BE PROVIDED, PRIOR TO RECEIVING APPROVAL-TO-BID BY THE STATE DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) FOR THIS PROJECT. IF THESE CERTIFICATIONS CANNOT BE OBTAINED LOCALLY, PLEASE CONTACT THE DAS, OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) FOR ASSISTANCE.
 - 2.) THE OFFICE OF SCHOOL CONSTRUCTION GRANTS & REVIEW (OSCG&R) APPROVED PROJECT PLANS, PROJECT MANUAL AND COST ESTIMATE MUST BE KEPT ON FILE AT THE LOCAL BOARD OF EDUCATION OFFICE UNTIL THE FINAL GRANT PAYMENT HAS BEEN MADE AND THE DAS AUDIT IS COMPLETE ON THIS PROJECT.
 - 3.) ORIGINAL SIGNATURES ARE REQUIRED ON THIS FORM. IF ORIGINAL SIGNATURES ARE NOT AVAILABLE AT THE PLAN REVIEW MEETING, MAIL OR OVERNIGHT DELIVER THIS COMPLETED FORM TO:
The Office of School Construction Grants & Review
450 Columbus Blvd., Suite 1503
Hartford, CT 06103

PROJECT MANUAL

**EAST HARTFORD PUBLIC SCHOOLS
STEAM TUNNEL ABATEMENT PROJECT AT
EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
191 Main Street
East Hartford, CT 06108**

**Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, CT 06108**

State Project No. 043-0250 CV

TOWN OF EAST HARTFORD

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

Prepared by:
TRC Environmental Corporation
21 Griffin Road, North
Windsor, CT 06095

PROJECT MANUAL DIRECTORY

PROJECT: Steam Tunnel Abatement Project
Early Childhood Learning Center at Hockanum School
191 Main Street
East Hartford, CT 06108

ALL QUESTIONS REGARDING THIS PROJECT MUST BE DIRECTED TO THE ARCHITECT

OWNER: East Hartford Public Schools
Department of Facilities
734 Tolland Street
East Hartford, CT 06108

ARCHITECT: TRC Environmental Corporation Office # (860)298-9692
21 Griffin Road, North
Windsor, Connecticut 06095
Gregory Kaczynski
Project Manager

Building Official:

Milton Gregory Grew

Sanitarian/Health Inspector:

Laurence Burnsed, MPH

Fire Marshall:

John Pelow

Approved 504 Official:

Tyron Harris

TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

	<u># OF PAGES</u>
Procurement and Contracting Requirements	3
Indemnification and Insurance Requirements	4
Affirmative Action / Equal Opportunity Policy Statement	1
AIA A104: Standard Abbreviated Form of Agreement Between Owner and Contractor.....	26
CHRO Contract Compliance Regulations.....	5

TECHNICAL SPECIFICATIONS

<u>DIVISION 1</u>	<u>GENERAL REQUIREMENTS</u>	<u>PAGES</u>
SECTION 01000	General Conditions	15
<u>DIVISION 2</u>	<u>SITE WORK</u>	
SECTION 02080	Asbestos Abatement.....	35
SECTION 02830	Lead Awareness.....	18
<u>DIVISION 3-14</u>	Not Used	
<u>DIVISION 15</u>	<u>REINSULATION</u>	
SECTION 15260	Mechanical Insulation.....	4
<u>DIVISION 16</u>	Not Used	

ATTACHMENTS

Hazardous Building Materials Investigation Report for tunnels in Early Childhood Learning Center at Hockanum School – March 8, 2022

DRAWINGS

T-1 – Title Sheet
HAZ-001 - Asbestos Abatement and Related Work (Basement)
HAZ-002 – Asbestos Abatement and Related Work (First Floor)

East Hartford Public Schools
Steam Tunnel Abatement at Early Learning Childhood Center at
Hockanum

Division 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

00.1 Procurement Using DAS Contracts

Project will be constructed using contractors that are on the Statewide CT DAS Contract as follows (to obtain minimum 3 quotes per work classification):

Work Classification 1: Abatement of existing floor tile (per project specification)

Use: Asbestos Abatement Contract #DAS-20PSX0154

Work Classification 2: Supply and Install New Vinyl Composition Floor tile (per project Specifications)

Use: Flooring Contract #DAS-20PSX0088

00.2 Requirements for Procuring Requests for Quotes with DAS Contractors:

Prevailing Wage: Estimated costs for both work classifications combined above are expected to reach the thresholds requiring prevailing wage rates to be applied to this project. Contractors shall comply with section 31-57f of the CT General Statutes.

CHRO Compliance: This project is funding using CT State Grant funds therefore all applicable requirements will be adhered to by contractors. Compliance with CONN. Gen. STAT. 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f inclusive, as amended by June 2015 Special Session Public Act 15-5(See CHRO attachment included in this project manual)

Insurance Requirements: Contractors are required to agree to and provide all insurance and indemnification requirements as established by the East Hartford Board of Education. (See Indemnification and Insurance Requirements).

Project Documents: Contract documents for this project consist of: 1.) Construction drawings dated: March 8, 2024, and Specifications dated: March 8, 2024 developed by TRC Environmental. Contractors will use these documents to develop their quotes. These documents serve as the “Statement of Work” (SOW)

Dates for Construction: Start date of construction is expected to be **June 12, 2024** (barring any unforeseen events which may cause delays) and must be completed by **August 16th, 2024**. Contractors quotes will be applicable to cover the dates of construction.

Work Hours: Normal work hours shall be between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, excluding Federal and State recognized holidays, unless alternate hours are agreed upon by Facilities and the Contractor(s) in writing. Any Services Performed outside the normal hours of work must be authorized in writing by Facilities prior to the commencement of such work.

AIA Document A104-2017: Contract will be the “Standard Abbreviated form of Agreement Between Owner and Contractor” top form the basis of the contract between EHPS and the contractor.

Payment Terms & Invoicing: Certified payment applications shall be used and when received by the 15th of the month will be paid by the 15th of the following month. If received on the above schedule, payment will be made within 30 days of receipt. Retainage will be 5%. These figures will be added to sections 4.1.3 and 4.1.4 of the resulting AIA A104 contract.

Licenses: Contractors must be properly licensed by the State of Connecticut

Payment Bond: A payment bond will be required by the contractor for the full contract amount.

Performance Bond: A performance bond will be required by the contractor for the full contract amount.

Pricing: DAS Contractors will submit quotes on their letterhead, noting the applicable State DAS Contract #, and noting the basis of the work shall be in accordance to the plans and specification for that project, using the applicable pricing schedule as indicated in the associated DAS contract.

Purchase Orders: Purchase order(s) will be issued only after approval from the East Hartford Board of Education. No work shall begin until the purchase order has been assigned to the contractor.

Site Visit: Contractor(s), upon receipt of the project plans and specifications, shall schedule a site visit with EHPS Facilities to view existing conditions of the job site at the school. Contractor(s) shall take their own field measurements to determine the accuracy of all information in the plans. EHPS shall not be responsible for the accuracy of any measurements required to Perform the Services. Contractor(s) will be accompanied by an authorized Facilities representative during all site visits. Site visits can be scheduling by calling 860-622-5952

Warranty: Contractor(s) shall warranty all Services against defects and workmanship including all materials and labor for a period of one (1) year from the acceptance date of Service provided (the “Warranty Period”). The warranty must include the full cost of parts, materials, labor, packaging, handling, shipping and other costs incurred to repair the defective Services, at no charge to East Hartford Public Schools. Contractor(s) shall replace and repair any defective materials and parts during the Warranty Period. If any part installed under this **Warranty (Cont.):** Contract fails or does not function properly due to any fault in material or workmanship, Contractor(s) shall, upon notice from the East Hartford Public Schools, proceed to repair or replace the faulty item within twenty-four (24) hours or as mutually agreed, at no

charge to the EHPS. Contractor(s) shall be responsible for all aspects of warranty administration and shall ensure that Services are Performed according to warranty procedure. Manufacturers material warranties will apply separately as required and will carry their own warranty periods.

Note: Section 00.2 above is in addition to the applicable DAS contract language and is intended to clarify terms and conditions of this particular project. In cases of dispute the DAS Contract will supersede.

TABLE OF CONTENTS

<u>ARTICLE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
01006	THE DESIGN CONSULTANT, HIS STATUS AND DECISION	2
01007	EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE	2
01010	SUMMARY OF WORK	2
01012	PROJECT DOCUMENTS	2
01013	DRAWINGS FURNISHED	2
01015	CONTRACTOR'S USE OF PREMISES	2
01016	OCCUPANCY	3
01035	OVERTIME	3
01040	COORDINATION	3
01090	STANDARDS, CODES, AND SPECIFICATIONS	3
01100	SPECIAL PROJECT PROCEDURES	4
01121	SALVAGEABLE MATERIALS	5
01210	PRECONSTRUCTION CONFERENCE	5
01220	PROJECT MEETINGS	5
01310	CONSTRUCTION SCHEDULE	5
01341	SAMPLES	5
01400	QUALITY CONTROL	6
01410	TESTING LABORATORY SERVICES	6
01511	TEMPORARY ELECTRICITY AND LIGHTING	7
01513	TEMPORARY HEATING, COOLING, AND VENTILATING	7
01514	TEMPORARY TELEPHONE	7
01515	TEMPORARY WATER	8
01516	TEMPORARY SANITARY FACILITIES	8
01518	FIRE PROTECTION	8
01520	CONSTRUCTION EQUIPMENT	8
01530	BARRIERS AND ENCLOSURES	9
01535	PROTECTION	9
01540	SECURITY	10
01550	TRAFFIC WAYS	10
01569	CLEANING	10
01590	FIELD OFFICES AND SHEDS	11
01610	TRANSPORTATION AND HANDLING	11
01620	STORAGE AND PROTECTION	12
01710	FINAL CLEANING	12
01720	PROJECT RECORD DOCUMENTS	13
01740	WARRANTIES AND GUARANTEES	13
01741	INSURANCE	14
01742	INDEMNIFICATION	15

01006 THE DESIGN CONSULTANT, HIS STATUS AND DECISIONS

- A. The Design Consultant is TRC Environmental Corporation (TRC), 21 Griffin Road North, Windsor, Connecticut 06095, or his/their accredited representative, and is referred to in the Contract Documents as "Design Consultant" or "Design Consultants" or by pronouns which imply them.

01007 EAST HARTFORD PUBLIC SCHOOLS REPRESENTATIVE

- A. The East Hartford Public Schools Representative is:

Mr. James Rovezzi
Acting Director of Facilities
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

01010 SUMMARY OF WORK

- A. The work includes removal of ACM (and related materials) described in Section 02080 and re-insulation of piping as described in Section 15260. The work may also impact lead painted components as described in Section 02830.

01012 PROJECT DOCUMENTS

- A. The Specifications and Drawings describe and illustrate the materials and labor necessary for the work of this Project.

01013 DRAWINGS FURNISHED

- A. The Contractor will be given a reasonable number of sets of the Contract Documents on or about the time of execution of the Contract, free of charge.

01015 CONTRACTOR'S USE OF PREMISES

- A. The Contractor shall confine his operations, including storage of apparatus, equipment and materials to the Contract limit lines as directed by the Design Consultant.
- B. The areas and/or spaces, including access, shall be maintained free and clear throughout contract term.

- C. Parking for Contractor's employees will be readily available at the School site.

01016 OCCUPANCY

- A. The Contractor shall cooperate with the Owner in scheduling operations to minimize conflict and to facilitate Owner usage of the facility. School will not be in session and no students will be in the building; however, the School will be partially occupied by staff during the work.

01035 OVERTIME

- A. Regular working hours shall consist of an 8-hour period established by the Design Consultant between 7:00 a.m. and 4:00 p.m., Monday through Friday, excluding holidays.
- B. Work outside regular hours shall be coordinated with the East Hartford Public Schools Representative and the Design Consultant. Requests for work outside regular hours, not indicated or specified, shall be submitted in writing to East Hartford Public Schools and the Design Consultant for approval a minimum of 72 hours prior to overtime work.
- C. The Contractor shall be responsible for all costs associated with additional services and fees required to perform work, not indicated or specified herein, during other than regular working hours.

01040 COORDINATION

- A. Coordinate work to assure efficient and orderly sequence of installation of construction elements.

01090 STANDARDS, CODES AND SPECIFICATIONS

- A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. References to standard specifications and codes refer to the editions current at the bid due date. References include their addenda and errata, if any, and shall be considered a part of these specifications as if they were printed herein in full.

- C. The manufacturers' standard warranties or guarantees shall apply when their products are used on this project.

01100 SPECIAL PROJECT PROCEDURES

- A. Prior to beginning work, the Design Consultant, East Hartford Public Schools Representative and Contractor shall make a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit a list which shall include all damaged areas not scheduled for repair under this contract, and include photographs and video tapes as applicable.
- B. An emergency plan shall be developed by the Contractor prior to abatement initiation. Copies of the plan showing emergency exits and indicating emergency procedures shall be posted in the Clean Room of the Worker Decontamination Enclosure System.
- C. The Contractor shall ensure that all employees use proper respiratory protection during all phases of this project as designated by 29 CFR 1926.1101. Where there has been no prior air sampling (i.e., any prep work), the workers will be required to use respiratory protection until a statistically reliable measurement of personal air sampling can be ascertained to determine if any respiratory protection is required.
- D. The Contractor shall be solely responsible for initiating, maintaining and supervising all Federal, State and Local labor, health and occupational regulations, safety precautions and programs in connection with asbestos abatement work.
- E. The Contractor shall provide an asbestos trained supervisor who is on-site at all times that abatement operations are in progress. The designated supervisor shall be available at all times to consult with the Project Monitor or Design Consultant and shall not work inside the contained areas except for short periods of time. The supervisor may also be the designated Competent Person.
- F. The Contractor shall provide a supervisor who is on-site at all times that rework is being done. The designated supervisor shall submit details of his work experience to the East Hartford Public Schools Representative at the time of the Pre-Construction Meeting. The East Hartford Public Schools Representative will review the work experience of the designated supervisor and has the right to accept or reject the Contractor's choice of supervisor, based on the supervisor's expertise, experience and knowledge of work practices and work skills related to the rework required under this Contract.

