

Volume 3 of 3 Project Manual

Renovations to Physical Plant Naugatuck Valley Community College 750 Chase Parkway Waterbury, CT Project No.: BI-CTC-500

> Prepared By: BVH Integrated Services, P.C. 206 West Newberry Road Bloomfield, CT 06002

Melody A. Currey - Commissioner

State of Connecticut
Department of Administrative Services
Construction Services
Office of Legal Affairs, Policy, and Procurement
450 Columbus Boulevard, Suite 1302
Hartford, CT 06103

Project Manual Date: March 16, 2018

VOLUME One of Three

Section No.	Title	Page Count	Not Used
00 01 01	Title Page (Volume One)	1	
00 01 07	Seals Page	1	
00 01 10	Table of Contents	9	
00 01 15	List of Drawing Sheets	3	
00 11 16	Invitation to Bid	3	
00 21 13	Instructions To Bidders	16	
00 25 13	Pre-Bid Meeting Agenda	3	
00 30 00	General Statements for Available Information	3	
	00 30 10 General Statement for Existing Conditions Survey		
	00 30 20 General Statement for Environmental Assessment II	nformation	\boxtimes
	00 30 30 General Statement for Hazardous Building Materials Inventory	Inspection and	
	00 30 40 General Statement for Subsurface Geotechnical Rep	oort	\boxtimes
	00 30 50 General Statement for Elevator Agreement		\boxtimes
	00 30 60 General Statement for FM Global Checklist for Roofi	ing Systems	
00 40 14	Certificate (of Authority)	2	
00 40 15	CT DAS Contractor Prequalification Forms	4	
00 41 00	Bid Proposal Form	9	
00 41 10	Bid Package Submittal Requirements	4	
00 43 16	Standard Bid Bond	1	
00 45 14	General Contractor Bidder's Qualification Statement	7	
00 45 15	Objective Criteria Established for Evaluating Qualifications of Bidde	ers 3	
00 45 17	Named Subcontractor Bidder's Qualification Statement	7	
00 52 03	Contract	3	
00 52 73	Subcontract Agreement Form	3	
00 62 16	Certificate of Insurance	1	
	00 62 16.1 Asbestos Attachment to Acord Form	1	
00 72 13	General Conditions of the Contract for Construction – For Design-B	id-Build 25	
	00 72 13.1 Supplementary Conditions	2	
00 73 27	Set-Aside Contractor Schedule – SAMPLE	1	
00 73 38	CHRO Contract Compliance Regulations	7	
00 73 44	Prevailing Wage Rates/Contractor's Wage Certification/Payroll Certi	ification 35	
00 73 63	CT DOC Security Requirements	3	\boxtimes
00 92 10	Additional Forms To be Submitted After Bond Commission Funding	Approval 7	
00 92 30	Procedures Regarding Taxation for Nonresident General/Prime Con Subcontractors	tractor and 2	

VOLUME One of Three (continued)

DIVISION 01 GENERAL REQUIREMENTS Not **Page** Section No. Title Count Used 01 11 00 **Summary of Work** 01 20 00 **Contract Considerations** 5 01 23 13 Supplemental Bids 2 01 25 00 **Substitution Procedures** 5 **Contract Modification Procedures** 4 01 26 00 **Progress Payment Procedures** 5 01 29 76 П 01 31 00 **Project Management and Coordination** 5 01 31 19 4 **Project Meetings** 01 32 16 **Construction Progress Schedules** \boxtimes 01 32 16.13 **CPM Schedules** 13 01 32 33 **Photographic Documentation** 2 П 01 33 00 **Submittal Procedures** 8 01 35 16 **Alteration Project Procedures** 5 12 **Government Safety Requirements** 01 35 26 **Reference Standards & Definitions** 01 42 20 3 01 45 00 **Quality Control** 5 01 45 23.13 Testing for Indoor Air Quality, Baseline Indoor Air Quality, and Materials \boxtimes 01 50 00 **Temporary Facilities & Controls** 9 01 57 30 **Indoor Environmental Control** \boxtimes 01 57 40 **Construction Indoor Air Quality Management Plan** \bowtie 3 01 60 00 **Product Requirements** 01 71 23 \boxtimes **Field Engineering** 01 73 29 4 **Cutting and Patching** 01 74 19 **Construction Waste Management & Disposal** 5 01 75 00 Starting & Adjusting 2 01 77 00 **Closeout Procedures** 5 01 78 23 **Operation & Maintenance Data** 5 П 01 78 30 **Warranties & Bonds** 4 01 80 13 **Sustainable Design Requirements** \boxtimes 01 91 00 22 **Building Commissioning Requirements**

VOLUME One of Three (continued)

	TECHNICAL SPECIFICATIONS	
DIVISION 02	EXISTING CONDITIONS	Not Used □
Section No.	Title	Page Count
02 41 19	Selective Demolition	7
02 82 13	Asbestos Abatement & Attachment	17
DIVISION 03	CONCRETE	Not Used □
Section No.	Title	Page Count
03 30 00	Cast-In-Place Concrete	18
DIVISION 04	MASONRY	Not Used □
Section No.	Title	Page Count
04 01 20.63	Brick Masonry Repair	8
04 22 00	Concrete Unit Masonry	11
DIVISION 05	METALS	Not Used □
Section No.	Title	Page Count
05 12 00	Structural Steel Framing	10
05 31 00	Steel Decking	5
05 40 00	Cold-Formed Metal Framing	7
05 51 19	Metal Grating Stairs and Railings	9
DIVISION 06	WOOD, PLASTICS AND COMPOSITES	Not Used ⊠
Section No.	Title	Page Count
DIVISION 07	THERMAL AND MOISTURE PROTECTION	Not Used □
Section No.	Title	Page Count
07 42 13.19	Insulated Metal Wall Panels	9
07 72 00	Roof Accessories	7
-		
07 84 13	Penetration Firestopping	6
07 84 13 07 92 00	Penetration Firestopping Joint Sealants	<u>6</u> 7

DIVISION 08	OPENINGS	Not Used □
		_
Section No.	Title	Page Count
08 11 13	Hollow Metal Doors and Frames	7
08 31 13	Access Doors and Frames	4
08 71 11	Door Hardware (Descriptive Specification)	10
08 91 19	Fixed Louvers	6
DIVISION 09	FINISHES	Not Used □
Section No.	Title	Page Count
09 22 16	Non-Structural Metal Framing	7
09 29 00	Gypsum Board	8
09 51 23	Acoustical Tile Ceilings	8
09 91 13	Interior and Exterior Painting	7
09 91 13	interior and Exterior Fainting	ı
DIVISION 10	SPECIALTIES	Not Used ⊠
Section No.	Title	Page Count
DIVISION 11	EQUIPMENT	Not Used ⊠
Section No.	Title	Page Count
DIVISION 12	FURNISHINGS	Not Used ⊠
Section No.	Title	Page Count
DIVISION 13	SPECIAL CONSTRUCTION	Not Used ⊠
Section No.	Title	Page Count
DIVISION 14	CONVEYING SYSTEMS	Not Used ⊠
Section No.	Title	Page Count
DIVISION 15	RESERVED	
DIVISION 16	RESERVED	
DIVISION 17	RESERVED	1
2.710101111	:\b\bi\\bi\\bi\	

		PAGE 5 OF 9
DIVISION 18	RESERVED	
DIVISION 19	RESERVED	
DIVISION 20	RESERVED	
	VOLUME Two of Three	
	DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS	
Section No.	Title	Page Count
00 01 01	Title Page (Volume Two)	1
DIVISION 21	FIRE SUPPRESSION	Not Used □
Section No.	Title	Page Count
21 00 10	General Conditions for Fire Suppression	17
21 05 17	Sleeves and Sleeve Seals for Fire-Suppression	5
21 05 18	Escutcheons for Fire-Suppression Piping	2
21 05 23	General-Duty Valves for Fire Protection Piping	8
21 05 29	Hangers and Supports for Fire Suppression Piping and Equipment	8
21 05 53	Identification for Fire-Suppression Piping and Equipment	6
21 13 13	Wet-Pipe Sprinkler Systems	10
21 13 16	Dry-Pipe Sprinkler Systems	11
DIVISION 22	PLUMBING	Not Used 🗌
DIVISION 22 Section No.	Title	Not Used Page Count
Section No. 22 00 10	Title General Conditions for Plumbing	
Section No. 22 00 10 22 05 13	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment	Page Count 17 4
Section No. 22 00 10 22 05 13 22 05 16	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping	Page Count 17 4 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping	Page Count 17 4 7 4
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping	Page Count 17 4 7 4 2
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping	Page Count 17 4 7 4 2 6
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping	Page Count 17 4 7 4 2 6 8
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment	Page Count 17 4 7 4 2 6 8 10
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment	Page Count 17 4 7 4 2 6 8 10 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping	Page Count 17 4 7 4 2 6 8 10
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation	Page Count 17 4 7 4 2 6 8 10 7 15
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Pumps	Page Count 17 4 7 4 2 6 8 10 7 15
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 33 00	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 33 00	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 33 00 22 34 00	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 13 19.13 22 33 00 22 34 00	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Pumps Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters HEATING, VENTILATING AND AIR CONDITIONING	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7 Not Used Not Used
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 13 19.13 22 33 00 22 34 00 DIVISION 23 Section No.	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters HEATING, VENTILATING AND AIR CONDITIONING	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7 Not Used Page Count
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 13 19.13 22 33 00 22 34 00 DIVISION 23 Section No. 23 00 10	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Sanitary Waste and Vent Piping Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters HEATING, VENTILATING AND AIR CONDITIONING Title General Conditions for Heating, Ventilating, and Air Conditioning	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7 Not Used Page Count 18
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 13 19.13 22 33 00 22 34 00 DIVISION 23 Section No. 23 00 10 23 05 13	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Specialties Domestic Water Piping Specialties Domestic Water Piping Specialties Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters Fuel-Fired Domestic Water Heaters Title General Conditions for Heating, Ventilating, and Air Conditioning Common Motor Requirements for HVAC Equipment	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7 Not Used Page Count 18 4
Section No. 22 00 10 22 05 13 22 05 16 22 05 17 22 05 18 22 05 19 22 05 23 22 05 29 22 05 53 22 07 19 22 11 16 22 11 19 22 11 23 22 13 16 22 13 19 22 13 19.13 22 33 00 22 34 00 DIVISION 23 Section No. 23 00 10	Title General Conditions for Plumbing Common Motor Requirements for Plumbing Equipment Expansion Fittings and Loops for Plumbing Piping Sleeves and Sleeve Seals for Plumbing Piping Escutcheons for Plumbing Piping Meters and Gages for Plumbing Piping General-Duty Valves for Plumbing Piping Hangers and Supports for Plumbing Piping and Equipment Identification for Plumbing Piping and Equipment Plumbing Piping Insulation Domestic Water Piping Domestic Water Piping Sanitary Waste and Vent Piping Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Electric, Domestic-Water Heaters Fuel-Fired Domestic Water Heaters HEATING, VENTILATING AND AIR CONDITIONING Title General Conditions for Heating, Ventilating, and Air Conditioning	Page Count 17 4 7 4 2 6 8 10 7 15 11 6 4 8 7 2 7 Not Used Page Count 18