01121 SALVAGEABLE MATERIALS

- A. There are no items scheduled to be salvaged in this project.

01210 PRECONSTRUCTION CONFERENCE

- A. The Design Consultant will organize a Preconstruction Conference and notify the parties concerned.

01220 PROJECT MEETINGS

- A. A schedule of regular project meetings will be established at the Preconstruction Conference.

01310 CONSTRUCTION SCHEDULE

- A. Start date shall be June 12, 2024 and completion date shall be August 16, 2024.
- B. The Contractor shall submit a proposed project schedule for approval at the time of the Preconstruction Conference.

01341 SAMPLES

- A. Submit samples of items where specifically required. Furnish information and data for items or materials offered as equals to those specified, to establish their equality.
- B. Mark Samples to Show:
 - 1. Name and number of project.
 - 2. Name or trade, type, quality or grade and any further designation necessary to identify the items or materials.
 - 3. Manufacturer's or producer's name.
 - 4. Name of Contractor and Subcontractor, if any.
- C. Submit samples of such size and/or number sufficient to show quality, type, range of color, finish and texture.
- D. Furnished materials shall be equal to approved samples.

01400 QUALITY CONTROL

- A. Comply with all manufacturers' and association or trade instructions and specifications for storage and use of their products.
- B. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from Design Consultant before proceeding.
- C. When specified require manufacturer to provide qualified personnel to observe field conditions; installation; quality of workmanship; to test, adjust and balance equipment, as applicable.
- D. Where required by the Specifications, submit certificates to the Design Consultant executed by a responsible officer of the Manufacturer, warranting that the product meets or exceeds specified requirements.
- E. When required by the Specifications, submit manufacturers' data sheets, including instructions and recommendations.

01410 TESTING LABORATORY SERVICES

- A. East Hartford Public Schools will retain the services of a Project Monitor for protection of its interests and those using the building. Pre-abatement, during abatement, and post-abatement sampling will be conducted as deemed necessary.
- B. Owner will pay for the services of an independent testing laboratory to perform inspections, tests, and other services required by the Specifications except as noted below.
 - 1. OSHA required personal air monitoring of Contractors personnel.
- C. Reports of test will be submitted to the Design Consultant indicating compliance or non-compliance with the specified standards and with the Contract Documents.
- D. Notify Design Consultant and Testing Laboratory 24-hours before expected time of testing.
- E. Make arrangement with testing laboratory and pay for additional tests if for Contractor's convenience.

- F. The Contractor shall bear the expense of any failed tests including retests, as required to obtain approval.

01511 TEMPORARY ELECTRICITY AND LIGHTING

- A. The contractor may connect to existing service, provide branch wiring and distribution boxes located to provide power and lighting by construction grade extension cords. Utilize ground fault interrupters according to asbestos abatement regulations. Owner will pay the cost of energy used. Take measures to conserve energy. Provide lighting for construction operations. At the termination of construction, return the facilities to their original condition.

01513 TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness and, in any event, between October 15 and April 15. Maintain during said period or periods until final completion of the Contract. Windows, doors, ventilators, and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations, and to protect materials and finishes from damage by temperature or humidity. Costs shall be paid by the Contractor. See individual Sections for temperature/humidity limits.
- B. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owners approval. Coordinate the use of existing facilities with the Owner. Provide additional temporary extensions and units to satisfy the criteria given in the preceding paragraph. The Owner will pay the cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition.
- C. Temporary heating shall comply with OSHA regulations, and other applicable codes, statutes, rules and regulations.

01514 TEMPORARY TELEPHONE

- A. The Contractor shall use their own cell phones for telephone service.

01515 TEMPORARY WATER

- A. Connect to existing facilities through an approved backflow prevention device; extend branch piping with outlets so that water is available by use of hoses. The Owner will pay for water used. The Contractor shall not waste water or use faulty equipment. The Contractor shall provide, at his own expense, all connections, extensions and other apparatus required for use of such services. Upon completion of the Contract, the Contractor shall disconnect temporary extensions and return utility to its original condition.

01516 TEMPORARY SANITARY FACILITIES

- A. Designated existing toilets may be used during construction. It is the responsibility of the Contractor to maintain the facilities in a clean and sanitary condition and return them to their original condition after use. No loitering will be permitted in these areas.

01518 FIRE PROTECTION

- A. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. No flammable material shall be stored in the structure. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of necessary fire protection measures.

01520 CONSTRUCTION EQUIPMENT

- A. The Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to ensure convenience and safety in the execution of the Contract except where this is specified in any Specification Section. All such items shall meet the approval of the Design Consultant but responsibility for design, strength, and safety shall remain with the Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the A.G.C. and the standards of the State Labor Department.

- B. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.

01530 BARRIERS AND ENCLOSURES

- A. Provide barriers to prevent public entry to construction areas and to protect existing facilities from damage by construction operations.
- B. Provide covered walkways as required for public access to existing buildings.
- C. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, materials dumping, chemically injurious materials, puddling or running water.
- D. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- E. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract.
- F. Temporary exit signs and building evacuation plans shall be prominently displayed throughout the affected areas of the building. Location of emergency exits and building evacuation plan shall be submitted for approval prior to starting.

01535 PROTECTION

- A. Protect buildings, equipment, furnishings, grounds, and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to East Hartford Public Schools. The Contractor shall leave the site in a condition equal to or better than prior to start of work.
- B. Provide protective coverings and barricades necessary to prevent damage or physical injury. The Contractor shall be held responsible for, and must make good at his own expense, any water damage or any other type of damage due to improper coverings. Protect at all times the public and building personnel from injury.

- C. Provide temporary protection for installed products. Control traffic in the immediate area to minimize damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.
- E. Provide temporary barriers to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.

01540 SECURITY

- A. Provide security program and facilities to protect work, existing facilities, and Owner's operations from unauthorized entry, vandalism and theft. Coordinate with Owner's security program.
- B. The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.

01550 TRAFFIC WAYS

- A. The Contractor may use on site paved roads and parking areas, but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, construction operations, or in any other manner.
- B. Public roads and the existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.

01569 CLEANING

- A. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.

- C. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.
- D. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.
- E. Remove waste materials, debris and rubbish from the site and dispose of legally off-site. No scrap/debris shall remain inside the building or anywhere on site upon final acceptance of the project.

01590 FIELD OFFICES AND SHEDS

- A. East Hartford Public Schools will furnish without charge, one room for the Contractors use an office in the existing building. The Contractor shall be responsible for furniture and shall keep the area clean and return it to its original condition after use. The Contractor shall provide a 5 lb ABC fire extinguisher and an approved first aid kit.
- B. Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.
- C. Remove temporary materials, equipment services, and construction before Substantial Completion.
- D. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified, or to original conditions.

01610 TRANSPORTATION AND HANDLING

- A. Materials and equipment shall be delivered, stored and handled to prevent intrusion of foreign matter and damage by weather or breakage. Packaged materials shall be delivered and stored in original, unbroken packages.
- B. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct, and products are undamaged.
- C. Packages, materials and equipment showing evidence of damage will be rejected and replaced at no additional cost to the Owner.

01620 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity range required by manufacturer.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Arrange storage to provide access for inspection. Periodically inspect to ensure products are undamaged, and are maintained under required conditions. Keep log showing date, time, and problems, if any.

01710 FINAL CLEANING

- A. Before final inspection, clean the work in readiness for occupancy.
- B. Clean interior and exterior surfaces to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, HEPA vacuum carpeted and soft surfaces. Clean equipment and fixtures. Also:
 - 1. Remove tape adhesive, spray glue and encapsulant stains; wash and polish glass. Repaint or refinish to match existing all surfaces which can not be totally cleaned of material deposited during this work.
 - 2. Clean and polish tile and other glazed surfaces.
 - 3. Clean floors; wax and buff resilient tile. Clean vinyl or rubber base.
 - 4. Wash washable surfaces of equipment and fixtures.
 - 5. HEPA vacuum and/or dust walls, ceilings, lighting fixtures, ceiling diffusers, and other wall and ceiling items.
 - 6. Remove defacements, streaks, fingerprints and erection marks.
 - 7. Clean site; sweep paved areas, rake other surfaces.
- C. Remove waste and surplus materials, rubbish, and construction equipment and facilities from the site.

- D. Leave the building clean and ready for occupancy. If the Contractor fails to clean up, East Hartford Public Schools may do so with the cost charged to the Contractor.

01720 PROJECT RECORD DOCUMENTS

- A. The Contractor shall keep one copy of the Specifications, Drawings, Addenda, approved Shop Drawings, Change Orders, Schedules and Instructions, in good order at the site and marked to record all changes made during construction. The documents shall be available to the Design Consultant at all times.

01740 WARRANTIES AND GUARANTEES

- A. The Contractor shall guarantee all materials and workmanship for a period of one year from the date of acceptance of the work. In addition, the Contractor shall furnish the warranties listed below. Submit to East Hartford Public Schools in the suppliers' standard form or in the form given below if there isn't a standard form available.
- B. Submit certification that finish materials are fire rated as specified.
- C. Forms of Bonds, Guarantees, Warranties:

Mr. James Rovezzi
East Hartford Public Schools
734 Tolland Street
East Hartford, Connecticut 06108

(Project Title and Number)

I (We) hereby guarantee (or warranty) the _____ work on the referenced project for a period of ___ years from _____, 20__ against the failures of workmanship and materials in accordance with the requirements of Division __, Page __, Paragraph __ of the Contract Specifications.

Signed _____ General Contractor
(or authorized agent)

- D. Bonds shall be by approved Surety Companies, made out to East Hartford Public Schools on company's standard form.

- E. Guarantees, warranties or bonds supplied by Subcontractors, Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the General Contractor to be the product installed on the project and be countersigned by the General Contractor.

01741 INSURANCE

- A. **The East Hartford Board of Education and the Town of East Hartford, its officials, volunteers, boards and commissions** must be named additional insured on all insurance policies and each shall be given a Certificate of Insurance evidencing such coverage.
- B. Before the contract is executed, the Contractor will be required to file with East Hartford Public Schools a Certificate of Insurance, executed by an insurance company licensed to do business satisfactory to the State of Connecticut and in a form acceptable to East Hartford Public Schools stating that with respect to the contract awarded, the Contractor carries insurance in accordance with the following requirements and stipulations: (See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** Early Childhood Learning Center at Hockanum School Steam Tunnel Abatement Project.)
1. Workers Compensation:
 - a. See Bid Document #1824-23 referencing Workers Compensation
 2. Commercial General Liability (including but not limited to Premises and Operations; Independent Contractors Protection; Products and Completions; Broad Form Property Damage; and Asbestos Liability):
 - a. Bodily Injury
See Bid Document #1824-23 referencing General Liability
 - b. Personal Injury, with Employment Exclusion Deleted
See Bid Document #1824-23 referencing General Liability

- c. Property Damage
See Bid Document #1824-23 referencing General Liability
- 3. Commercial Automobile Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Automobile Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Automobile Liability Ins.
- 4. Contractual Liability:
 - a. Bodily Injury
See Bid Document #1824-23 referencing Contractual Liability Ins.
 - b. Property Damage
See Bid Document #1824-23 referencing Contractual Liability Ins.
- 5. All Subcontractors on this project shall carry the same coverages as required for the General Contractor in Paragraphs 2 through 4 of this Section.

01742 INDEMNIFICATION

- A. See Bid Document #1824-23 referencing **Indemnification and Insurance Requirements for Construction, Professional or Labor Services** Early Childhood Learning Center at Hockanum School Project.
- B. The Contractor understands that it shall reimburse and hold East Hartford Public Schools harmless against any and all delays caused by the Contractor beyond the specified contract period which causes the loss of revenues to East Hartford Public Schools as a result of that delay.

END OF SECTION

PART 1 – GENERAL

1.1 SCOPE

- A. The work specified herein shall be the abatement of asbestos-containing materials by persons who are knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of asbestos-containing material, and the subsequent cleaning of the affected environment. The Contractor shall have a Competent Person in control on the job site at all times during asbestos abatement work. This person must comply with applicable Federal, State and Local regulations that mandate work practices, and be capable of performing the work of this contract.
- B. The Contractor shall be licensed by the State of Connecticut in accordance with State of Connecticut Regulations, Sections 20-440-1 through 9. Should any portion of the work be subcontracted, the subcontractor must also be licensed in accordance with these regulations.
- C. East Hartford Public Schools will retain the services of a State of Connecticut licensed Project Monitor, TRC Environmental Corporation (TRC), for protection of its interests and those using the building. Pre-abatement, during abatement and post-abatement sampling will be conducted as deemed necessary.
- D. Deviations from this Specification require the written approval from East Hartford Public Schools.
- E. Restore all work areas and auxiliary areas utilized during abatement (or related work) to conditions equal to or better than original. Any damage caused during the performance of abatement activities (or related work) shall be repaired by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, removal of ceiling tiles or concrete blocks, broken glass, etc.) at no additional expense to East Hartford Public Schools. The Contractor is responsible for protecting all objects in work areas that are permanent fixtures or too large to remove.