P	Δ	G	F	6	n	F	q

23 05 18	Escutcheons for HVAC Piping	2
23 05 19	Gages for HVAC Piping	6
23 05 23	General-Duty Valves for HVAC Piping	13
23 05 29	Hangers and Supports for HVAC Piping and Equipment	10
23 05 48	Vibration and Seismic Controls for HVAC Systems	13
23 05 53	Identification for HVAC Piping and Equipment	9
23 05 93	Testing, Adjusting, and Balancing for HVAC and Domestic Hot Water Recirculation	17
23 07 13	Duct Insulation	16
23 07 16	HVAC Equipment Insulation	14
23 07 19	HVAC Piping Insulation	17
23 09 00	Instrumentation and Control for HVAC	34
23 11 23	Facility Natural-Gas Piping	11
23 21 13	Hydronic Piping	19
23 21 23	Hydronic Pumps	5
23 31 13	Metal Ducts	15
23 33 00	Air Duct Accessories	8
23 34 23	HVAC Power Ventilators	5
23 37 13	Diffusers, Registers, and Grilles	3
23 51 00	Breechings, Chimneys, and Stacks	4
23 52 16	Condensing Boilers	7
23 57 00	Heat Exchangers for HVAC	3
23 64 16	Centrifugal Water Chillers	22

DIVISION 24	RESERVED
-------------	----------

DIVISION 25	INTEGRATED AUTOMATION	Not Used ⊠
Section No.	Title	Page Count

DIVISION 26	ELECTRICAL	Not Used □
Section No.	Title	Page Count
26 00 10	General Conditions for Electrical	17
26 05 19	Low-Voltage Electrical Power Conductors and Cables	5
26 05 23	Control-Voltage Electrical Power Cables	10
26 05 26	Grounding and Bonding for Electrical Systems	5
26 05 29	Hangers and Supports for Electrical Systems	5
26 05 33	Raceways and Boxes for Electrical Systems	8
26 05 44	Sleeves and Sleeve Seals for Electrical Raceways and Cabling	4
26 05 48	Vibration and Seismic Controls for Electrical Systems	7
26 05 53	Identification for Electrical Systems	7
26 05 73	Protective Device Coordination Study	6
26 11 16	Modifications to Existing Secondary Unit Substation	3
26 22 00	Low-Voltage Transformers	5
26 24 13	Switchboards	11
26 24 16	Panelboards	9
26 27 26	Wiring Devices	7
26 28 13	Fuses	3
26 28 16	Enclosed Switches and Circuit Breakers	6
26 29 13	Enclosed Controllers	9
26 29 23	Variable-Frequency Motor Controllers	16
26 36 00	Transfer Switches	8
26 51 19	LED Interior Lighting	8
26 52 13	Emergency and Exit Lighting	6

DIVISION 27	COMMUNICATIONS	Not Used ⊠
Section No.	Title	Page Count
DIVISION 28	ELECTRONIC SAFETY AND SECURITY	Not Used □
Section No.	Title	Page Count
28 00 10	General Conditions for Electronic Safety and Security	18
28 05 14 28 44 00	Conductors and Cables for Fire Alarm Refrigerant Detection and Alarm	6
28 46 21.11	Addressable Fire-Alarm Systems	
		••
DIVISION 29	RESERVED	
DIVISION 30	RESERVED	
		_
DIVISION 31	EARTHWORK	Not Used 🗌
Section No.	Title	Page Count
31 20 01	Building Excavation and Backfill	15
DIVISION 32	EXTERIOR IMPROVEMENTS	Not Used ⊠
Section No.	Title	Page Count
DIVISION 33	UTILITIES	Not Used ⊠
Section No.	Title	Page Count
		- a g o ocamo
DIVISION 34	TRANSPORTATION	Not Used ⊠
Section No.	Title	Page Count
		<u> </u>
DIVISION 35	WATERWAYS AND MARINE	Not Used ⊠
Section No.	Title	Page Count
		_
DIVISION 36	RESERVED	
DIVISION 37	RESERVED	
DIAIOION 21	I/FOFI/AED	

DIVISION 38	RESERVED	
DIVISION 39	RESERVED	
DIVISION 40	PROCESS INTEGRATION	Not Used ⊠
Section No.	Title	Page Count
DIVISION 41	MATERIAL PROCESSING	Not Used ⊠
Section No.	Title	Page Count
DIVISION 42	PROCESS HEATING, COOLING, AND DRYING	Not Used ⊠
Section No.	Title	Page Count
DIVISION 43	PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND STORAGE EQUIPMENT	Not Used ⊠
Section No.	Title	Page Count
DIVISION 44	POLLUTION CONTROL EQUIPMENT	Not Used ⊠
Section No.	Title	Page Count
DIVISION 45	INDUSTRY SPECIFIC MANUFACTURING EQUIPMENT	Not Used ⊠
Section No.	Title	Page Count
DIVISION 46	RESERVED	
DIVISION 47	RESERVED	
DIVISION 48	RESERVED	
DIVISION 49	RESERVED	

VOLUME Three of Three

	DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREM	IENTS	
Section No.	Title		Page Cou
00 01 01	Title Page (Volume Three)		1
DIVISION 50	PROJECT-SPECIFIC AVAILABLE INFORMATION	Page Count	Not Used
50 10 00	Existing Conditions Survey		\boxtimes
50 20 00	Environmental Assessment Information		\boxtimes
50 30 00	Hazardous Building Materials Inspection and Inventory	186	
50 40 00	Subsurface Geotechnical Report		\boxtimes
50 50 00	Elevator Agreement		\boxtimes
50 60 00	FM Global Checklist For Roofing Systems	3	
50 60 01	FM Global Checklist For Boiler Installer	2	П

00 01 10 Table of Contents

Section 50 10 00 Existing Conditions Survey (Not Used)

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Section 50 20 00 Environmental Assessment Information (Not Used)

THIS PAGE INTENTIONALLY LEFT BLANK

Section 50 30 00 Hazardous Building Materials Inspection and Inventory

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290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Ekstrom Hall

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63180

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for Ekstrom Hall at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

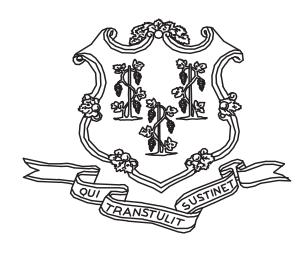
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Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Ekstrom Hall NVCC

ASBESTOS INSPECTION REPORT

EKSTROM HALL NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63180 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 18, 2017

Table of Contents

SECTION

APPENDIX B

1.0	INTRODUCTION
2.0	ASBESTOS-CONTAINING MATERIALS SURVEY
3.0	ASBESTOS-CONTAINING MATERIALS
4.0	DISCUSSION AND RECOMMENDATIONS
5.0	LIMITATIONS
6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
7.0	BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS
APPEN	NDIX A LICENSE AND CERTIFICATION

DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a prerenovation inspection at Ekstrom Hall located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 28, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included pipe fitting insulation, fiberglass pipe insulation paper/adhesive, fiberglass duct insulation adhesive, duct sealant, plaster ceiling, gaskets, fire stop caulk, and end cap sealant. Suspect materials that are inaccessible and were not sampled include roofing, waterproofing and gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.

- (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

Miscellaneous Gasket (on Ground) – E103

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Cementitious Plaster Ceiling
- Green Gaskets
- Mudded End Cap Sealant
- Mudded Pipe Fitting Insulation (All Sizes, All Systems)
- Mudded Pump Insulation (CHW P-9)
- Mudded Valve Insulation
- Mudded Tank Insulation
- Green Duct Sealant
- White End Cap Sealant
- Fiberglass Duct Insulation Adhesive Yellow

• Fiberglass Pipe Insulation Paper/Adhesive

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

Based on the ACM identification of a loose gasket, pipe flange gaskets should be presumed to be ACM.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE EKSTROM HALL

Sample	Sample		%	
Number	Location	Material	Asbestos	Asbestos Type
112817-EK-1A	Parking Garage - Level B2	Cementitious Plaster Ceiling	ND	-
112817-EK-1B	Parking Garage - Level B2	Cementitious Plaster Ceiling	ND	-
112817-EK-1C	Parking Garage - Level B2	Cementitious Plaster Ceiling	ND	-
112817-EK-2A	Mechanical Room E103 (by Zone 5 Pump)	Miscellaneous Gasket on Ground	70	Chrysotile
112817-EK-2B	Mechanical Room E103	Miscellaneous Gasket on Ground - Green	ND	-
112817-EK-3A	Mechanical Room E103 (CHW P-9)	Mudded End Cap Sealant	ND	-
112817-EK-3B	Mechanical Room E103 (HWR on Tank)	Mudded End Cap Sealant	ND	-
112817-EK-4A	Mechanical Room E103 (CHW Supply)	Mudded Pipe Fitting – 12" Pipe	ND	-
112817-EK-4B	Mechanical Room E103 (CHW Supply)	Mudded Pipe Fitting	ND	-
112817-EK-5A	Mechanical Room E103 (HW Return)	Mudded Pipe Fitting – 12" Pipe	ND	-
112817-EK-5B	Mechanical Room E103 (HW Return)	Mudded Pipe Fitting	ND	-
112817-EK-6A	Mechanical Room E103 (Domestic HW)	Mudded Pipe Fitting	ND	-
112817-EK-6B	Mechanical Room E103 (Domestic CHW)	Mudded Pipe Fitting	ND	-
112817-EK-7A	Mechanical Room E103 (Condensate Line)	Mudded Pipe Fitting	ND	-
112817-EK-7B	Mechanical Room E103 (CHW Return)	Mudded Pipe Fitting	ND	-
112817-EK-7C	Mechanical Room E103 (CHW P-9)	Mudded Insulation	ND	-
112817-EK-8A	Mechanical Room E103 (HW Supply)	Mudded Pipe Fitting	ND	-
112817-EK-8B	Mechanical Room E103 (Recirculating HW)	Mudded Pipe Fitting	ND	-
111817-EK-9A	Mechanical Room E104	Green Duct Sealant	ND	-
112817-EK-10A	Mechanical Room E103	Tank Insulation	ND	-

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE EKSTROM HALL

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-EK-10B	Mechanical Room E103	Tank Insulation	ND	-
112817-EK-10C	Mechanical Room E103	Tank Insulation	ND	-
112817-EK-11A	Mechanical Room E103 (Drain Line)	Mudded Pipe Fitting	ND	-
112817-EK-11B	Mechanical Room E103 (Drain Line)	Mudded Pipe Fitting	ND	-
112817-EK-11C	Mechanical Room E103 (Drain Line)	Mudded Pipe Fitting	ND	-
112817-EK-12A	Mechanical Room E103	White End Cap Sealant	ND	-
112817-EK-12B	Mechanical Room E103	White End Cap Sealant	ND	-
112817-EK-13A	Mechanical Room E104	Fiberglass Duct Insulation Adhesive – Yellow	ND	-
112817-EK-13B	Mechanical Room E104	Fiberglass Duct Insulation Adhesive – Yellow	ND	-
112817-EK-14A	Mechanical Room E103 (Zone #2)	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112817-EK-14B	Mechanical Room E103 (Zone #4)	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112817-EK-15A	Mechanical Room E104 (CHW Supply at AHU44)	Mudded Fitting on Valve	ND	-
112817-EK-15B	Mechanical Room E104 (CHW Return)	Mudded Pipe Fitting	ND	-
112817-EK-15C	Mechanical Room E104 (CHW Supply)	Mudded Pipe Fitting	ND	-
112817-EK-15D	Mechanical Room E104 (HW Supply)	Mudded Pipe Fitting	ND	-
112817-EK-15E	Mechanical Room E104 (HW Return P-13)	4" Mudded Pipe Fitting	ND	-
112817-EK-15F	Mechanical Room E104 (CHW Supply at AHU43)	Mudded Pipe Fitting	ND	-

ND = None Detected

NA/PS = Not Analyzed/Positive Stop HTHW = High Temp Hot Water

HIHW = High Temp Hot Wa HW = Hot Water

CHW = Chilled Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705224

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Attention: Ed Fennell Phone: (860) 282-9924

ATC Group Services LLC Fax: (860) 282-9826

 290 Roberts Street
 Received Date:
 12/08/2017 2:35 PM

 Suite 301
 Analysis Date:
 12/09/2017 - 12/12/2017

East Hartford, CT 06108 Collected Date: 11/30/2017

Project: 2257317033/NYCC-EKSTROM, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>itos</u>	Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-EK-1A	Parking garage B2 - cementitious plaster	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705224-0001 112817-EK-1B	ceiling Parking garage B2 -	Homogeneous Tan		100% Non-fibrous (Other)	None Detected
241705224-0002	cementitious plaster ceiling	Non-Fibrous Homogeneous			
112817-EK-1C	Parking garage B2 - cementitious plaster	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705224-0003	ceiling	Homogeneous			
112817-EK-2A	E103, zone 5 pump - misc gasket on	Various Fibrous		30% Non-fibrous (Other)	70% Chrysotile
241705224-0004	ground	Homogeneous			
112817-EK-2B	E103 - misc gasket on ground green	Green Non-Fibrous	30% Cellulose	70% Non-fibrous (Other)	None Detected
241705224-0005		Heterogeneous			
The sample group is not I	homogeneous.				
112817-EK-3A	E103, CHWP-9 - mudded ECS	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0006		Homogeneous			
112817-EK-3B	E103, HWR on tank - mudded ECS	Tan Non-Fibrous	15% Min. Wool	85% Non-fibrous (Other)	None Detected
241705224-0007		Homogeneous			
112817-EK-4A	E103, CHW supply - 12" mudded fitting	Gray/Tan Fibrous	25% Min. Wool 20% Glass	55% Non-fibrous (Other)	None Detected
241705224-0008		Homogeneous			
112817-EK-4B	E103, CHW supply - mudded fitting	Tan Fibrous	30% Min. Wool 15% Glass	55% Non-fibrous (Other)	None Detected
241705224-0009		Homogeneous			
112817-EK-5A	E103 HW return - 12" mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0010		Homogeneous			
112817-EK-5B	E103 HW return - mudded fitting	Tan Fibrous	20% Cellulose 30% Min. Wool	50% Non-fibrous (Other)	None Detected
241705224-0011		Homogeneous			
112817-EK-6A	E103 domestic HW - mudded fitting	Gray/White Fibrous	20% Cellulose 30% Min. Wool	50% Non-fibrous (Other)	None Detected
241705224-0012		Homogeneous			
112817-EK-6B	E103 domestic CHW - mudded fitting	Tan Fibrous	25% Cellulose 30% Min. Wool	45% Non-fibrous (Other)	None Detected
241705224-0013		Homogeneous			
112817-EK-7A	E103 condensate line - mudded fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705224-0014		Homogeneous			
112817-EK-7B	E103 CHW return - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0015		Homogeneous			
112817-EK-7C	E103 CHWP-9 - mudded fitting	Tan Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0016		Homogeneous			

Initial report from: 12/12/2017 16:47:13

EMSL Order: 241705224 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbes % Fibrous	<u>tos</u> % Non-Fibrous	<u>Asbestos</u> % Type
112817-EK-8A	E103 HW supply - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0017		Homogeneous			
112817-EK-8B	E103 recirculating HW - mudded fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705224-0018		Homogeneous			
112817-EK-9A	E104 - green duct sealant	Gray Non-Fibrous	5% Glass	95% Non-fibrous (Other)	None Detected
241705224-0019		Homogeneous			
12817-EK-10A	E103 - tank insulation	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705224-0020		Homogeneous			
112817-EK-10B	E103 - tank insulation	White Fibrous	25% Synthetic 10% Glass	65% Non-fibrous (Other)	None Detected
241705224-0021		Homogeneous			
112817-EK-10C	E103 - tank insulation	Tan Fibrous	20% Cellulose 35% Min. Wool	45% Non-fibrous (Other)	None Detected
241705224-0022		Homogeneous			
112817-EK-11A	E103 drain line - mudded fitting	Gray/Tan Fibrous	20% Cellulose 20% Min. Wool	60% Non-fibrous (Other)	None Detected
241705224-0023	E400 I : "	Homogeneous	050/ 14:	050/ N 51 (51)	
112817-EK-11B	E103 drain line - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0024		Homogeneous			
112817-EK-11C	E103 drain line - mudded fitting	Tan Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705224-0025		Homogeneous			
112817-EK-12A	E103 - white end cap sealant	White/Yellow Fibrous	15% Glass	85% Non-fibrous (Other)	None Detected
241705224-0026		Homogeneous			
112817-EK-12B	E103 - white end cap sealant	Tan/Yellow Fibrous	30% Glass	70% Non-fibrous (Other)	None Detected
		Homogeneous			
112817-EK-13A	E104 - fiberglass duct adhesive yellow	Yellow Non-Fibrous	5% Glass	95% Non-fibrous (Other)	None Detected
241705224-0028	E404 5:	Homogeneous	201 0 " :	000/ N - 51 - (51)	
112817-EK-13B	E104 - fiberglass duct adhesive yellow	Yellow Non-Fibrous	2% Cellulose	98% Non-fibrous (Other)	None Detected
241705224-0029	E400 "0	Homogeneous	05% 0'	FOV Nove El (OII)	None D. C. C.
112817-EK-14A 241705224-0030	E103 zone #2 - fiberglass pipe insulation paper/adhesive	Silver/Yellow Fibrous Homogeneous	95% Glass	5% Non-fibrous (Other)	None Detected
112817-EK-14B	E103 zone #4 - fiberglass pipe	Silver/Yellow Fibrous	95% Glass	5% Non-fibrous (Other)	None Detected
241705224-0031	insulation paper/adhesive	Homogeneous			
112817-EK-15A	E104 CHW supply H44 - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0032	on valve	Homogeneous			
112817-EK-15B	E104 CHW return - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0033	.	Homogeneous			
112817-EK-15C	E104 CHW supply - mudded fitting	Gray/Tan Fibrous	10% Cellulose 30% Min. Wool	60% Non-fibrous (Other)	None Detected
241705224-0034	J	Homogeneous			

Initial report from: 12/12/2017 16:47:13



EMSL Order: 241705224 Customer ID: ATCE54 Customer PO: 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Туре
112817-EK-15D	E104 HW supply - mudded fitting	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705224-0035		Homogeneous			
112817-EK-15E	E104 HWP 13 - 4"	Tan	2% Cellulose	63% Non-fibrous (Other)	None Detected
	mudded fitting HWR	Fibrous	35% Min. Wool	, ,	
241705224-0036		Homogeneous			
112817-EK-15F	E104 CHW supply -	Tan	35% Min. Wool	65% Non-fibrous (Other)	None Detected
	mudded fitting AH43	Fibrous			
241705224-0037		Homogeneous			

Analyst(s)