The Contractor shall be responsible for the following general requirements:

EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
State Project No. 043-0250CV

1. Obtain all approvals and permits, and submit all notifications required.
 2. Provide, erect, and maintain all planking, bracing, shoring, barricades, and warning signs.
 3. Unless otherwise specified, all equipment, fixtures, piping and debris resulting from demolition shall become the property of the Contractor and shall be removed from the premises.
 4. Materials to be reused shall be removed with the utmost care to prevent damage of any kind. All material to be reused shall be stored as directed. The Contractor shall coordinate with East Hartford Public Schools as to the storage location.
 5. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
- F. It shall be the responsibility of the Contractor to protect and preserve in operating condition, all utilities traversing the building and site. Damage to any utility due to work under this Contract shall be repaired to the satisfaction of East Hartford Public Schools at no cost to East Hartford Public Schools.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall supply all labor, materials, equipment, services, insurance (with specific coverage for work on asbestos), and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations and these specifications.
- B. The asbestos abatement work shall include the removal of asbestos-containing materials as specified herein. This abatement project was designed by Mr. Gregory Kaczynski, a State of Connecticut licensed Asbestos Project Designer (#000328) from TRC. TRC is the Designer/Consultant for the project.

Work Area 1 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Pipe insulation debris**

Notes:

- **Fiberglass/PVC insulation on piping shall remain.**

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 2 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Pipe insulation/mudded fittings**
- **Pipe insulation/fitting debris**

Notes:

- **Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access point as described in Work Area 5 shall be performed.**
- **The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in tunnels.**

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 3 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Pipe insulation/mudded fittings**
- **Pipe insulation/fitting debris**

Notes:

- **Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access points as described in Work Area 5 shall be performed.**
- **The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in tunnels.**
- **It is presumed that the tunnels in Work Area 3 & 4 are not connected (similar to the tunnels in Work Area 2 & 3). At the start of the project, the Contractor shall determine whether or not these tunnel sections are actually separate. Based on the findings, the Contractor may combine or sub-divide these tunnel sections with approval from the Architect and Town of East Hartford.**

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 4 – As Shown on Drawing HAZ-001

Remove ACM in the form of:

- **Pipe insulation/mudded fittings**
- **Pipe insulation/fitting debris**

Notes:

- **Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access point as described in Work Area 5 shall be performed.**
- **The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in tunnels.**
- **It is presumed that the tunnels in Work Area 3 & 4 are not connected (similar to the tunnels in Work Area 2 & 3). At the start of the project, the Contractor shall determine whether or not these tunnel sections are actually separate. Based on the findings, the Contractor may combine or sub-divide these tunnel sections with approval from the Architect and Town of East Hartford.**
- **There is a large open crawl space (with a dirt floor) under the gymnasium in Work Area 4. ACM pipe insulation/mudded fittings and associated debris are presumed to run/be along the entire perimeter of this area only. An allowance is included for the raking of the dirt floor in the center area of this open crawl space under the gym (where no ACM insulation is located) if deemed necessary by the Project Monitor. Otherwise, the separation of center area of the open crawl space under the gym from the perimeter and tunnel sections with ACM pipe insulation shall be performed in accordance with pre-approved CTDPH Alternative Work Practice.**

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 5 – As Shown on Drawing HAZ-002

Remove ACM in the form of:

- **Openings made through the 1st floor directly into the tunnels which contain ACM pipe insulation/mudded fitting insulation/debris.**

Notes:

- **Work Area 5 includes the creation of four (4) additional access points from the first floor of the school (as shown on HAZ-002), through the floor slab and into the tunnels being abated below. The purpose of these access points is to facilitate the tunnel abatement.**
- **The Contractor may propose alternative and/or additional access point locations; however, this would require prior approval from the Town of East Hartford.**
- **The Contractor shall submit architectural plans, designed by a Connecticut licensed architect, which show the exact location and dimensions of each opening and address the demolition work through the floor. These openings shall be a minimum of 2.5' x 2.5' in size and shall be suitable for entry and exit into the tunnels. In addition, these plans shall address the installation of a hatch door at all four (4) access points/openings following the completion of the removal and re-insulation of the tunnels. These plans will require review and approval from the Town of East Hartford.**
- **The Contractor is responsible for the protection of all piping in tunnels beneath the Work Area 5 locations. Any first floor furnishings impacted by the demolition shall also be replaced and/or returned to as new.**
- **The paint on the wood cabinets/shelving along the perimeter of the first floor rooms is presumed to be Lead-Based Paint (>1 mg/cm²). If it is to be impacted by the creation of any of the access points, then this work shall also be performed in accordance with Specification 02830 Lead Awareness.**

Contractor shall be responsible for removal of all walls, counters, cabinets, sinks, appliances, trim work, carpeting, etc., necessary in order to create access points. Asbestos removal shall be performed under full containment conditions with a pressure differential and contiguous decontamination system in accordance with CTDPH 19a-332a-5, 6 and 7, OSHA Class I and USEPA NESHAP requirements. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM).

1.3 DEFINITIONS

Accessible - A space easily accessed and which can be entered or seen without demolition.

Adequately Wet - Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

AHERA - Asbestos Hazard Emergency Response Act - U. S. EPA regulation 40 CFR Part 763 under Section 203 of Title II of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2643. This rule mandates inspections, accreditations of persons involved with asbestos, and -final air clearances following abatement in public and private schools, and public and commercial buildings.

Asbestos - The term asbestos includes chrysotile, amosite, crocidolite, asbestiform tremolite, asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered.

Asbestos Abatement - The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials.

Asbestos-Containing Waste Materials (ACM Waste) - Any waste that either contains or is contaminated with asbestos. This term includes asbestos-containing materials and materials contaminated with asbestos including disposable equipment and clothing, filters from control devices, polyethylene sheeting generated from disassembly of a containment structure, and any other items from within regulated areas which cannot be properly decontaminated.

Asbestos Control Area - An area where asbestos abatement operations are performed

which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glovebag".

Asbestos Fiber - A particulate form of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals having a length of five micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Authorized Asbestos Disposal Facility - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

Category I Non-Friable Asbestos-Containing Material (ACM) - Asbestos-containing packings, gaskets, resilient Floor coverings and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II Non-Friable ACM - Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Class I Asbestos Work - Activities involving the removal of TSI and surfacing ACM and PACM.

Class II Asbestos Work - Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

Class IV Asbestos Work - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Competent Person - In addition to the definition in 29 CFR 1926.32(f), one who is

capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763). The Asbestos Abatement Site Supervisor as defined in RCSA>

Concealed Space - Space which is out of sight. Examples of a concealed space include area above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

Confined Space - See Permit Required Confined Spaces (PRCS).

Critical Barrier - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the Work Area and uncontaminated areas outside of the Work Area, including the outside of the building.

Decontamination Enclosure System - A series of rooms separated from the Work Area and from each other by air locks, for the decontamination of workers and equipment.

Demolition - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DEEP - The Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106.

DPH - The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06106.

Differential Pressure - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

Encapsulant - Specific materials in various forms used to chemically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulant as follows:

1. Removal Encapsulant (can be used as a wetting agent).
2. Bridging Encapsulant (used to provide a tough durable surface coating to asbestos-containing material).
3. Penetrating Encapsulant (used to penetrate the asbestos containing material down to substrate, encapsulating all asbestos fibers).
4. Lock-down Encapsulant (used to seal off "lock-down" minute asbestos fibers left on surfaces from which asbestos containing materials have been removed).

Encapsulation - The application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

Engineering Controls - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

Equipment Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

Exposed - Open to view.

Finished Space - Space used for habitation or occupancy where rough surfaces are plastered, paneled or otherwise treated to provide a pleasing appearance.

Fixed Critical Barrier - Barrier constructed of 2" x 4" wood or metal framing 16" O.C., with 2" plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Work Area side to prevent unauthorized access or air flow.

Fixed Object - A piece of equipment or furniture in the Work Area which cannot be removed from the Work Area, as determined by the Project Monitor.

Friable Asbestos Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy, that when dry can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Full Containment – Two layers of six (6) mil poly on walls and floors, contiguous decontamination units, pressure differential between work area and adjacent area and engineering controls.

Glovebag - A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used glovebags provide a small Work Area enclosure typically used for small scale asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101).

Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. This technique requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

HEPA Filter Equipment - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

Inaccessible - A space not accessible and which cannot be entered or seen without demolition.

Lock-Down - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

Mini-Containment - A procedure using a single layer of polyethylene sheeting to contain the Work Area. Access to the mini-containment is controlled by an air lock which also serves as a Holding Area. This procedure requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Public Schools Project Monitor and DPH when not pre-approved.

Movable Object - A piece of equipment or furniture in the Work Area which can be removed from the Work Area, as determined by the Project Monitor.

Negative Exposure Assessment - For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are not more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

Non-Friable Asbestos-Containing Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that when dry cannot be crumbled, pulverized or reduced to powder by hand pressure.

NPE - Negative pressure enclosure.

Owner or Operator of a Demolition or Renovation Activity - Any person who owns, leases, operates, controls and supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation, or both.

Permissible Exposure Limit (PEL) - (1) time-weighted average unit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) or air as an eight (8) hour time-weighted average time (TWA). (2) excursion limit. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fibers per cubic centimeter of air (f/cc) as averaged over a sampling period of thirty (30) minutes.

Permit Required Confined Spaces (PRCS) - A confined space that has the potential to cause harm to the entrants. These spaces could contain a hazardous atmosphere, material that could engulf the entrant, have an internal configuration that could entrap an entrant and any other serious safety or health hazard. PRCS require special entry precautions which could include retrieval systems, ventilation, monitoring and air line respirators. A written permit is required to be completed prior to entry. All TRC personnel entering a PRCS must follow TRC's health and safety program and the requirements for entering PRCS.

Personal Monitoring - Air sampling within the breathing zone of an employee.

Pre-Clean - The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

Presumed Asbestos-Containing Material (PACM) - TSI and surfacing material found in buildings constructed no later than 1980.

Project Monitor - The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut DPH regulations (Sections 20-440-1 through 20-440-9, inclusive). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts

Registry.

Regulated Area - Area established by the employer to demarcate areas where Class I, II and III work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the Permissible Exposure Limit.

Regulated Asbestos-Containing Material (RACM) - (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Renovation - Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting members are wrecked or taken out are demolitions.

Repair - Overhauling, rebuilding, reconstructing or reconditioning of structures or substrates where asbestos, is present.

Thermal System Insulation (TSI) - Materials applied to pipes, fittings, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Unfinished Space - Space used for storage, utilities or work area where appearance is not a factor. Examples of an unfinished space include crawlspace; pipe tunnel and similar spaces.

Visible Emissions - Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Visible Residue - Any debris or dust on surfaces in areas within the Work Area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos.

Waste Generator - Any owner or operator of a source whose act or process produces

asbestos-containing waste material.

Waste Shipment Record - The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area - Specific area or location where the actual work is being performed or such other area of a facility which the Commissioner determines may be hazardous to public health as a result of such asbestos abatement.

Worker Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled passage of workers and authorized visitors, typically consisting of a Clean Room, a Shower Room and an Equipment Room that is under negative pressure.

1.4 REFERENCES

A. The current issue of each document shall govern. Where conflict among requirements or with these specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1001 - Asbestos, Tremolite, Anthophyllite, and Actinolite

29 CFR 1910.134 - Respiratory Protection

29 CFR 1926.21 - Safety Training and Education

29 CFR 1926.32 - Competent Person

29 CFR 1926.51 – Sanitation

29 CFR 1926.59 - Hazard Communication.

29 CFR 1926.62 - Lead in Construction

29 CFR 1926.200 - Accident Prevention Signs and Tags

29 CFR 1926.417 - Lockout and Tagging of Circuits

29 CFR 1926.1101 - Asbestos

2. Environmental Protection Agency (EPA)

40 CFR 61, Subpart M - National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule

40 CFR 763, Subpart E - Asbestos Hazard Emergency Response Act (AHERA)

40 CFR 763, Subpart G - Worker Protection Rule

3. State of Connecticut, Department of Public Health (DPH) Regulations

Section 20-440-1 through 20-440-9- Standards for Asbestos Abatement

Section 22a-209-1; 22a-209-8(i); 22a-449(c)-11; and 22a-449(c)-100 - Hazardous Waste Management Regulations

4. American National Standards Institute (ANSI)

ANSI Z9.2 - Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2 - Respiratory Protection

5. American Society of Testing and Materials (ASTM)

ASTM E 84 - Surface Burning Characteristics of Building Materials

ASTM E 96 - Water Vapor Transmission of Materials

ASTM E 119 - Fire Tests of Building and Construction Materials

ASTM E 736 - Cohesion/Adhesion of Sprayed Fire-Resistive Materials
Applied to Structural Members

ASTM E 1368 - Visual Inspection of Asbestos Abatement Projects

ASTM E 1494 - Encapsulants for Spray- or Trowel- Applied Friable
Asbestos-Containing Building Materials

6. Underwriters Laboratories, Inc. (UL)

UL 586 - High-Efficiency, Particulate, Air Filter Units

1.5 DOCUMENTATION

A. Submit two copies of the following documentation to ensure compliance with the applicable regulations. An up-to-date copy shall be retained at the job site at all times. Submission must be made prior to the Pre-abatement Meeting, which will be held two weeks prior to the start of abatement. The General Contractor, Abatement Contractor, Architect, Asbestos Project Designer and Owners Representative shall be present at the meeting.