Lauren Buffone (22) Quetcy Castro Romero (15) In Rom

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/12/2017 16:47:13

ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

Page L of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

ATC Inspector: Scort Jahnson Accreditation No.: Oco.29,7 Survey Date: 1/30/17 Signature:							
Accreditation No.: 0029. Survey Date: 1/30/17 Signature: 2017	OHW SOM	Client Name:	ame: cTbcs	CS			
ii	2	Project	Project No./Task No.: 3257317033	225731703	5		
		Project	Project Manager: Ed Fonell	1 Fennell			
		Rednes	Requested Completion Date:	Date:			
TWI.	Requested turnaround time (circle)	3 HR 6 HR	IR 24 HR	48 HR (3 DY) 5 DY	No. Samples Collected	illected 34
Building: NYCC - E	Ekstrom Address:	No Char.	Beleur	Waterbra	13.	474	
Location	Material Description	Type S TSI MISC	Estimated Quantity	Friable Y/N	SI (SI	Sample_of_ (homogeneous material)	Field Number
Portion goinge BA Com	Comentions Plaster Certing	S		پ		£ 1	112817 - EK- 1A
	entition plake ceiling	S		<i>y</i> _		2	1 - 18
	Cementitions plant perinty	~	,	>		2	71-10
Elo3, Zone Spunp MISC	of gesters on ground	٤		2		ď	112317-EK-2A
Elos Mix	ox gaster on grown green	٤		>		۲ ۲	1 4 2B
Floz, CHWP-9 M.		TST		3-		a	112817-EK-3 A
ĸ	Mudded ECS	TST		5 -		a	4 4-3B
Flos, CHW Supply 12	12" mudded fitting	tst		2		u.	112817-EK-4A
Flos CHW Supply MI	mudder Atting	TST		2		2	1 1 - 4B
Elos, Hw tehuin 12"	12" muddes fraking	TST		7-			112817-EK-5A
E103, Hw schuen M	principled felting	TSI		2		2 3	S A L
Elos, dopestic Hw Mu	Andrea fishing	151		>		a	112817-EK- 6A
Flos domplic cHw Mu	Mudaca fifting	TST	The state of the s	2		a	1 1-63
Elos, Condonsule line Mu	Muchae Sitting	TST		2		E 1	112817-EK-7A
E103, CHUS return M	Mudden fetteral	TST	83) ~	The state of the s	2 2	1 b-78

Comments: Notes Damage Factors:

Ventilation (yes-no; if yes, type) Physical (sig dmg-dmg-no dmg) Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Received By/Date: Received By/Date: Air movement (high-moderate-low)

Accessibility (within reach-barely reachable)-not reachable)
Air conduits (air plenum - air shaft - elevator shaft - duct)

Water (extensive-moderate-slight-none)

Deterioration (heavy-moderate-light-none)

Friability (yes-no; hard-mod-soft surface)



Relinquished By/Date:

Relinquished By/Date:

S:\BldgSci\Admin\Templates and Forms\Asbestos\Asbestos Bulk Sample Form.doc

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page A of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924

Inspector: Jcott Jahrson editation No.: Oco297 ey Date: 1/30/17 et Date: 1	Requested turnaround time (circle Address: Material Description	Client Name: Project No./Ta	Client Name: CTDCS Project No./Task No.: 2257317033	CS			
editation No.: 000297 ey Date: 1/30/17 ature: 2/10/2/ Name: 2/10/2/ Ing: NYCC - Location Location Lucation Mw. Supply Rudder felt Ecirculating How mudder felt	Requested turnaround time (circle	Project N Project N	No./Task No.:				
ature: Saying ature: Profit Ing: NYCC - Location CHWP-9 mustar Investigation of the Supply mustare fith	sted turnaround time (circle Address:	Project N		225731703	5		
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Elos wuch En	wark Erd Cop Scalout	2		2		7	

Comments: Notes Damage Factors:

Disturbance Factors:

Physical (sig dmg-dmg-no dmg)

Ventilation (yes-no; if yes, type) Proximity (<1ft-1-6ft->6ft)

Accessibility (within reach-barely reachable-not reachable)
Air conduits (air plenum - air shaft - elevator shaft - duct)

Water (extensive-moderate-slight-

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Received By/Date: Air movement (high-moderate-low)

Deterioration (heavy-moderate-light-none)



Relinquished By/Date: Relinquished By/Date:

Received By/Date:

Page 2 Of

ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

Page 3 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924

11287-EK- 13A 11287-EK- 14A 15 B 15 C 8 m1 - 7 112817-EK-15A 150 W Field Number 7 No. Samples Collected 34 Sample_of_ (homogeneous ad 3 material) ~ CY a d (SD D ND) Condition 3 HR 6 HR 24 HR 48 HR (3 DY) 5 DY Project No. Task No.: 3257317033 Waterbro Fennell Friable X 5 Requested Completion Date: 2 5 5 2-2 CTDC5 22 シンケ Project Manager: Estimated Quantity Beleve 241705224 Client Name: Chase TSI MISC TSI 157 TST 137 TST. 157 2 2 2 2 Requested turnaround time (circle) Fibr glass pipe resultion, paper laditionist Address: Fire glass prop insulation, paper / Adhosive Fiber ofluss Duck Adrestive, yellow First gloss Duct Adhering, yellow Material Description HWA AHUS mudades fifting on value 4" museu fellowy fill lug totted mudged fetting mudaca fetting ATC Inspector: Scorr Jakusow EKStrom Mudded Prudach Accreditation No.: 000297 11/30/17 Building: NYCC -Floy CHW SUPPLY HIGH Zone # 2 Zow # L Flor CHW return Elot Cide Supply He Supply FIOH CHW SUPPLY ELON HWP 13 Location Survey Date: Lab Name: Signature: EloH Flos F104 Elot E103

Comments:

PLM

Ventilation (yes-no; if yes, type) Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

Notes Damage Factors:

Air conduits (air plenum - air shaft - elevator shaft - duct) Water (extensive-moderate-slight-Accessibility (within reach-barely reachable-not reachable) Physical (sig dmg-dmg-no dmg)

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Received By/Date: Air movement (high-moderate-low)

Deterioration (heavy-moderate-light-none)



Relinquished By/Date: Relinquished By/Date:

Received By/Date: 12/1/17



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

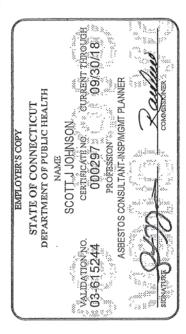
(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH



03-615244 CURRENT THROUGH VALIDATION NO 09/30/18 SIGNATURE



INSTRUCTIONS:

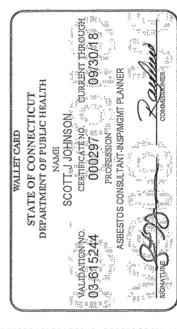
- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet ainent place in your office or place of business 1. Detach and sign each of the cards on this form 2. Display the large card in a prominent place in a
- 4. The employer's copy is for persons who must demonstrate current licensure/cerdification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can card, place it in a secure place.

CERTIFICATE NO.

000297

SCOTT J JOHNSON

232 0 23 B B William 24 P 9018864 90886



CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Site Inspector Refresher Training Asbestos Accreditation Under TSCA Title II has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 73 William Franks Drive ATC Group Services LLC (413) 781-0070