B. Manufacturer's Catalog Data:

Local Exhaust Equipment
Vacuum Equipment
Respirators
Pressure Differential Automatic Recording Instrument
Surfactant
Chemical Encapsulant
Polyethylene Sheeting
Airless Sprayers
Portable Shower Units
MSDS for All Materials Delivered to the Site
Letters of Compatibility for Encapsulant and Coating Materials

C. Statements:

Notification to State of Connecticut Department of Public Health
(ten (10) days before the start of asbestos abatement)

Notification to EPA Region 1
(ten (10) days before the start of asbestos abatement)

Worker Medical Certification

Worker Training Certification

Worker Respirator Fit Testing

OSHA Laboratory Certification

Contractor's Project Monitor Certification

Landfill Approval

Safety Plan

Respirator Protection Plan

Initial Exposure Assessment

1. Copies of all required notifications, approvals and permits for the removal, disposal and transport asbestos-containing or contaminated materials.
2. Documentation from a physician certifying that all employees who may be exposed to airborne asbestos in excess of the background level have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring required in 29 CFR 1926.1101. They shall also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform as well as special work place conditions such as high temperature, high humidity and chemical contaminants which to which he/she may be exposed.
3. Documentation certifying that all employees have received training in the proper handling of materials that contain asbestos; understand the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis.

4. Documentation of respiratory fit testing for all employees who must enter the Work Area. This fit testing shall be in accordance with qualitative procedures as detailed in 29 CFR 1926.1101.
5. Establish and supervise in accordance with 29 CFR 1926.21, a program for the education and training of workers in the recognition, avoidance and prevention of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury. Include any site-specific information to address health and safety procedures unique to this project (i.e. Confined Space Entry).
6. Establish a written Respiratory Protection Plan in accordance with 29 CFR 1910.134. This plan shall establish procedures governing the selection and use of respirators and shall include such information as training in the proper use of respirators; medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required; training in proper use and limitations of respirators; respirator fit testing; regular inspection and evaluation of the continued effectiveness of the program; and other elements included in the standard.
7. Demonstrate that employee's exposures will be below the PELs for Class I asbestos work until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise make a Negative Exposure Assessment.

D. Construction Schedule:

A construction schedule which shows how the pipe insulation removal and installation will be coordinated and completed within the construction timeline provided. Include the installation of access floor hatches to tunnels as well.

E. Records:

Sign-in/out Logs
Pressure Differential Recording Data
NPE Inspection and Smoke Test Logs
Rental Equipment Statements

When rental equipment is to be used in removal areas or to transport waste materials, submit a copy of written notification provided to the rental company informing them of the nature of use of the rented equipment.

- F. During the asbestos abatement, submit to the Asbestos Project Designer and receive acknowledgment of the following:
 - 1. Results of the personal air sampling data within one (1) working day of when the sampling was done.
 - 2. Copies of all waste shipment records of asbestos waste that is transported from the facility site.
- G. At the conclusion of the project, submit to the Asbestos Project Designer and receive acknowledgment of the following:
 - 1. The original copy of all completed waste shipment records. This shall be submitted to the Asbestos Project Designer within 35 days from the date the waste was transported from the facility site.

1.6 PERSONNEL PROTECTION

- A. Instruct workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- B. Ensure workers are fully protected with respirators and protective clothing during work in the Asbestos Control Area, where there is the possibility of disturbing asbestos-containing or asbestos-contaminated materials.
- C. Respiratory protection shall meet the requirements of OSHA as required in 29 CFR 1910.134 and 29 CFR 1926.1101. Provide appropriate respiratory protection for each worker and ensure usage during potential asbestos exposure. As a minimum, workers shall be equipped with powered air-purifying respirators (PAPR) with HEPA filters.
- D. Select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the

provisions of 30 CFR Part 11. Provide an adequate supply of filter elements for respirators in use.

E. Minimum respiratory protection shall be as follows:

Airborne concentration of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals	Required Respirator
Not in excess of 1 f/cc (10 × PEL) or otherwise as required	Half mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 × PEL)	Full face piece air purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc equipped with (100 × PEL)	Any powered air-purifying respirator high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1000 × PEL)	Full face piece supplied air respirator operated in pressure demand mode.

- Note:
1. Respirators assigned for higher airborne fiber concentrations may be used at lower concentrations.
 2. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.
 3. The Contractor shall provide a full face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus for all persons within the regulated area where apparatus for all persons within the regulated area where Class I work is being performed for which a negative exposure assessment has not been produced and, the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full-face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-

contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8 hour time weighted average.

4. If compressed air is used for supplied air respirators, this air will meet the requirements for grade D breathing air as described by the Compressed Gas Association Commodity Specification G-7.1-1996. The compressor will be equipped with the necessary safety devices and absorbents/filters and be situated to avoid entry of contaminated air. In addition, the compressor will be equipped with alarms to indicate failure or overheating, and additional alarms for indicating the presence of carbon monoxide. Airline couplings will be incompatible with outlets for other gas systems to prevent inadvertent servicing of airline respirators with non-respirable gases.

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- F. Provide and require all workers to wear protective clothing in Work Areas where asbestos fiber concentrations exceed permissible limits established by OSHA. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
 - G. Provide all authorized persons entering contaminated areas with proper respirators and protective clothing.
 - H. Ensure that all workers and authorized persons enter and leave the Asbestos Control Area through the Worker Decontamination Enclosure System.
 - I. Ensure all contaminated protective clothing remains in the Equipment Room for reuse or disposal of as contaminated waste.
 - J. Ensure workers do not eat, drink, smoke or chew gum or tobacco while in the Asbestos Control Area.

1.7 EQUIPMENT REMOVAL PROCEDURE

- A. Clean surfaces of contaminated containers and equipment thoroughly by vacuuming with HEPA filtered equipment and wet wiping before moving such items into the Equipment Decontamination Enclosure System for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave the Asbestos Control Area through the Equipment Decontamination Enclosure

System.

1.8 SEQUENCE OF WORK

- A. Proceed in accordance with the sequence of work as mutually agreed upon with East Hartford Public Schools.
- B. The following sequence of work shall be used for the asbestos abatement work:
 - 1. A visual inspection of the Work Area to determine pre-existing damage to facility components. (Movable objects (furniture, equipment & supplies) will be removed by the Owner prior to Work Area being turned over to the Contractor.)
 - 2. Release of work area to the Contractor.
 - 3. All temporary utilities required for the project shall be on site and operational prior to the initiation of asbestos work.
 - 4. Abatement of all asbestos-containing materials by the Contractor.
 - 5. Air sampling by East Hartford Public School's Project Monitor for re-occupancy.
 - 6. Cleanup by the Contractor. Work Areas must be returned to their original condition or better.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description. Do not use damaged or deteriorating materials. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire retardant polyethylene sheet in roll size to minimize the frequency of joints, shall be delivered to job site with factory label indicating four (4) or six (6) mil.
- B. Polyethylene disposable bags shall be six (6) mil with pre-printed label. Disposable bags shall be opaque.
- C. Tape shall be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces. Tape must be capable of adhering under both dry and wet conditions.
- D. Surfactant (wetting agent) shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration one (1) ounce surfactant to five (5) gallons of water or as directed by the manufacturer.
- E. Containers must be impermeable and shall be both air and watertight. Containers shall be labeled in accordance with OSHA Standard 29 CFR 1926.1101 and EPA NESHAPS 61.150 as appropriate.
- F. Labels and signs shall conform to OSHA Standard 29 CFR 1926.1101.
- G. Encapsulant shall be bridging or penetrating type which has been approved by the Design Consultant. Usage shall be in accordance with manufacturer's printed technical data. Encapsulant must be compatible with new materials being installed. Encapsulant shall be clear.
- H. Glovebag assembly shall be manufactured of six (6) mil transparent polyethylene or PVC with two (2) inward projecting long sleeve gloves, an internal pouch for tools, and an attached labeled receptacle for waste.

2.2 TOOLS AND EQUIPMENT

- A. Tools and equipment shall be suitable for asbestos removal.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter

cassettes shall be provided in sufficient quantities for the project.

- C. Electrical equipment, protective devices, emergency generators and power cables shall conform to all applicable codes.
- D. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. Showers shall be equipped with hot and cold or warm running water. One shower stall shall be provided for each eight workers.
- E. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. No air movement system or air filtering equipment shall discharge unfiltered air outside the Asbestos Control Area.
- F. Pressure differential automatic recording instrument shall be provided to ensure exhaust air filtration devices provide the minimum pressure differential required between the Work Area and occupied areas of the facility.
- G. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Asbestos Control Area.
- H. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 microns in diameter or larger.
- I. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the Work Area shall be provided as appropriate for the work.

PART 3 - EXECUTION

3.1 PREPARATION OF WORK AREA ENCLOSURE SYSTEM

- A. Prior to beginning work, the Design Consultant, East Hartford Public School's Representative and Contractor shall perform a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit to the East Hartford Public School's Representative a list which shall include all damaged areas not scheduled to be repaired under this Contract and include photographs, video tapes as applicable.
- B. Post warning signs meeting the specifications of OSHA 29 CFR 1910 and 29 CFR 1926.1101 at each Regulated Area. In addition, signs shall be posted at all approaches to Regulated Areas so that an employee may read the sign and take the necessary protective steps before entering the area. Additional signs may require posting following construction of work place enclosure barriers.
- C. Utilize engineering controls and personnel protective equipment while installing enclosures and supports when asbestos-containing materials may be disturbed.
- D. When feasible, shut down and lock out electrical power, including all receptacles and light fixtures. Protect receptacles and light fixtures remaining in the Work Area with six (6) mil polyethylene and seal with tape. Protect fire alarm system components remaining in the area with six (6) mil polyethylene and seal with tape. Coordinate all power and fire alarm isolation with East Hartford Public Schools.
- E. Provide temporary power and lighting, if applicable, and ensure safe installation, including ground fault protection, of temporary power sources and equipment in compliance with applicable electrical code and OSHA requirements. The Contractor is responsible for proper connection and installation of electrical wiring.
- F. Shut down and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to other areas of the building. Seal all vents. Construct wooden platform over gas burners and gas trains to prevent damage.
- G. Pre-clean movable objects within the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such

objects from Work Areas to a temporary location.

- H. Pre-clean fixed objects within the proposed Work Areas, using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with two layers of six (6) mil polyethylene sheeting sealed with tape. Objects which must remain in the Work Area and which require special ventilation or enclosure include electrical equipment, pumps, compressors, control panels, and meter equipment.
- I. Clean the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.
- J. Seal off all openings between the Work Area and the uncontaminated areas outside of the Work Area with critical barriers. Doorways and corridors, which will not be used for passage during work, must be sealed with fixed critical barriers.
- K. Conspicuously label and maintain emergency and fire exits from the Asbestos Control Area satisfactory to the Project Monitor.

3.2 WORKER DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area, a Worker Decontamination Enclosure System consisting of Equipment Room, Shower Room and Clean Room in series. Access to the Work Area shall only be through this enclosure.
- B. Access between rooms in the Worker Decontamination Enclosure System shall be through double flap curtained openings (air locks). Other effective designs are permissible. The Clean Room, Shower Room and Equipment Room located within the Worker Decontamination Enclosure, shall be completely sealed ensuring sole source of airflow into the Asbestos Control Area originates from the outside uncontaminated areas.
- C. The Clean Room shall be adequately sized to accommodate workers and shall be equipped with a suitable number of hooks, lockers, shelves, etc., for workers to store personal articles and clothing. Changing areas of the Clean Room shall be suitably screened from areas occupied by the public.

- D. The Shower Room shall be of sufficient capacity to accommodate the number of workers. Supply warm water to showers. Provide one shower for each eight workers. No worker or other person shall leave an Asbestos Control Area without showering. Shower water shall be collected and filtered using best available technology and dumped down an approved drain.
- E. No personnel or equipment shall be permitted to leave the Asbestos Control Area unless just decontaminated by showering, wet cleaning or HEPA vacuuming to remove all asbestos debris. No asbestos-contaminated materials or persons shall enter the Clean Room.

3.3 EQUIPMENT DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area an Equipment Decontamination Enclosure System consisting of two (2) totally enclosed chambers divided by a double flap curtained opening. Other effective designs are permissible. This enclosure must be constructed so as to ensure that no personnel enter or exit through this unit.

3.4 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. Occupied areas and/or building space not within the Asbestos Control Area shall be separated from asbestos abatement Work Areas by means of airtight barriers. Barriers at openings with dimensions exceeding two (2) feet in both directions shall be blocked with fixed critical barriers.
- B. Do not impair required building exits from any occupied building area. Where normal exits have been blocked by the asbestos work, provide temporary exit signs directing building occupants to the nearest available exit location.
- C. For Class I work, visually inspect and smoke test barriers to assure an effective seal. Repair defects immediately.
- D. Create a pressure differential in the range of 0.02 to 0.04 inches of water column between the Work Area and occupied areas by the use of acceptable pressure differential equipment. Provide a sufficient quantity of units to exhaust the volume of air within the Asbestos Control Area a minimum of four times per hour. Continuously monitor the pressure differential between the Work Area and occupied areas utilizing recording type equipment to ensure exhaust air filtration equipment maintains a minimum pressure differential of 0.02 inches of water

column.

3.5 ASBESTOS REMOVAL

- A. A Competent Person shall be on the job at all times to ensure the establishment and maintenance of the negative pressure enclosure (NPE) and proper work practices throughout the project.
- B. Do not begin abatement work until authorized by the East Hartford Public School's Project Monitor. Follow the steps for abatement as outlined in Section 1.8, Sequence of Work.
- C. Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches, and smoke tested for leaks, and any leaks sealed. Results of the NPE inspection shall be logged.
- D. Spray asbestos materials with amended water, using airless spray equipment capable of providing a "mist" application to reduce the release of fibers during the removal operation.
- E. In order to maintain indoor asbestos concentrations at a minimum, remove the wet asbestos in manageable sections. Materials shall not be allowed to dry out. Material drop shall not exceed 8 feet. For heights up to 15 feet provide inclined chutes or scaffolding to intercept drop. For heights exceeding 15 feet provide enclosed dust-proof chutes.
- F. Fill disposal containers (six (6) mil polyethylene bags or fiber drums) as removal proceeds, seal filled containers, apply caution labels and clean containers before removal to wash area. Bags shall be securely sealed to prevent accidental opening and leakage by taping in gooseneck fashion. Bags may be placed in drums for staging and transportation to the disposal site. Bags shall be decontaminated by wet cleaning and HEPA vacuuming before being placed in clean drums and sealed with locking ring tops. Large components removed intact may be wrapped in two (2) layers of six (6) mil polyethylene sheeting secured with tape for transport to the waste disposal site. Small components and asbestos containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) which could tear polyethylene bags and sheeting shall be placed in clean drums and sealed with locking ring tops. Wet clean each container thoroughly before moving to Holding Area. Ensure that workers do not enter from uncontaminated

areas into the Washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the Equipment Decontamination Enclosure.

- G. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet.
- H. If at any time during asbestos removal, should the East Hartford Public School's Project Monitor suspect contamination of areas outside the Work Area, the Contractor shall stop all abatement work and take steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections determine decontamination.
- I. Containerize asbestos-containing waste material removed daily. Do not allow ACM to remain on the floor overnight, allowing it to dry out
- J. Once properly containerized and removed from containment, asbestos waste shall be stored in a locked waste container.

3.6 CLEAN-UP PROCEDURE

- A. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris which may have splattered or collected on the polyethylene wall covering. Carefully remove the cleaned outer layer of polyethylene from the walls, fold inward as material is being removed, and place in disposal containers. Any debris which may have leaked behind the outer layer shall be removed by HEPA vacuuming and/or wet cleaning.
- B. Remove contamination from the exteriors of the negative air machines, scaffolding, ladders, extension cords, hoses and other equipment inside the Work Area. Cleaning may be accomplished by brushing, HEPA vacuuming and/or wet cleaning.
- C. The East Hartford Public School's Project Monitor shall conduct a thorough visual inspection utilizing a high-intensity flashlight, with the containment barriers in place, to detect visible accumulations of dust or bulk asbestos-containing materials remaining in the Work Area. Should dust, debris or residue

be detected, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate clean-up of the work site. At the conclusion of the final visual inspection, the East Hartford Public School's Project Monitor and the Contractor's supervisor shall certify that they have visually inspected the work area and have found no dust, debris or residue.

- D. Once the area has been re-cleaned, any equipment, tools or materials not required for completion of the work, shall be removed from the Work Area. Negative air filtration devices shall remain in place and operating for the remainder of the clean-up operation.
- E. Apply a lock-down encapsulant to all surfaces within the Work Area from which asbestos has been removed. The Contractor is responsible for ensuring that the encapsulant and the new floor tile mastic are compatible i.e. the new tiles will adhere to the floor (if applicable).
- F. Air sampling for re-occupancy clearance shall be undertaken using aggressive sampling techniques. Analysis of clearance samples shall follow State of Connecticut Regulations, Section 19a-333-7-(h). Areas which do not comply shall continue to be cleaned by and at the Contractors expense, until the specified Standard of Cleaning is achieved as evidenced by results of air testing. When the Work Area passes the re-occupancy clearance, controls established by this specification may be removed.
- G. Remove all remaining polyethylene, including critical barriers, and Decontamination Enclosure Systems leaving negative air filtration devices in operation. HEPA vacuum and/or wet wipe any visible residue which is uncovered during this process. Dispose of poly as asbestos waste.

3.7 REINSTALLATION OF DISPLACED EQUIPMENT

- A. After re-occupancy is granted, re-secure mounted items removed during the course of the work to their former positions.
- B. Re-establish to proper working order all HVAC, mechanical and electrical systems including lights, exit lights, fire alarm systems and sound systems.

- C. Install new filters in HVAC systems and dispose of used filters as asbestos-containing waste. All systems shall be function tested in the presence of the East Hartford Public School's Representative.

3.8 DISPOSAL OF ASBESTOS

- A. Disposal of asbestos-containing and/or asbestos contaminated material shall occur at an authorized site and must be in compliance with the requirements of, and authorized by the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, or other designated agency having jurisdiction over solid waste disposal.
- B. Disposal approval shall be obtained prior to commencement of asbestos removal.
- C. Warning signs must be attached to vehicles used to transport asbestos-containing waste. Warning signs shall be posted during loading and unloading of disposal containers. The signs must be posted so that they are plainly visible.
- D. Waste removal dumpsters and cargo areas of transport vehicles shall be lined with a layer of six (6) mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first, and shall be extended up sidewalls 12-inches. Wall sheeting shall overlap floor sheeting 24-inches and shall be taped into place.
- E. The completed waste shipment record shall be provided to the East Hartford Public School's Representative.

3.9 CONTRACTOR RESPONSIBILITY

- A. Conduct air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours collection, and shall be available for review until the job is complete.

3.10 AIR SAMPLING SCHEDULE

- a. At a minimum, air sampling by the East Hartford Public School’s Project Monitor will be conducted in accordance with the following schedule (Pre-abatement and during abatement sampling would only apply if full-time project monitoring is being performed for the project.):

Abatement Activity	Pre- Abatement	During Abatement	Post Abatement
Greater than 160 sf./260 lf.	PCM	PCM	TEM
Tent and Glovebag Procedures	PCM	PCM	PCM

B. Frequency and duration of the air sampling during abatement will be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. This sampling is in addition to OSHA compliance monitoring (personal sampling accomplished by the Contractor) and would only be performed if full-time project monitoring is occurring for the project.

C. Post-abatement clearance air monitoring requirements are as follows:

1. Air sampling will not begin until at least 12 hours after wet cleaning has been completed and no visible water or condensation remain.
2. Sampling equipment will be placed at random around the Work Area.
3. The representative samplers placed outside the Work Area but within the building will be located to avoid any air that might escape through the isolation barriers and will be approximately 50 feet from the entrance to the Work Area, and 25 feet from the isolation barriers.
4. The following aggressive air sampling procedures will be used within the Work Area during all air clearance monitoring:

- a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as a 1 horsepower leaf blower) against all walls, ceilings, floors, ledges and other surfaces in the Work Area. This should take at least 5 minutes per 1000 SF of floor area.
 - b. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.
 - c. Start the sampling pumps and sample for the required time.
 - d. Turn off the pump and then the fan(s) when sampling is complete.
5. Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 f/cc of air.
 6. Each homogeneous Work Area, which does not meet the clearance criteria, shall be thoroughly re-cleaned using HEPA vacuuming and/or wet cleaning, with the negative pressure ventilation system in operation. New samples shall be collected in the Work Area as described above. The process shall be repeated until the Work Area passes the test, with the **cost of repeat sampling being borne entirely by the Contractor.**
 7. For an asbestos abatement project with more than one homogeneous Work Area, the release criterion shall be applied independently to each Work Area.

3.11 ACTION CRITERIA

- A. If air samples collected outside of the Work Area during abatement activities indicate airborne fiber concentrations greater than original background levels or greater than 0.050 f/cc, as determined by Phase Contrast Microscopy, whichever is larger, an examination of the Work Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Work Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.

END OF SECTION

PART 1- GENERAL

1.1 SCOPE

- A. Work under this item shall include activities impacting various materials containing or covered by lead paint and associated work by persons who are knowledgeable, qualified, and trained in the removal, treatment and handling of lead contaminated materials, including the transportation and disposal of non-hazardous and hazardous lead construction and demolition bulky waste containing or contaminated with lead, the recycling of metallic components covered with lead paint, and the subsequent cleaning of the affected environment. For OSHA Regulations, lead paint includes paint found to contain **any** detectable amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF). For work under the USEPA regulations, lead paint is defined as any paint shown to be above 1 mg/cm² utilizing XRF data.
- B. All activities shall be performed in accordance with, but not limited to, the current revision of the OSHA Lead in Construction Regulations (29 CFR 1926.62), the USEPA Lead Safe Renovation, Repairs and Painting (40 CFR 745.80 Subpart E), the USEPA RCRA Hazardous Waste Regulations (40 CFR Parts 260 through 274), and the CTDEP Hazardous Waste Regulations (22a-209-1 and 22a-449(c).
- C. Lead paint activity shall include the disturbance, demolition, removal and/or disposal of building components coated with lead painted surfaces as identified in the inspection report (included in this Project Manual) and identified in this specification.
- D. Deviations from these Specifications require the written approval of the Project Monitor.
- E. **All Contractors working on this project must perform all work in accordance with OSHA Regulations 29 CFR 1926.62 and the USEPA Regulations 40 CFR 745.80 Subpart E, Lead Safe Renovation, Repair and Painting.**
- F. The Town of East Hartford will retain the services of a State of Connecticut licensed Project Monitor for protection of its interests and those using the building. Air sampling may be conducted to ensure that contractor's engineering controls and work practices are working to prevent the spread of lead dust and

debris beyond the Regulated Area and limit the generation of airborne lead.

- G. The Contractor shall be responsible for the following general requirements:
1. Obtain all approvals and permits, and submit all notifications required.
 2. Provide, erect, and maintain all planking, bracing, shoring, barricades, and warning signs.
 3. Unless otherwise specified, all equipment, fixtures, piping and debris resulting from demolition shall become the property of the Contractor and shall be removed from the premises.
 4. Materials to be reused shall be removed with the utmost care to prevent damage of any kind. All material to be reused shall be stored as directed. The Contractor shall coordinate with the Town of East Hartford as to the storage location.
 5. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
 6. The Contractor shall be responsible for verification of all field conditions affecting performance of the work as described in these Specifications in accordance with OSHA, USEPA, USDOT and CTDEP standards. Compliance with the applicable requirements is solely the responsibility of the Contractor.
- H. It shall be the responsibility of the Contractor to protect and preserve in operating condition, all utilities traversing the building and site. Damage to any utility due to work under this Contract shall be repaired to the satisfaction of the Town of East Hartford at no cost to the Town of East Hartford.

A.2 DESCRIPTION OF WORK

- A. The Contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations and these specifications.

- B. All work impacting the lead painted materials identified below shall be conducted within an established Regulated Area with a remote wash facility/decontamination system and the OSHA Lead in Construction Standard. In accordance with 29 CFR 1926.62, engineering controls and work practices shall be utilized to prevent the spread of lead dust and debris beyond the Regulated Area and limit the generation of airborne lead. All wastes containing lead paint shall be properly contained and secured for storage, transportation and disposal.
- C. Any data for random lead testing conducted on surfaces throughout the buildings as well as any waste characterization results are available from the Engineer for informational purposes only. Under no circumstances shall this information be the sole means used by the Contractor for determining the extent of lead painted materials. The Contractor shall be responsible for verification of all field conditions affecting performance of the work as described in these Specifications in accordance with OSHA, USEPA, USDOT and CTDEEP standards. Compliance with the applicable requirements is solely the responsibility of the Contractor.
- D. The Contractor shall conduct exposure assessments for all tasks which impact lead paint in accordance with OSHA 29 CFR 1926.62(d) and shall implement appropriate personal protective equipment until negative exposure assessments are developed.
- E. The following details the extent of each phase of operation designated for this project. Phase areas may be combined or divided at the direction of the Project Monitor/Town of East Hartford. Proceed through the sequencing of the work phases under the direction of the Project Monitor/Town of East Hartford.

Components to Be Impacted

Elevated levels of lead paint (>1.0 mg/cm²) are presumed on wood cabinets/shelving along the perimeter walls in rooms throughout the first floor. All work impacting these materials shall be conducted within an established lead control (regulated) area with a remote handwash facility/decontamination system in accordance with OSHA Lead in Construction Standards. In accordance with OSHA 29 CFR 1926.62 and USEPA Regulations 40 CFR 745.80 Subpart E, Lead Safe Renovation, Repair and Painting, engineering controls and work practices shall be

utilized to prevent the spread of lead dust and debris beyond the Regulated Area and limit the generation of airborne lead. Waste characterization sampling (TCLP) for leachable lead has not been previously performed by the Engineer on the waste stream expected to be generated during this project. The Contractor shall segregate and containerize those materials for TCLP testing/mass balance calculations by the Engineer. Based on the results of the sampling/calculations the materials may be characterized as hazardous waste, and if so, must be handled in accordance with CTDEEP and USEPA RCRA regulations and this specification. If the waste stream is characterized as non-hazardous it shall be disposed of as non-hazardous construction and demolition (C&D) bulky waste at an approved CTDEEP Solid Waste landfill.

1.3 REFERENCES

A. The current issue of each document shall govern. Where conflict among requirements or with these specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA)

29 CFR 1910.134 - Respiratory Protection

29 CFR 1926.21 - Safety Training and Education

29 CFR 1926.59 - Hazard Communication.

29 CFR 1926.62 - Lead in Construction

29 CFR 1926.200 - Accident Prevention Signs and Tags

29 CFR 1926.417 - Lockout and Tagging of Circuits

40 CFR 260-271 - Hazardous Waste Disposal

40 CFR 763, Subpart G - Worker Protection Rule

2. United States Environmental Protection Agency (USEPA)

40 CFR 745.80 Subpart E - Lead-Safe Renovation, Repairs and Painting

RCRA Hazardous Waste Regulations (40 CFR Parts 260 through 274)

3. Connecticut Department of Environmental Protection (CTDEP)

Hazardous Waste Regulations (22a-209-1 and 22a-449(c)).