Dregon Morrel

Regional Training Manager: Gregory Morsch

Certificate Number

SIAR - 5858

October 12, 2017 Examination Date

Dregoy Morel Principal Instructor: Gregory Morsch October 12, 2017

Date of Course

October 12, 2018 Expiration Date

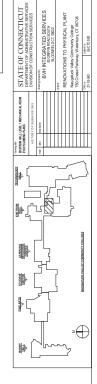


E103
ROOM

DEMOLITION DRAWING NOTES

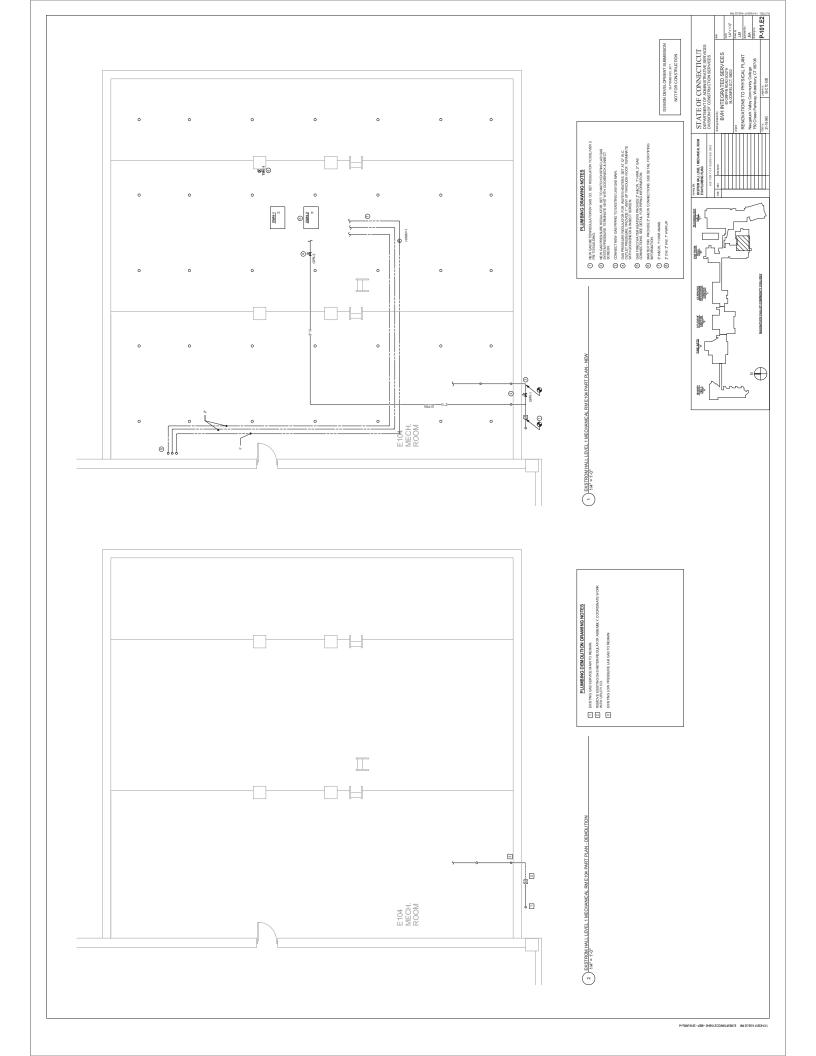
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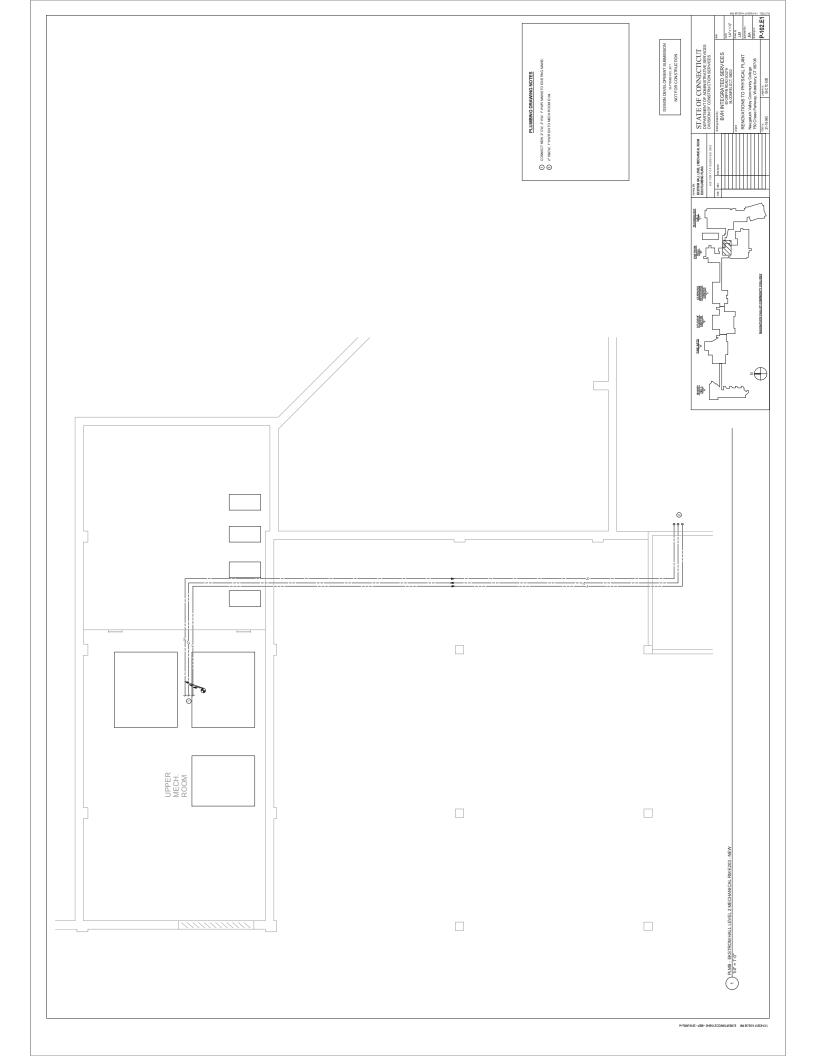
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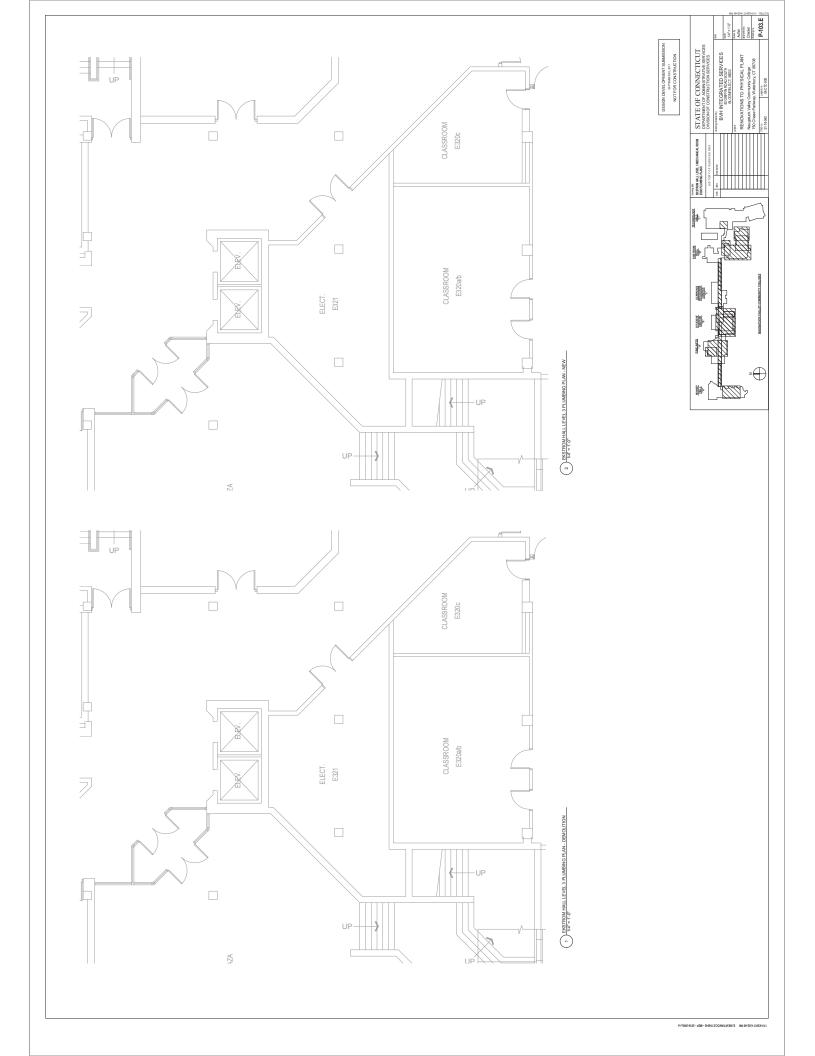


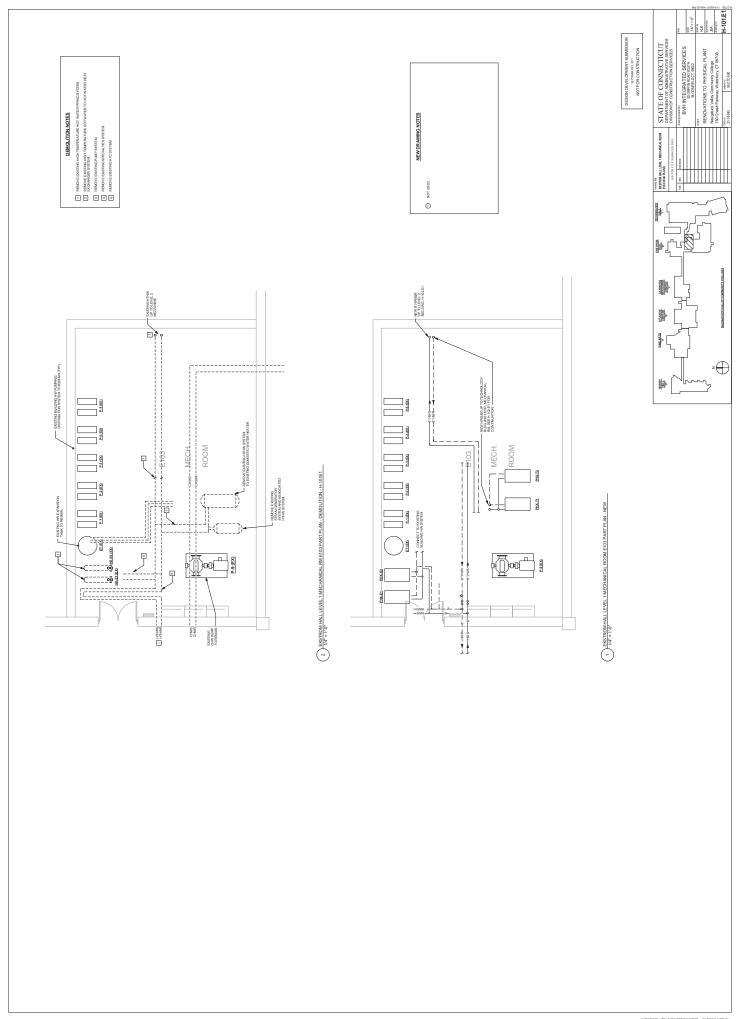
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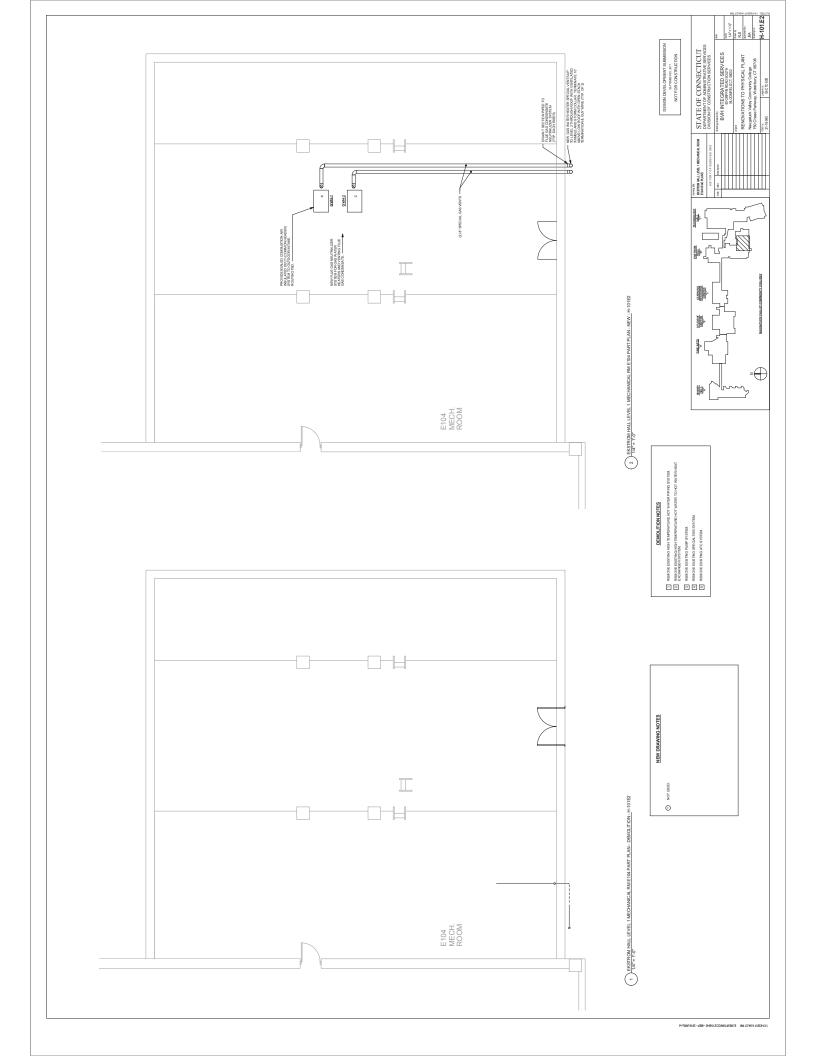
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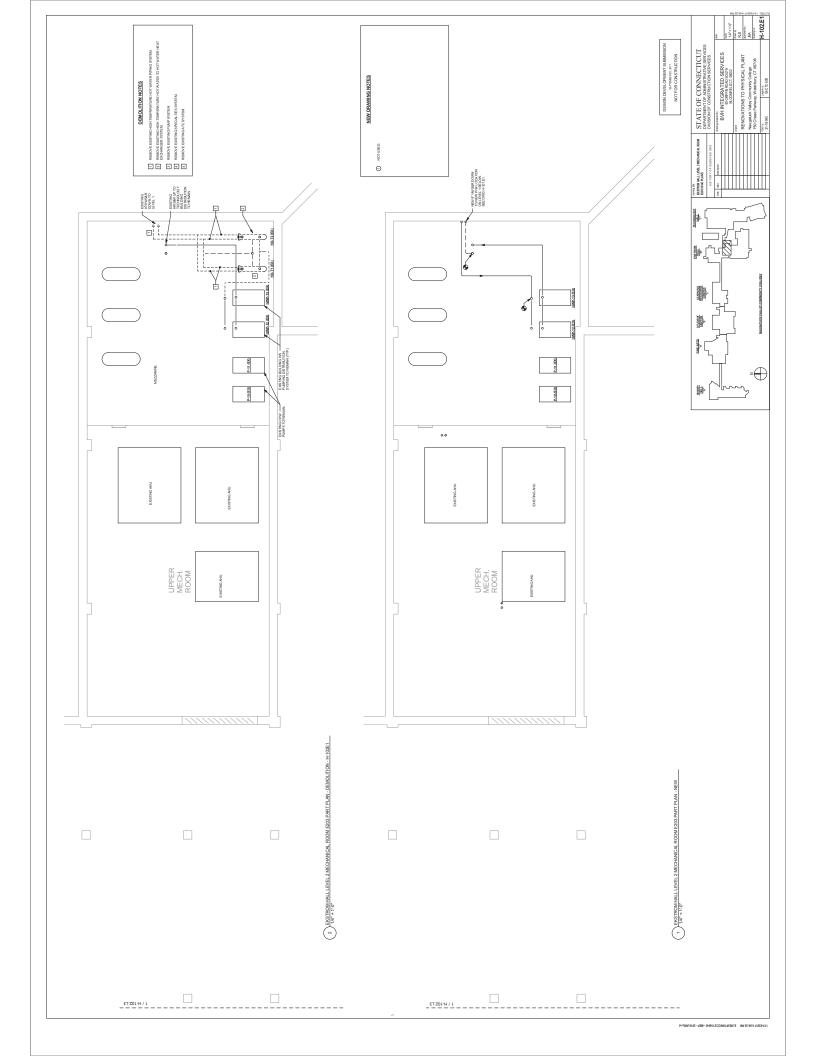


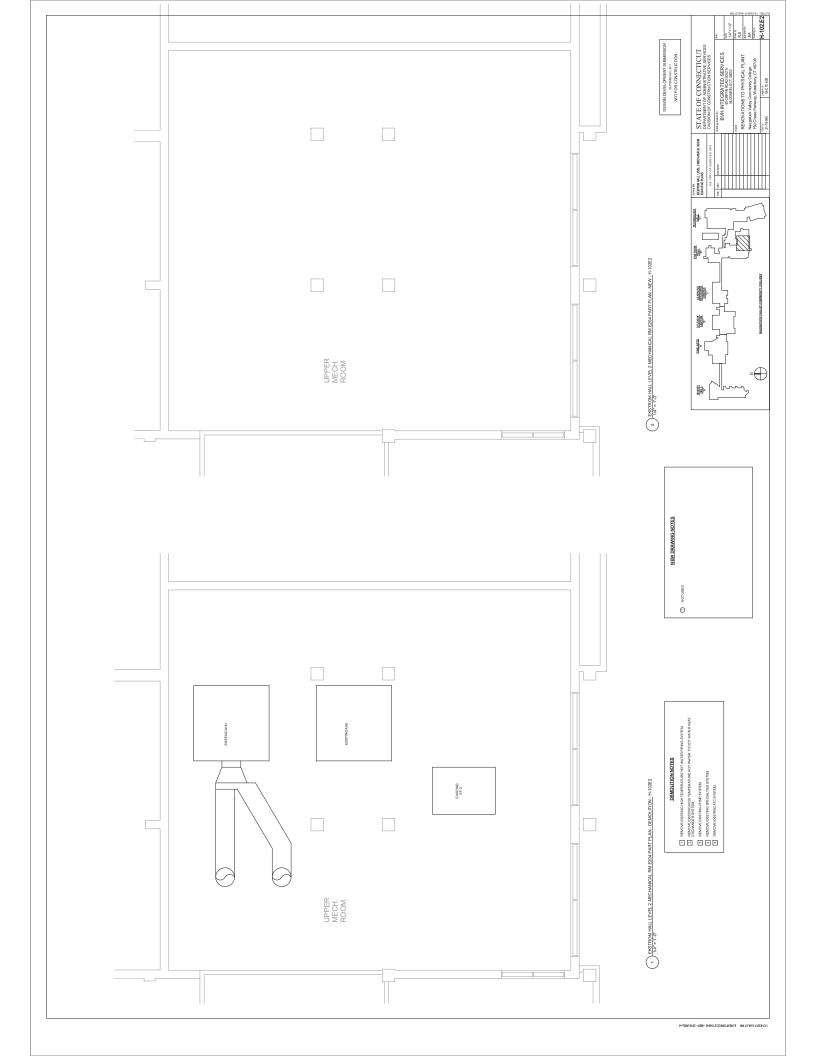


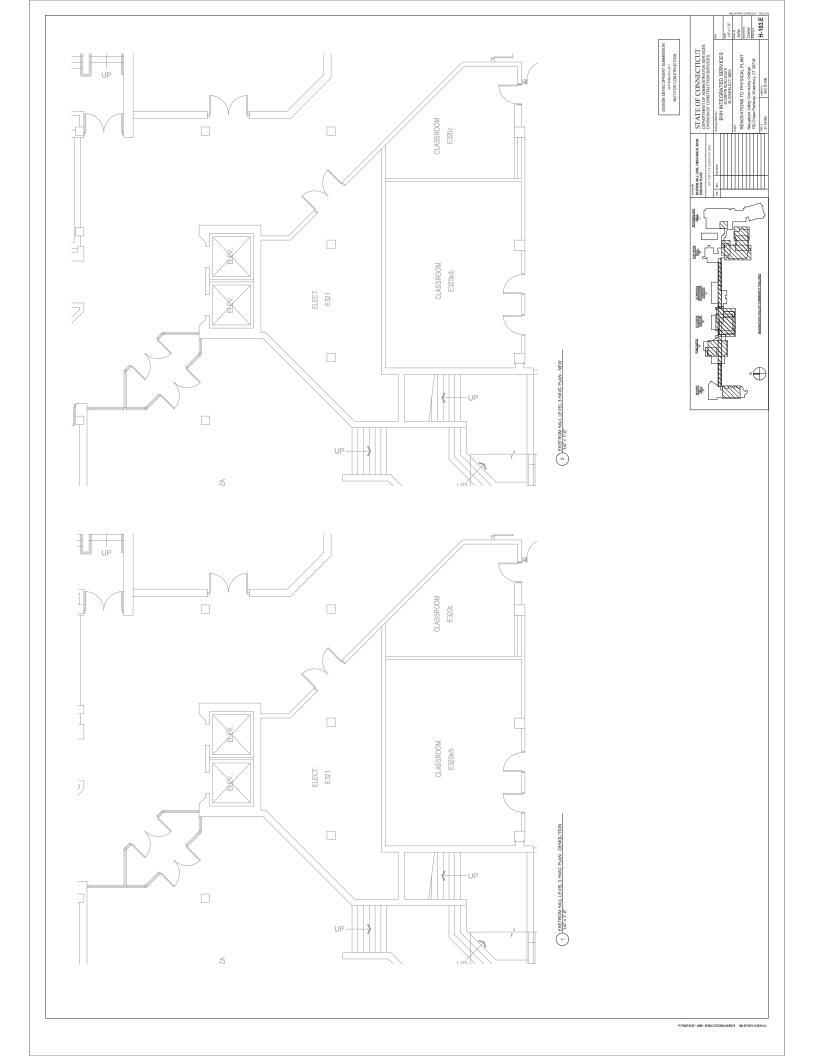












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290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Core Building - Boiler Room

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63261

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for the Core Building - Boiler Room at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

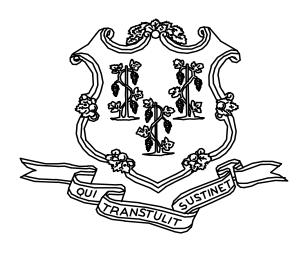
Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Core Building - Boiler Room NVCC

ASBESTOS INSPECTION REPORT

BOILER ROOM CORE BUILDING NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63261 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 19, 2017

Table of Contents

SECTION

1.0 INTRODUCTION	
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- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a prerenovation inspection at Core Building - Boiler Room located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 30, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included fiberglass pipe fitting insulation, valve insulation, boiler components, fire brick and mortar, tank insulation, pipe insulation paper/adhesive, end cap sealant,. Suspect materials that are inaccessible and were not sampled include spray-on fireproofing, gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.
 - (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.

- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

• Rope Gaskets – Boilers

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Mudded Pipe Fitting Insulation (All sizes, All systems)
- Tank Insulation
- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive
- Fiberglass Insulation Canvas Wrap
- Fire Brick
- Fire Brick Mortar
- Interior Boiler Putty at Exhaust

Boiler mixing tank insulation was identified to contain Vermiculite.