1.4 DOCUMENTATION

A. Submit two copies of the following documentation to ensure compliance with the applicable regulations. An up to date copy shall be retained at the job site at all times. Submission must be made two weeks prior to the start of work.

B. Manufacturer's Catalog Data:

Vacuum Equipment
Respirators
Polyethylene Sheeting
Portable Shower Units
MSDS for All Materials Delivered to the Site

C. Statements:

Worker Medical Certification
Worker Training Certification
Worker Respirator Fit Testing
Safety Plan
Respirator Protection Plan
Initial Exposure Assessment

1. Documentation from a physician certifying that all employees who may be exposed to airborne lead dust have been provided with an opportunity to be medically monitored as required in 29 CFR 1926.62 to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. They shall

also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform as well as special work place conditions such as high temperature, high humidity and chemical contaminants which to which he/she may be exposed.

2. Documentation dated within the previous year, of biological monitoring including initial blood lead level and zinc protoporphyrin level test results prior to the workers first entry into the Work Areas.
 - a. Workers with blood lead levels in excess of fifty (50) micrograms/deciliter will not be permitted in the Regulated Area. The Contractor shall follow management of employee's blood lead levels in accordance with OSHA 29 CFR 1926.62.
3. Documentation certifying that all employees have received training in the proper handling of materials that contain lead paint; understand the health implications and risks involved, including the illnesses possible from exposure to lead; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of lead. Workers shall be trained in lead awareness (OSHA) and in accordance with the hazard communication standard for the construction industry issued by the Occupational Safety and Health Administration of the U.S. Department of Labor at 29 CFR 1926.59. Workers shall be trained in accordance to USEPA Regulation 40 CFR 745.80 Subpart E, Lead Safe Renovation, Repairs and Painting only if they are working in the cafeteria of the 1929 building.
4. Documentation dated within the previous twelve (12) months, of respiratory fit testing for all employees who must don a tight-fitting face piece respirator in order to perform activities impacting lead. This fit testing shall be in accordance with qualitative procedures as detailed in 29 CFR 1910.134.
5. An exposure assessment for each specific lead job which will be performed during the course of this project. The data must meet the requirements of OSHA 29 CFR 1926.62. If data from prior lead project(s) is submitted (i.e. a negative exposure assessment), the following information is required:

- a. Date of project
 - b. Description of monitoring, analysis and work operations and practices
 - c. Type of activity conducted, concentration and application of lead
 - d. Project Monitoring controls
 - e. Experience of workers and supervisors
6. Establish a written Respiratory Protection Plan in accordance with 29 CFR 1910.134. This plan shall establish procedures governing the selection and use of respirators and shall include such information as training in the proper use of respirators; medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required; training in proper use and limitations of respirators; respirator fit testing; regular inspection and evaluation of the continued effectiveness of the program; and other elements included in the standard.
7. Prior to the start of any work that will generate hazardous lead waste above conditionally exempt small quantities, the Contractor shall obtain from the Project Monitor/CTDEP a temporary EPA Hazardous Waste Generators ID, unless otherwise directed by the Project Monitor.
- D. During the work, submit to the Project Monitor and receive acknowledgment of the following:
1. Results of the personal air sampling data within one (1) working day of when the sampling was done.
 2. Copies of all waste shipment records of lead waste that is transported from the facility site.
 3. Competent person (supervisor) job log.

1.5 PERSONNEL PROTECTION

- A. The Contractor shall initially determine if any employee performing construction tasks impacting lead paint may be exposed to lead at or above the OSHA Action Level of 30 micrograms per cubic meter (30 $\mu\text{g}/\text{m}^3$). Assessments shall be based on initial air monitoring results as well as other relevant information. The

Contractor may rely on historical air monitoring data obtained within the past 12 months under workplace conditions closely resembling the process, type of material, control methods, work practices and environmental conditions used and prevailing in the Contractor's current operations to satisfy the exposure assessment requirements. Monitoring shall continue as specified in the OSHA standard until a negative exposure assessment is developed.

Until a negative exposure assessment is developed for the required tasks impacting lead paint, the Contractor shall ensure that all workers and authorized person entering the work area wear protective clothing and respirators in accordance with OSHA 29 CFR 1926.62. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings. Sufficient quantities shall be provided to last throughout the duration of the project.

- B. Instruct workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- C. Protective clothing provided by the Contractor and used during chemical removal operations shall be impervious to caustic materials. Gloves provided by the Contractor and used during chemical removal shall be of neoprene composition with glove extenders.
- D. Respiratory protection shall meet the requirements of OSHA as required in 29 CFR 1910.134 and 29 CFR 1926.1101. Provide appropriate respiratory protection for each worker and ensure usage during potential lead exposure.
- E. Ensure workers do not eat, drink, smoke or chew gum or tobacco while in the Work Area.

1.6 SEQUENCE OF WORK

- A. Proceed in accordance with the sequence of work as mutually agreed upon with the Town of East Hartford.
- B. The following sequence of work shall be used for the work:
 - 1. A visual inspection of the Work Area to determine pre-existing damage to facility components.

2. Release of work area to the Contractor.
3. All temporary utilities required for the project shall be on site and operational prior to the initiation of the work.
4. Cleanup by the Contractor. Work Areas must be returned to their original condition or better.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Six (6) mil polyethylene disposable bags shall have pre-printed OSHA/EPA/DOT labels and shall be transparent.
- B. The cleaning agent detergent shall be lead specific, such as TriSodium Phosphate (TSP).
- C. Labels and warning signs shall conform to OSHA 29 CFR 1926.62, USEPA 40 CFR 260 through 274 and USDOT 49 CFR 172 as appropriate.
- D. Any chemical stripper and chemical neutralizer to be utilized shall be compatible with the substrate as well as with each other.

2.2 TOOLS AND EQUIPMENT

- A. Tools and equipment shall be suitable for working with lead paint.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter cassettes shall be provided in sufficient quantities for the project.
- C. Electrical equipment, protective devices, emergency generators and power cables shall conform to all applicable codes.
- D. Air monitoring equipment of the type and quantity required to monitor operations and conduct personnel exposure surveillance in accordance

with OSHA requirements.

- F. Where lead exposures are above the OSHA Action Level or PEL, the Contractor shall provide wash facilities/shower stalls and plumbing that include sufficient hose length and drain system or an acceptable alternate. One shower stall shall be provided for each eight workers.
- G. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- H. The Contractor shall provide vacuum units of suitable size and capabilities for the project which have HEPA filters capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of three micrometers in diameter or larger.
- I. Protective clothing, respirators, and HEPA P100 filter cartridges shall be provided in sufficient quantities for the project.

PART 3 EXECUTION

3.1 PREPARATION OF WORK AREA

- A. Prior to beginning work, the Design Consultant, Town of East Hartford's Representative and Contractor shall perform a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit to the Town of East Hartford's Representative a list which shall include all damaged areas not scheduled to be repaired under this Contract and include photographs, video tapes as applicable.
- B. In all areas where airborne exposures may exceed the OSHA PEL (unless proven by air sampling), post warning signs meeting the requirements of OSHA 29 CFR 1926.62 at each regulated area.
- C. In addition, signs shall be posted at all approaches to regulated areas so that an employee may read the sign and take the necessary protective steps before entering the area. These signs shall read:

WARNING

LEAD WORK AREA
POISON
NO SMOKING OR EATING

- D. Establish a work area, through the use of appropriate barrier tape, etc. and control unauthorized access into the area throughout the lead paint related activity.
- E. Implement appropriate Project Monitoring controls such as critical barriers, poly drop cloths, negative pressure, etc. to prevent the spread of lead contamination from the work area. The use of negative air machines and local exhaust ventilation with HEPA filters may be required if lead contamination continues to spread.
- F. The Contractor shall provide handwash facilities in compliance with 29 CFR 1926.51(f) and 29 CFR 1926.62 regardless of airborne lead exposure. This wash facility will consist, at least, of potable water, towels, soap, and a HEPA vacuum.
- G. If air monitoring data by the Contractor or Project Monitor shows that employee exposure to airborne lead exceeds the OSHA PEL ($50 \mu\text{g}/\text{m}^3$), shower rooms must be utilized. The Shower Room shall be of sufficient capacity to accommodate the number of workers. One shower stall shall be provided for each eight (8) workers. Showers shall be equipped with hot and cold or warm running water through the use of electric hot water heaters supplied by the Contractor. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate.
- H. Shut down and isolate heating, cooling, and ventilating air systems to prevent contamination to other areas of the building. Seal all vents.
- D. Clean the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.
- E. For exterior work areas, the Contractor shall use a High Efficiency Particulate Air (HEPA) filtered vacuum dust collection system to remove any visible existing paint chips from the ground to a distance of 20' out from the base of the exterior surface scheduled for lead paint activity prior to commencement of work and extend a 6 mil polyethylene sheet drop cloth on the ground adjacent to the exterior surface scheduled for lead paint activity to contain debris/contamination.

3.2 LEAD PAINT ACTIVITY PROCEDURES

- A. Ensure that the Competent Person is on the job at all times.
- B. Do not begin work until authorized by the Project Monitor, following a pre-abatement visual inspection by the Project Monitor.
- C. The Contractor shall ensure proper entry and exit procedures for workers and authorized persons who enter and leave the Regulated Area. All workers and authorized persons shall leave the Regulated Area and proceed directly to the wash or shower facilities where they will HEPA vacuum gross debris from work suit, remove and dispose of work suit, wash and dry face and hands, and vacuum clothes. Do not remove lead chips or dust by blowing or shaking of clothing. Wash water shall be collected, filtered, and disposed of in accordance with federal, state and local water discharge standards.
- D. No one shall eat, drink, smoke, chew gum or tobacco, or apply cosmetics while in the Regulated Area.
- E. Utilize appropriate Project Monitoring controls (e.g. wet methods) as directed by 29 CFR 1926.62 to control lead emissions and contamination.
- F. Properly contain wastes containing lead paint for appropriate transport/disposal.
- G. Stop all work in the regulated area and take steps to decontaminate non-work areas and eliminate causes of such contamination should lead contamination be discovered in areas outside of the regulated area.
- H. Special Requirements:
 - 1. Demolition/Renovation:
 - a. Demolish/renovate in a manner which minimizes the spread of lead contamination and generation of lead dust.
 - b. Implement dust suppression controls, such as misters, local exhausts ventilation, etc. to minimize the generation of airborne lead dust.

- c. Segregate work areas from non-work areas through the use or barrier tape, poly criticals, etc.
- d. Clean up immediately after renovation/demolition has been completed

2. Component Removal/Replacement:

- a. Wet down components which are to be removed to reduce the amount of dust generated during the removal process.
- b. Remove components utilizing hand tools, and follow appropriate safety procedures during removal. Remove the building components by approved methods which will provide the least disturbance to the substrate material. Do not damage adjacent surfaces.
- c. Clean up immediately after component removals have been completed. Remove any dust located behind the component removed.

3.3 PROHIBITED REMOVAL METHODS

- A. The use of heat guns in excess of 700 degrees Fahrenheit to remove lead paint is prohibited.
- B. The use of sand, steel grit, water, air, CO₂, baking soda, or any other blasting media to remove lead or lead paint without the use of a HEPA ventilated contained negative pressure enclosure is prohibited.
- C. Power tool assisted grinding, sanding, cutting, or wire brushing of lead paint without the use of cowled HEPA vacuum dust collection systems is prohibited.
- D. Lead paint burning, busting of rivets painted with lead paint, welding of materials painted with lead paint, and torch cutting of materials painted with lead paint is prohibited. Where cutting, welding, busting, or torch cutting of materials is required, pre-remove the lead paint in the area affected.
- E. Use of chemical strippers containing Methylene Chloride is prohibited.
- F. Compressed air shall not be utilized to remove lead paint.

3.4 AIR MONITORING REQUIREMENTS

A. The Contractor shall:

1. Provide air monitoring equipment including sample filter cassettes of the type and quantity required to properly monitor operations and personnel exposure surveillance throughout the duration of the project.
2. Conduct initial exposure monitoring to determine if any employee performing construction tasks impacting lead paint may be exposed to lead at or above the OSHA Action Level of 30 micrograms per cubic meter. Monitoring shall continue as specified in the OSHA standard until a negative exposure assessment is developed.
3. Conduct personnel exposure assessment air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.62. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours and shall be available for review until the job is complete.

B. The Project Monitor may:

1. Collect air samples in accordance with the current revision of the NIOSH 7082 or 7702 Method of Air Sampling for Airborne Lead while overseeing the activities of the Contractor. Frequency and duration of the air sampling during abatement will be representative of the actual conditions at the site. The size and configuration of the project will be a factor in the number of samples required to monitor the activities and shall be determined by the Project Monitor.

C. As determined by AAS, XRF, or equivalent analysis, if air samples collected outside of the Regulated Area during abatement activities indicate airborne lead concentrations greater than original background levels or greater than 30 ug/m³, whichever is larger, an examination of the Regulated Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Regulated Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.