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

Duct Gasket Putty – Tan could possibly be found on duct work throughout.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

Pipe Flange Gaskets were not accessible to be sampled but could possibly be found on piping throughout.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE CORE BUILDING BOILER ROOM

Sample	Sample	Material	% Asbestos	Asbestos Type
Number	Location	IVIIII III	70 11500505	risbestos Type
112817-BR-1A	Hot Water Tank near Drinking Fountain	Hot Water Tank Insulation	ND	-
112817-BR-1B	Hot Water Tank near Drinking Fountain	Hot Water Tank Insulation	ND	-
112817-BR-2A	Mixing Tank near Drinking Fountain	Mixing Tank Insulation	ND	-
112817-BR-2B	Mixing Tank near Drinking Fountain	Mixing Tank Insulation	ND	-
112817-BR-3A	Boiler #2	Interior Boiler Putty at Exhaust	ND	-
112817-BR-3B	Boiler #2	Interior Boiler Putty at Exhaust	ND	-
112817-BR-4A	Boiler #2	Rope Gasket on Door	65	Chrysotile
112817-BR-4B	Boiler #2	Rope Gasket on Door	70	Chrysotile
112817-BR-5A	Boiler #2	Fire Brick Mortar	ND	-
112817-BR-5B	Boiler #2	Fire Brick Mortar	ND	-
112817-BR-6A	Green Chiller	Fiberglass Insulation Canvas Wrap (HTHW Supply)	ND	-
112817-BR-6B	Green Chiller	Fiberglass Insulation Canvas Wrap (HTHW Supply)	ND	-
112817-BR-7A	Middle Chiller	White End Cap Sealant	ND	-
112817-BR-7B	HTHW Supply (Tag 015)	White End Cap Sealant	ND	-
112817-BR-7C	Hot Water Tank near Drinking Fountain	White End Cap Sealant	ND	-
112817-BR-8A	Boiler #2	18" Mudded Fitting Insulation	ND	-
112817-BR-8B	Green Chiller	18" Mudded Fitting Insulation (HTHW Line)	ND	-

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE CORE BUILDING BOILER ROOM

	1			ı
Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-BR-8C	Boiler #2	18" Mudded Fitting Insulation (HTHW Return)	ND	-
112817-BR-8D	Adjacent to P-16	18" Mudded Fitting Insulation (HTHW Supply)	ND	-
111817-BR-8E	Mixing Tank	18" Mudded Fitting Insulation (HTHW Return)	ND	-
112817-BR-9A	BW Pumps in Back of Room by Stairs	Fiberglass Pipe Insulation Paper/Adhesive (BW Supply)	ND	-
112817-BR-9B	BW Pumps in Back of Room by Stairs	Fiberglass Pipe Insulation Paper/Adhesive (BW Return)	ND	-
112817-BR-10A	Boiler #2	6" Mudded Pipe Fitting Insulation (HTHW Return)	ND	-
112817-BR-10B	Boiler #2	6" Mudded Pipe Fitting Insulation (HW Tank)	ND	-
112817-BR-10C	Boiler #2	6" Mudded Pipe Fitting Insulation (HTHW Supply)	ND	-
112817-BR-11A	Boiler #2	Fire Brick	ND	-
112817-BR-11B	Boiler #2	Fire Brick	ND	-
112817-BR-12A	Near Green Chiller by Stairs	Mudded Pipe Fitting Insulation (BW Return)	ND	-
112817-BR-12B	Boiler #2	Mudded Pipe Fitting Insulation (Fuel Oil Return)	ND	-
112817-BR-12C	Pump P-16	Mudded Pipe Fitting Insulation (HTHW Supply)	ND	-
112817-BR-12D	Near Sink by Hot Water Tank	Mudded Pipe Fitting Insulation	ND	-
112817-BR-12E	BW Pumps in Back of Room by Stairs	Mudded Pipe Fitting Insulation (BW Return)	ND	-
112817-BR-12F	BW Pumps in Back of Room by Stairs	Mudded Pipe Fitting Insulation (BW Supply)	ND	-
112817-BR-12G	Pump P-33	Mudded Pipe Fitting Insulation (HTHW Supply)	ND	-
112817-BR-12H	Pump P-33	Mudded Pipe Fitting Insulation (CHW Supply)	ND	-

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE **CORE BUILDING BOILER ROOM**

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-BR-12I	BW Pumps in Back of Room by Stairs	Mudded Pipe Fitting Insulation (BW Supply)	ND	-
112817-BR-12J	Boiler #1	Mudded Pipe Fitting Insulation (Fuel Oil Return)	ND	-
112817-BR-12K	By Drinking Fountain	Mudded Pipe Fitting Insulation (HTHW Return)	ND	-
112817-BR-12L	By Drinking Fountain	Mudded Pipe Fitting Insulation (CHW Return)	ND	•

ND = None Detected CHW = Chilled Water

HTHW = High Temp Hot Water HW = Hot Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS



Attention: Ed Fennell

EMSL Analytical, Inc.

ATC Group Services LLC

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705225 Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Phone: (860) 282-9924

Fax: (860) 282-9826

290 Roberts Street Received Date: 12/08/2017 2:35 PM

 Suite 301
 Analysis Date:
 12/12/2017

 East Hartford, CT 06108
 Collected Date:
 11/30/2017

Project: 2257317033/NYCC-BOILER ROOM, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-1A 241705225-0001	HW tank #2 boiler - hot water tank insulation	Tan Non-Fibrous	15% Min. Wool	85% Non-fibrous (Other)	None Detected
112817-1B	HW tank #2 boiler - hot water tank	Homogeneous Tan Fibrous	25% Min. Wool	2% Vermiculite 73% Non-fibrous (Other)	None Detected
241705225-0002	insulation	Homogeneous			
112817-2A 241705225-0003	Mixing tank #2 boiler - mixing tank insulation	Brown Fibrous	30% Cellulose	15% Vermiculite 55% Non-fibrous (Other)	None Detected
	Mississon to all HO hadilan	Homogeneous	400/ O-II-I	400/ \/	None Detected
112817-2B 241705225-0004	Mixing tank #2 boiler - mixing tank insulation	Tan Fibrous	10% Cellulose 10% Min. Wool	10% Vermiculite 70% Non-fibrous (Other)	None Detected
	Fire base #O basiles	Homogeneous		4000/ New Characte (Others)	None Detected
112817-3A 241705225-0005	Fire box #2 boiler - interior putty	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
	Fire here #0 heilen			4000/ Nam Sharara (Others)	None Detected
112817-3B 241705225-0006	Fire box #2 boiler - interior putty	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
112817-4A	Fire box #2 boiler -		20% Cellulose	150/ Non fibrous (Other)	6E% Chrysotile
241705225-0007	rope gasket	Gray Fibrous Homogeneous	20% Cellulose	15% Non-fibrous (Other)	65% Chrysotile
112817-4B	Fire box #2 boiler -	Gray	20% Synthetic	10% Non-fibrous (Other)	70% Chrysotile
241705225-0008	rope gasket	Fibrous Homogeneous	20 % Cynthelic	10 % Non-librous (Other)	70% Offiyadile
112817-5A	#2 boiler, older - fire	Tan		10% Vermiculite	None Detected
241705225-0009	brick mortar	Non-Fibrous Homogeneous		90% Non-fibrous (Other)	None Detected
112817-5B	#2 boiler, older - fire	Tan		10% Quartz	None Detected
241705225-0010	brick mortar	Non-Fibrous Homogeneous		90% Non-fibrous (Other)	None Beledieu
112817-6A	Green boiler, HTHW supply - fiberglass	Tan Fibrous	70% Cellulose 25% Glass	5% Non-fibrous (Other)	None Detected
241705225-0011	paper canvas	Homogeneous			
112817-6B	Green boiler, HTHW supply - fiberglass	Tan Fibrous	70% Cellulose 15% Glass	15% Non-fibrous (Other)	None Detected
241705225-0012	paper canvas	Homogeneous			
112817-7A	HTHW return - white end cap sealant	Gray/White Non-Fibrous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
241705225-0013		Homogeneous			
112817-7B	HTHW 015 - white end cap sealant	White/Yellow Fibrous	25% Glass	75% Non-fibrous (Other)	None Detected
241705225-0014		Homogeneous			
112817-7C	HW tank - white end cap sealant	Tan/Yellow Fibrous	25% Glass	75% Non-fibrous (Other)	None Detected
241705225-0015		Homogeneous			
112817-Br-8A	#2 boiler, HTHW boiler - 18" mudded	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0016	fitting	Homogeneous			

Initial report from: 12/12/2017 16:36:38

EMSL Order: 241705225 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes		<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-Br-8B 241705225-0017	Green boiler, HTHW - 18" mudded fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
	//O.L. ''. LITINA	Homogeneous	000/14: 14/ 1	700(1) 51 (01)	
112817-Br-8C 241705225-0018	#2 boiler, HTHW return - 18" mudded fitting	Gray Fibrous Homogeneous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
		-	250/ Min Man	CEO/ Nan Ebraue (Other)	Nana Datastad
112817-Br-8D 241705225-0019	Adjacent to P-16 - 18" mudded fitting, HTHW supply	Tan Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
		-	050/ Min 14/1	OFO(Nigg Strange (Ottoor)	Name Datastad
12817-Br-8E 41705225-0020	Mixing tank, HTHW return - 18" mudded fitting	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
		-	750/ 0-11-1	50/ New Stewart (Ottoon)	Name Datastad
112817-Br-9A 241705225-0021	Pumps back of room - fiber insulation BW	Tan/Silver Fibrous Homogeneous	75% Cellulose 20% Glass	5% Non-fibrous (Other)	None Detected
	supply		750/ 0 # 1	50(N) 51 (011)	
112817-Br-9B 241705225-0022	Pumps back of room - fiber insulation BW supply	Tan/Silver Fibrous Homogeneous	75% Cellulose 20% Glass	5% Non-fibrous (Other)	None Detected
	#2 boiler, HW tank -	-	30% Min. Wool	70% Non fibrous (Other)	None Detected
112817-Br-10A 241705225-0023	mudded fittings; 6" HTHW return	Gray Fibrous Homogeneous	30% WIII. WOOI	70% Non-fibrous (Other)	None Detected
112817-Br-10B	#2 boiler. HW tank -	Gray	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0024	6" mudded fitting	Fibrous Homogeneous	30 % WIIII. WOOI	70% Non-librous (Other)	None Detected
12817-Br-10C	#2 boiler, HTH supply	Gray	10% Cellulose	55% Non-fibrous (Other)	None Detected
41705225-0025	- 6" mudded fitting	Fibrous Homogeneous	35% Min. Wool	55% Non-librous (Other)	None Detected
	#2 boiler - fire brick	Tan		5% Quartz	None Detected
112817-Br-11A 241705225-0026	#2 boiler - life brick	Non-Fibrous Homogeneous		95% Non-fibrous (Other)	None Detected
I12817-Br-11B	#2 boiler - fire brick	Tan		5% Quartz	None Detected
241705225-0027	#2 boiler life blick	Non-Fibrous Homogeneous		95% Non-fibrous (Other)	None Beledicu
112817-Br-12A	Pipes in back -	Gray/Tan	30% Cellulose	40% Non-fibrous (Other)	None Detected
241705225-0028	mudded fitting , BW return	Fibrous Homogeneous	30% Min. Wool	1070 11011 11010 (0 11101)	10.10 20.00.00
112817-Br-12B	#2 boiler - mudded	Gray	30% Min. Wool	70% Non-fibrous (Other)	None Detected
41705225-0029	fitting, fuel oil return	Fibrous Homogeneous			
12817-Br-12C	Pump P-16 - mudded fitting, HTHW supply	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0030		Homogeneous			
12817-Br-12D	By sink - mudded fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0031	-	Homogeneous			
12817-Br-12E	Pipes back of room - mudded fitting, BW	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0032	return	Homogeneous			
112817-Br-12F	Pumps back of room - mudded fitting, BW	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0033	supply	Homogeneous			
112817-Br-12G	Pump P-33 - mudded fitting HTHW supply	Gray/Yellow Fibrous	25% Min. Wool 15% Glass	60% Non-fibrous (Other)	None Detected
241705225-0034		Homogeneous			
112817-Br-12H	CHW supply - mudded fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705225-0035		Homogeneous			