3.5 CLEAN-UP AND VISUAL INSPECTION

- A. Remove and containerize all lead waste material and visible accumulations of debris, paint chips and associated items.
- B. During clean up the Contractor shall utilize rags and sponges wetted with lead-specific detergent and water as well as HEPA filtered vacuum equipment.
- C. The Project Monitor will conduct a visual inspection of the work areas in order to document that all surfaces have been maintained as free as practicable of accumulations of lead in accordance with OSHA 29 CFR 1926.62(h). If visible accumulations of waste, debris, lead paint chips or dust are found in the work area, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the activity, and inadequate clean up of the work site. **In Room 24 storage (or any other lead work areas on the 1st floor), the contractor will perform swifer wipe sampling as defined in the USEPA Regulations.**
- D. In other parts of the building, OSHA lead regulations do not call for dust wipe clearance testing. However, OSHA may request, under OSHA housekeeping regulations, dust wipe clearance testing. If lead dust wipe levels are above OSHA clearance criteria, the Contractor shall re-clean the work area and retesting shall be conducted at the Contractors expense. The testing and cleaning sequence shall be repeated until the clearance criteria levels have been achieved.

3.6 POST ABATEMENT WORK AREA DEREGULATION

- A. Following the visual inspection, (and clearance testing if appropriate,) any Project Monitoring controls implemented may be removed and the Work Area deregulated.
- B. A final visual inspection of the work area shall be conducted by the Competent Person and the Project Monitor to ensure that all visible accumulations of suspect materials have been removed and that no equipment or materials associated with the abatement project remain.
- C. The Contractor shall restore all work areas and auxiliary areas utilized during work to conditions equal to or better than original. Any damage caused during the performance of the work activity shall be repaired by the Contractor at no

additional expense to the Town.

3.7 NON-HAZARDOUS WASTE DISPOSAL/RECYCLING

- A. Non-metallic building debris waste materials tested and found to be non-hazardous Construction and Demolition (C&D) bulky waste shall be disposed of properly at a CTDEP approved Solid Waste landfill.
- B. Metallic debris shall be segregated and recycled as scrap metal at an approved metal recycling facility. The Contractor shall submit to the Project Monitor all documentation necessary to demonstrate the selected recycling facility is able to accept lead-painted scrap metal.
- C. Concrete, brick, etc. coated with any amount of lead paint cannot be crushed, recycled or buried on-site to minimize waste disposal. Only CTDEP defined “clean fill” can be recycled on-site or sent to a recycling facility.

3.11 HAZARDOUS LEAD WASTE DISPOSAL

- A. If required to dispose of any hazardous waste, the Contractor shall utilize a certified/permitted transporter for hazardous waste in compliance with DOT 49 CFR Part 172 and USEPA 40 CFR 260-274 and a permitted hazardous waste treatment storage disposal facility (TSDF) in compliance with USEPA 40 CFR 260-274.
- B. Hazardous lead bearing material must be offered for transportation and transported in compliance with the Code of Federal Regulations, Title 49, Chapter 1, Part 173, Subparts A, B, C, and D and Paragraph 178.118. Transport vehicles (hopper or dump type) must be free from leaks and discharge openings must be securely closed during transportation. All storage containers (roll offs or drums) shall have a protective liner and removable lid. These containers shall not have any indentations or damage that would allow seepage of the contained material.
- C. The disposal of hazardous lead bearing material must be in compliance with the requirements of, and authorized by, the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, and the USEPA.
- D. The disposal of hazardous lead bearing waste shall comply with the requirements of the Resource Conservation and Recovery Act (RCRA).

- E. Previous waste characterizations have not been completed by the Project Monitor. All generated waste shall be containerized and stored on-site for hazardous waste determination via TCLP testing by East Hartford's Project Monitor.
 - F. The Contractor shall collect the wash water generated by the worker shower, wash facilities, or steam cleaning operations in 55 gallon drums and filter the water using a 2 stage filtration system composed of:
 - 1. 5 micron porosity in-line cartridge particulate filter followed by:
 - 2. Activated carbon filter in-line cartridge
- Once the contractor has determined that the water is clean, discharge to the sanitary sewer.
- G. The dumpsters/containers containing hazardous waste are to be kept covered and locked when not in active use for the loading of materials.
 - H. All containers of hazardous lead bearing material shall be labeled in accordance with 29 CFR 1926.62 and EPA 40 CFR 260-270.
 - I. All hazardous lead-bearing waste removed from the site by the Contractor shall be containerized in lined roll-offs or barrels. Store waste materials in U.S. Department of Transportation (49 CFR 178) approved containers. Properly label and placard each container to identify the type of waste (49 CFR 172) and the date the container was filled. The disposal containers shall be labeled with a six inch square, yellow, weatherproof, hazardous waste sticker in accordance with U.S. DOT regulations, by the Contractor.
 - J. The Contractor may not store containerized hazardous lead waste on the job site for in excess of 90 calendar days from the accumulation start date.
 - K. When required to dispose of hazardous waste, the Contractor shall utilize a certified/permitted transporter for hazardous waste in compliance with USDOT 49 CFR Part 172 and USEPA 40 CFR 260-274 and a permitted hazardous waste treatment storage disposal facility (TSDF) in compliance with USEPA 40 CFR 260-274.
 - L. The Contractor shall complete a Uniform Hazardous Waste Manifest, EPA Form 8700-22, and submit to the Project Monitor for review and generator sign-off

prior to each load of hazardous waste scheduled to leave the site. Completed copies of the manifest shall be delivered by the Contractor to the Project Monitor within 30 calendar days following the date the load leaves the site.

- M. When all necessary procedures have been completed, then the hazardous waste shall be shipped to the hazardous waste disposal facility.
- N. Any spillage of debris during disposal operation, i.e., loading, transport and unloading, shall be cleaned up in accordance with the Code of Federal Regulations, Title 40, Chapter 1, Part 25, Subparts C and D, at the Contractor's expense.
- O. The Contractor is liable for any fines, costs or remediation costs incurred as a result of the failure to be in compliance with this special provision and all federal, state and local laws.

END OF SECTION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The work under this section shall include furnishing all labor, materials and equipment necessary to insulate pipes and pipe fittings within the work areas. Piping lines that have had insulation removed, or that has fallen off, shall be re-insulated during this work. Examples of piping lines which would not require insulation are condensate return lines or sewer drain lines. Contractor to verify extent of the above underlines and include in his estimate of work to be done prior to beginning any removal activities.
- B. Re-insulate pipe with jacketed fiberglass of thickness and type as specified in Part 2, Materials. These replacement materials shall be professionally applied. All replacement material shall be applied and installed to meet with applicable building codes.
- C. Re-insulate fittings with pre-molded polyvinyl chloride (PVC) with appropriate fiberglass insert material as recommended by the manufacturer.
- D. Each Contractor shall visit job site to determine quantities, limitations, and restrictions of work area before submitting a bid.

1.2 SUBMITTALS

- A. Submit piping insulation manufacturer's complete product data and installation instructions of all items proposed for use, with list of materials, locations and thickness for each use.

1.3 REFERENCES

- A. ASTM C547 - Mineral Fiber Preformed Pipe Insulation
- B. ASTM C553 - Mineral Fiber Blanket and Felt Insulation (Industrial Type)
- C. ASTM E84, NFPA 255, UL 273 - Surface Burring Characteristics of Building Materials

1.4 GUARANTEE

- A. The work under this Section shall be part of the Contractor’s standard one-year guarantee.

1.5 PRODUCT HANDLING, DELIVERY AND STORAGE

- A. All materials shall be delivered to job site prior to start of work in original unopened boxed or containers bearing appropriate manufacturer’s label.
- B. Materials damaged in delivery or storage shall be removed from job site.

PART 2 PRODUCTS

2.1 MATERIALS - GENERAL

- A. Pipe and pipe fitting insulation, including components such as jackets, adhesives, sealant, and finishes shall be fire-resistant and fire-retardant and comply with NFPA 225, ASTM E84, UL 723 and ASHRAE STD 90A-1980. And not exceeding the following:

Flame - spread rating 25
Smoke - developed 50

- B. Piping Insulation: New replacement glass fiber pipe insulation shall conform with the specified temperature ranges and thicknesses shown on the following table.

Pipe System	Pipe Size	Insulation Thickness
Domestic hot and cold water	□" - 2"	1"
	2" - up	2"
Heating pipes	1" - 2"	2"
	2" - up	2□"
Manifold		3"

fabricated insulation of the same thickness and conductivity as used on adjacent piping. Materials shall be Micro-Lok 650 as manufactured by Johns-Manville;

fiberglass 25 ASJ/SSL as manufactured by Owens-Corning; 850 Snap-On as manufactured by Certain-Teed Corporation; or an approved equal. Insulation materials shall have an all-purpose vapor barrier fire retardant jacket.

- D. Pre-formed rigid insulation shall have jacket of white kraft paper bonded to aluminum foil and reinforced with glass fibers with all service jacket exterior and self-sealing adhesive joints.
- E. Manufacturers: Materials of the following manufacturers are acceptable as applicable:
 - 1. Owens-Corning
 - 2. Armstrong Corporation
 - 3. Certain-Teed Corporation
 - 4. Knauf Corporation
 - 5. Johns-Manville

PART 3 EXECUTION

3.1 PREPARATION

- A. This work shall proceed only after final air clearance is passed and cleanup is completed.
- B. Install insulation only on clean dry surfaces and only after inspection and release for insulation application is granted.

3.2 INSTALLATION

- A. Install all insulation according to manufacturer's instructions. All butt joints are to be tight and sealed with ASJ butt laps. Secure longitudinal seams with outward clinch staples or a suitable lap adhesive. Position lap down to avoid accumulation of dirt and moisture. When installing insulation, matching thickness takes priority over conductivity when placing partial sections of pipe insulation.
- B. Fasten throats of fitting covers with stainless steel tacks. Use of steel staples to fasten covers is not acceptable. Seal seams and all overlaps of fitting covers to insulation jacket with PVC tape. Seal all exposed fiberglass ends with lagging mastic.

- C. Completed work shall be smooth and straight. Fitting covers shall fit tight to pipe insulation with no gaps or fish mouths in throat seams or joints. Completed insulation work judged aesthetically unacceptable by the Design Consultant shall be corrected by the Contractor at no cost to the State.
- D. Should insulation pass with piping through walls or floors, firestop opening around pipes using intumescent fire safing/caulking system. The rating of the firestops shall be equal to the time-rating of the floor or wall assembly in the path of the piping.
- E. On exposed insulation, all longitudinal seams shall be kept at the top and back of the pipe and circumferential joints shall be kept to a minimum. Raw end of insulation shall be concealed by neatly folding the end of the jackets. Fittings, valve bodies and flanges shall be furnished with the same jacket materials used on adjoining insulation.

END OF SECTION

STEAM TUNNEL ABATEMENT PROJECT

EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
 191 MAIN STREET
 EAST HARTFORD, CT 06118

SDE PROJECT NUMBER 043-0250CV
 MARCH 8, 2024

TRC ENVIRONMENTAL CORPORATION
 21 GRIFFIN RD NORTH
 WINDSOR, CT 06095

INDEX OF DRAWINGS

NO.	TITLE
T-1 HAZ-001	TITLE SHEET ASBESTOS ABATEMENT AND RELATED WORK (BASEMENT)
HAZ-002	ASBESTOS ABATEMENT AND RELATED WORK (FIRST FLOOR)

Certifications of Local Approval:		
I certify that I have local jurisdiction over the State Building Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable building codes.		
Milton Gregory Grew	_____	_____
Local Building Official's Name	Signature	Date
I certify that I have local jurisdiction over the State Fire Safety Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable fire codes.		
John Pelow	_____	_____
Local Fire Marshal's Name	Signature	Date
I certify that I have local jurisdiction over the State Health Code and that the plans and project manual dated _____ for the above referenced project comply with all applicable health codes.		
Laurence Burns, MPH	_____	_____
Local Health Official's Name	Signature	Date
I certify that I have local jurisdiction over Section 504 of the Rehabilitation Act of 1973, and the Uniform Federal Accessibility Standards (UFAS). I further certify that the plans and project manual dated _____ for the above referenced project comply with all applicable accessibility codes.		
Tyron Harris	_____	_____
Local Federal 504 Official's Name	Signature	Date

STATE PROJECT
 NO. 043-0250 CV



DESCRIPTION	DATE	BY

STEAM TUNNEL ABATEMENT PROJECT
 EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
 TITLE SHEET
 191 MAIN STREET
 EAST HARTFORD CT 06118

GK	RRH	EP
DESIGNED	DRAWN	CHECKED
SCALE		
DATE MARCH 8, 2024		
PROJECT NO. 569249		
DRAWING NO. -		
T-1		

LEGEND OF SYMBOLS

- A = EXISTING ACCESS POINT TO TUNNELS
- = ACM PIPE INSULATION/FITTINGS AND DEBRIS

GENERAL NOTES (Refer to Section 02080)

Work Area 1 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Pipe insulation debris

Notes:

- Fiberglass/PVC insulation on piping shall remain.

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 2 - As Shown on Drawing HAZ-001

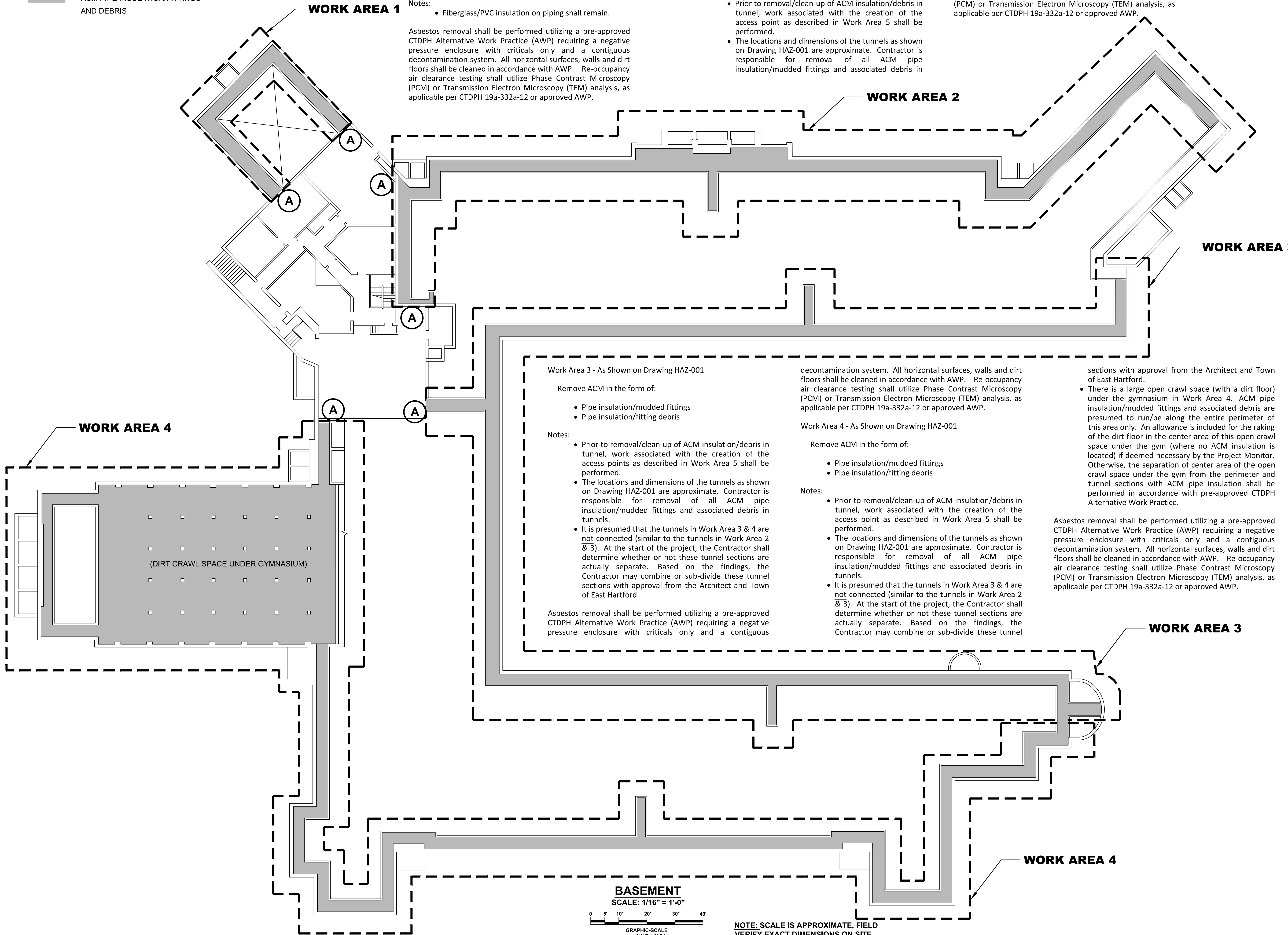
Remove ACM in the form of:

- Pipe insulation/mudded fittings
- Pipe insulation/fitting debris

Notes:

- Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access point as described in Work Area 5 shall be performed.
- The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in

tunnels. Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.



Work Area 3 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Pipe insulation/mudded fittings
- Pipe insulation/fitting debris

Notes:

- Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access points as described in Work Area 5 shall be performed.
- The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in tunnels.
- It is presumed that the tunnels in Work Area 3 & 4 are not connected (similar to the tunnels in Work Area 2 & 3). At the start of the project, the Contractor shall determine whether or not these tunnel sections are actually separate. Based on the findings, the Contractor may combine or sub-divide these tunnel sections with approval from the Architect and Town of East Hartford.

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous

decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.

Work Area 4 - As Shown on Drawing HAZ-001

Remove ACM in the form of:

- Pipe insulation/mudded fittings
- Pipe insulation/fitting debris

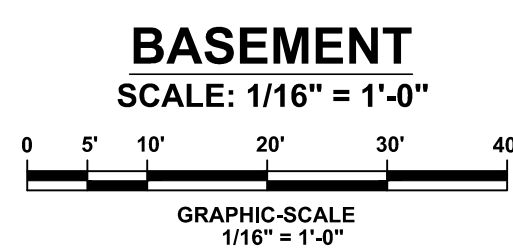
Notes:

- Prior to removal/clean-up of ACM insulation/debris in tunnel, work associated with the creation of the access point as described in Work Area 5 shall be performed.
- The locations and dimensions of the tunnels as shown on Drawing HAZ-001 are approximate. Contractor is responsible for removal of all ACM pipe insulation/mudded fittings and associated debris in tunnels.
- It is presumed that the tunnels in Work Area 3 & 4 are not connected (similar to the tunnels in Work Area 2 & 3). At the start of the project, the Contractor shall determine whether or not these tunnel sections are actually separate. Based on the findings, the Contractor may combine or sub-divide these tunnel

sections with approval from the Architect and Town of East Hartford.

- There is a large open crawl space (with a dirt floor) under the gymnasium in Work Area 4. ACM pipe insulation/mudded fittings and associated debris are presumed to run/be along the entire perimeter of this area only. An allowance is included for the raking of the dirt floor in the center area of this open crawl space under the gym (where no ACM insulation is located) if deemed necessary by the Project Monitor. Otherwise, the separation of center area of the open crawl space under the gym from the perimeter and tunnel sections with ACM pipe insulation shall be performed in accordance with pre-approved CTDPH Alternative Work Practice.

Asbestos removal shall be performed utilizing a pre-approved CTDPH Alternative Work Practice (AWP) requiring a negative pressure enclosure with criticals only and a contiguous decontamination system. All horizontal surfaces, walls and dirt floors shall be cleaned in accordance with AWP. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM) or Transmission Electron Microscopy (TEM) analysis, as applicable per CTDPH 19a-332a-12 or approved AWP.



NOTE: SCALE IS APPROXIMATE. FIELD VERIFY EXACT DIMENSIONS ON SITE.



STATE PROJECT NO. 043-0250 CV



DESCRIPTION	DATE	BY

STEAM TUNNEL ABATEMENT PROJECT
 EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
 ASBESTOS ABATEMENT AND RELATED WORK (BASEMENT)
 191 MAIN STREET
 EAST HARTFORD CT 06118

GK	RRH	EP
DESIGNED	DRAWN	CHECKED

SCALE

DATE MARCH 8, 2024

PROJECT NO. 569249

DRAWING NO.

HAZ-001

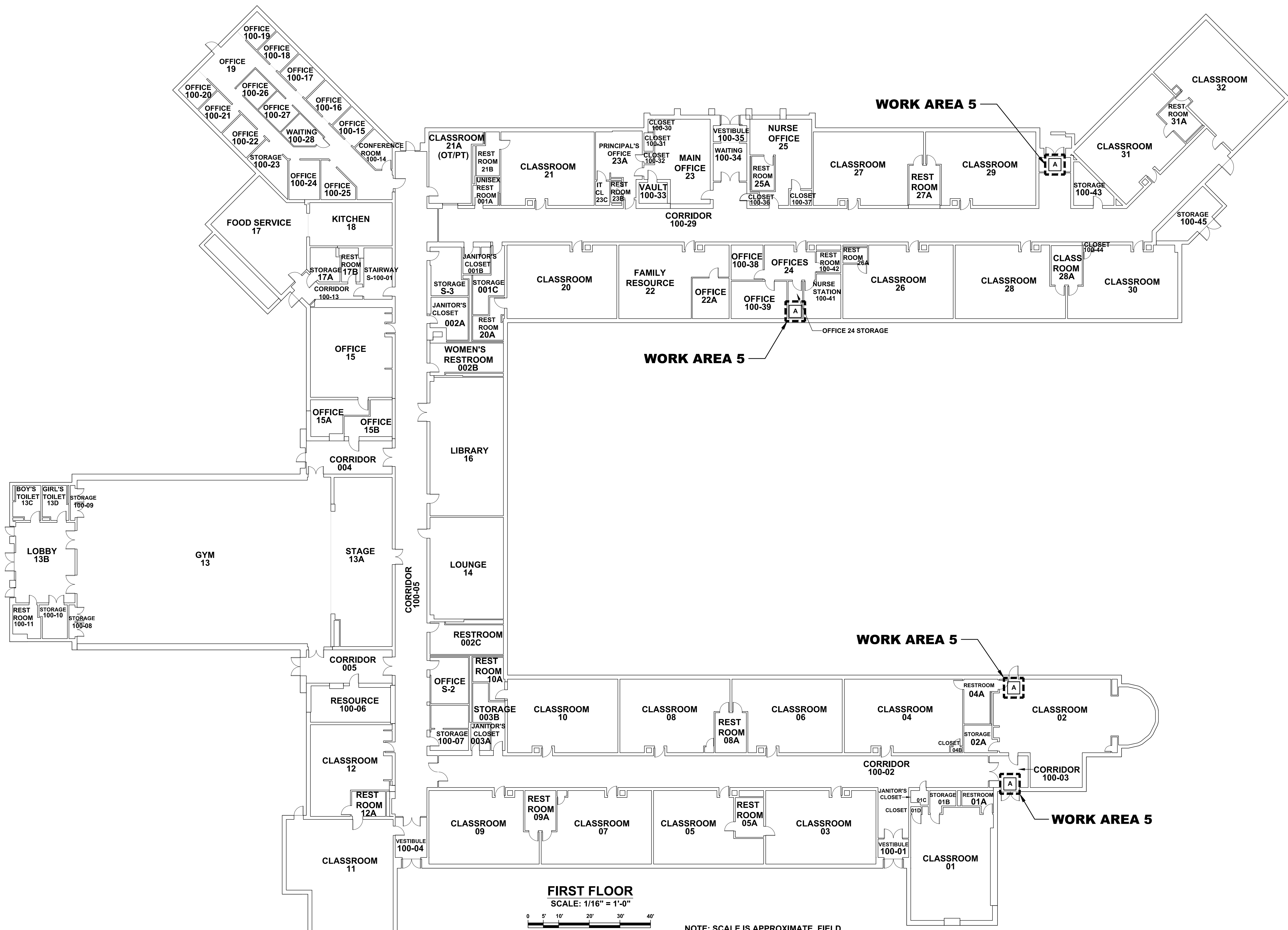
SHEET NO.

LEGEND OF SYMBOLS

A = PROPOSED ACCESS POINT TO TUNNEL



STATE PROJECT
NO. 043-0250 CV



GENERAL NOTES (Refer to Section 02080)

Work Area 5 - As Shown on Drawing HAZ-002

Remove ACM in the form of:

- Openings made through the 1st floor directly into the tunnels which contain ACM pipe insulation/mudded fitting insulation/ debris.

Notes:

- Work Area 5 includes the creation of four (4) additional access points from the first floor of the school (as shown on HAZ-002), through the floor slab and into the tunnels being abated below. The purpose of these access points is to facilitate the tunnel abatement.
- The Contractor may propose alternative and/or additional access point locations; however, this would require prior approval from the Town of East Hartford.
- The Contractor shall submit architectural plans, designed by a Connecticut licensed architect, which show the exact location and dimensions of each opening and address the demolition work through the floor. These openings shall be a minimum of 2.5' x 2.5' in size and shall be suitable for entry and exit into the tunnels. In addition, these plans shall address the installation of a hatch door at all four (4) access points/openings following the completion of the removal and re-insulation of the tunnels. These plans will require review and approval from the Town of East Hartford.
- The Contractor is responsible for the protection of all piping in tunnels beneath the Work Area 5 locations. Any first floor furnishings impacted by the demolition shall also be replaced and/or returned to as new.
- The paint on the wood cabinets/shelving along the perimeter of the first floor rooms is presumed to be Lead-Based Paint (>1 mg/cm²). If it is to be impacted by the creation of any of the access points, then this work shall also be performed in accordance with Specification 02830 Lead Awareness.

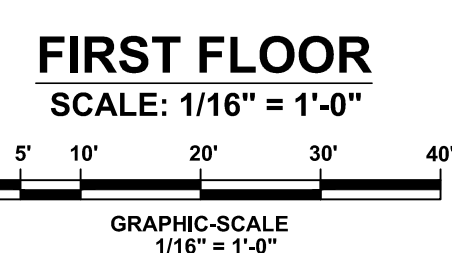
Contractor shall be responsible for removal of all walls, counters, cabinets, sinks, appliances, trim work, carpeting, etc., necessary in order to create access points. Asbestos removal shall be performed under full containment conditions with a pressure differential and contiguous decontamination system in accordance with CTDPH 19a-332a-5, 6 and 7, OSHA Class I and USEPA NESHAP requirements. Re-occupancy air clearance testing shall utilize Phase Contrast Microscopy (PCM).

DESCRIPTION	DATE	BY

STEAM TUNNEL ABATEMENT PROJECT
EARLY CHILDHOOD LEARNING CENTER AT HOCKANUM SCHOOL
ASBESTOS ABATEMENT AND RELATED WORK (FIRST FLOOR)
191 MAIN STREET
EAST HARTFORD CT 06118

GK	RRH	EP
DESIGNED	DRAWN	CHECKED
SCALE		
DATE MARCH 8, 2024		
PROJECT NO. 569249		
DRAWING NO.		

HAZ-002



NOTE: SCALE IS APPROXIMATE. FIELD VERIFY EXACT DIMENSIONS ON SITE.