Initial report from: 12/12/2017 16:36:38



EMSL Order: 241705225

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>stos</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-Br-12I	Pipes in back - mudded fitting, BW	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705225-0036	supply	Homogeneous			
112817-Br-12J	#2 boiler - mudded fitting, fuel oil return	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705225-0037	0 ,	Homogeneous			
112817-Br-12K	At drinking fountain - mudded fitting,	Gray Fibrous	25% Cellulose 35% Min. Wool	40% Non-fibrous (Other)	None Detected
241705225-0038	HTHW return	Homogeneous			
112817-Br-12L	CHW return - mudded	Gray	35% Cellulose	30% Non-fibrous (Other)	None Detected
	fitting	Fibrous	35% Min. Wool	, ,	
241705225-0039		Homogeneous			

Analyst(s)

Lauren Buffone (23) Quetcy Castro Romero (16) hu Rr

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/12/2017 16:36:38

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

290 Roberts Street, Suite 301 Page 1 of 3

	BUILDING SCIENCES • MATERIALS TESTING		24170522S	225			East Hartford, (860) 282-9924	East Hartford, CT 06108 (860) 282-9924 Fax: (860) 282-9826
ATC Inspector: John San	JOHNSOW		Client Name:	Name: cTDcs	CS			
Accreditation No.: 000297	97		Project	Project No./Task No.: 2257317033	325731703	3		
Survey Date: 11/30/17	,		Project	Project Manager: Ed Fenell	J Francil			
Signature:			Reque	Requested Completion Date:	ו Date:			
Lab Name:		Requested turnaround time (circle)	3 HR	6 HR 24 HR	48 HR (3 DY	5 DY	No. Samples Collected	llected 39
Building: NYCC -	Boiler room	Address:	No Char	Below.	Waterbur	5	26745	
Location	Materia	otion	Type S TSI MISC		Friable Y/N	Condition D D NE	Sample of (homogeneous material)	Field Number
Hw Tank #2 boiler	Hot water tank insulation	nsulation	TSI		>-		~	112817 - 14
Hw Tank #2 boild !	Hot muter tank insulation	Sulation	TST		>-		a	-
Mixing fank #2 boild	mixing tank insulation	ation	TST		2		-	112817 - 24
Mixing lank #2 boiler	Miking tack insulation	afion	TST	,	٠,>		u	22
File box # & boile	Interior putty		Z.		2		a -	112817 - 34
File box # 2 bailer	Interior publy		ĭ		2		a	J 3B
File door that boild	rope gasket		٤		2		4	112817 - 419
File don #2 boiler	rope gasket		٤		2		2	48
#2 boiler, older	Fire brick mothat	J4	٤		5			112817 - SA
# 2 boiler, older Fire brick mortal	Fire brick mort	af	£		\$		2	
Green boiler, HTHW S.PM	riber glass paper	Canves,	TST		2			112817 - CA
Green Boiler, HTHW Sapra Fiber glass puper canvas	Fibel glass puper c	ANVAS	TST		2		n	
	while End Cap Scalart	Sealart	٤		5		•	112317- 7A
15		Scalust	٤		2		2	1 78
Hw Tank	write End Cup S	Sculant	٤		2		3 3	* 7C

Comments:

Proximity (<1ft-1-6ft->6ft) Disturbance Factors; Notes Damage Factors:

Relinquished By/Date: Relinquished By/Date:

Water (extensive-moderate-slight-Physical (sig dmg-dmg-no dmg)

Ventilation (yes-no; if yes, type)

Air conduits (air plenum - air shaft - elevator shaft - duct)

Accessibility (within reach-barely reachable-not reachable)

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Received By/Date: Air movement (high-moderate-low)

Deterioration (heavy-moderate-light-none)

Received By/Date:

Friability (yes-no; hard-mod-soft surface)



ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

Page 2 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

	DOLFDENG SOLENGES - MALENIARS I COLLING		24170 5225	5			(860)	East natuoru, C.1 06108 (860) 282-9924 Fax: (860	Fax: (860) 282-9826
ATC Inspector: Scorr JaHw Sow	JOHNSOW		Client Name:	ame: cTbcs	25				
Accreditation No.: 000297	297		Project N	No./Task No.:	Project No./Task No.: 22573,7033	3			
Survey Date: 11/30/17	63	*	Project	Project Manager: Ed Fenell	! Fenell				
Signature:	7		Request	Requested Completion Date:	Date:				
Lab Name:		Requested turnaround time (circle)	3 HR 6 HR	24 HR	48 HR (3 DY)	5 DY	No. Sample:	No. Samples Collected 39	
Building: NYCC - Boild	Boiler room	Address:	No chase	Beleux	Waterbon	13	4570gr		
Location	Material Description		TSI MISC Quantity	Estimated Quantity	Friable Y/N	Condition D D NE	Sample_of_ (homogeneous material)	r_ Sus Field Number	ber
#2 Boile, HTHW Boiler	18" mudded filling		TST		>		- 0	112817-Br- 8A	84
- 1	18" muddeg fitting		151		>		2 5		88
A250:10, HTHW return	18" mudded fitting		TST		بر		3 5		J 00
Adjacent to P-16		HT HW Supply	151	,	5-		5	->	87
Missing Tank, HTHU refum 18" Musuca fetting.			TST		2		5 5	7	8 E
									1
Dumps back of room	Fiber insulation Bw supply	hidans	157		3		-	112817-BR-	44
	Fibre glass insulation Bw Supply	Bw Supply	TSI		2		4	→ →	98
#2 builer, HarTank	Mudden fittings, 6"	HIMM CETURA	151		>		1 3	112817 - BR-	Hol
#2 boild, Hw Touk	6" Muddeg fittings.		TSI		2		7		10 3
JTH Supply	C" muddes fetting		TST		2		3. 3	->	100
#2 Saite									1
#2 Soiler	Fire brick		٤		2		u	112817-39-114	11 A
#2 boiler	Fire brick		٤		2		4	~	113

Comments:

Physical (sig dmg-dmg-no dmg) Notes Damage Factors:

Disturbance Factors:

Ventilation (yes-no; if yes, type) Proximity (<1ft- 1-6ft- >6ft)

Relinquished By/Date:

Relinquished By/Date:

Accessibility (within reach-barely reachable-not reachable)
Air conduits (air plenum - air shaft - elevator shaft - duct) Water (extensive-moderate-slight-none)

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Received By/Date: Air movement (high-moderate-low)

Deterioration (heavy-moderate-light-none)

Received By/Date:



S:\BidgSci\Admin\Templates and Forms\Asbestos\Asbestos Bulk Sample Form.doc

ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

Page 3 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

CC - Boiler Company Mudden fills Mudden fills							
200297 200297 200200 200200 200200 200200 200200 200200		Client Name:	lame: cTDcs	CS			
Mudden fill		Project	No./Task No.:	Project No./Task No.: 2257317033	3		
CC - Doiler Co. Mudder fift	•	Project	Project Manager: Ed Fenell	L Fennell			
CC - Boiler Co. Muddes fitt		Rednes	Requested Completion Date:	n Date:			
~ 22	Requested turnaround time (circle)	3 HR	6 HR 24 HR	48 HR (3 DY)	5 DY	No. Samples Collected 39	lected 39
	Address:	No Char	Beleur	Waterbra	15	W. Jar	
	_	Type Estimate S Quantity	Estimated Quantity	Friable Y/N	Condition D NI	Sample of (homogeneous material)	Field Number
	, Bw return	157		>		1 12	112817-BR-12A
	Mudder filling Fuel ort seturn	TSI		>-		u	1 1 13 13
Dump 7-16 Muddon fitting	Mudden fitting, HTH w Supply	157		<u>></u>		3 12	120
by sink mudded fitting		TST	,	پ		7	(L)
Pipes back of room muddes fitting,	£ =	TST		<u>ۍ</u>		5 13	J Z I
pumps back of room Mudder fitting Bw Supply		TST		_ر		6 12	126
Dump p-33 mudder fitting	610	151		> -		21 4	126
		TST		2		∞ ¤	NA IN
pipes in back Mudden fifting, But supply	De Supery	TST		>		9 3	ISI
	mudars fifting, Fud oil return	TST		>		01	123
@ Drinking fountain mudden fottilly	Mudden fitting, HTHW return	TST		<u>ب</u>		11 12	J K
CHW return mudded filling		TST		2		k k	751 121

Comments:

Notes Damage Factors:

Disturbance Factors;

Relinquished By/Date: Relinquished By/Date:

Physical (sig dmg-dmg-no dmg)

Ventilation (yes-no; if yes, type) Proximity (<1ft- 1-6ft- >6ft)

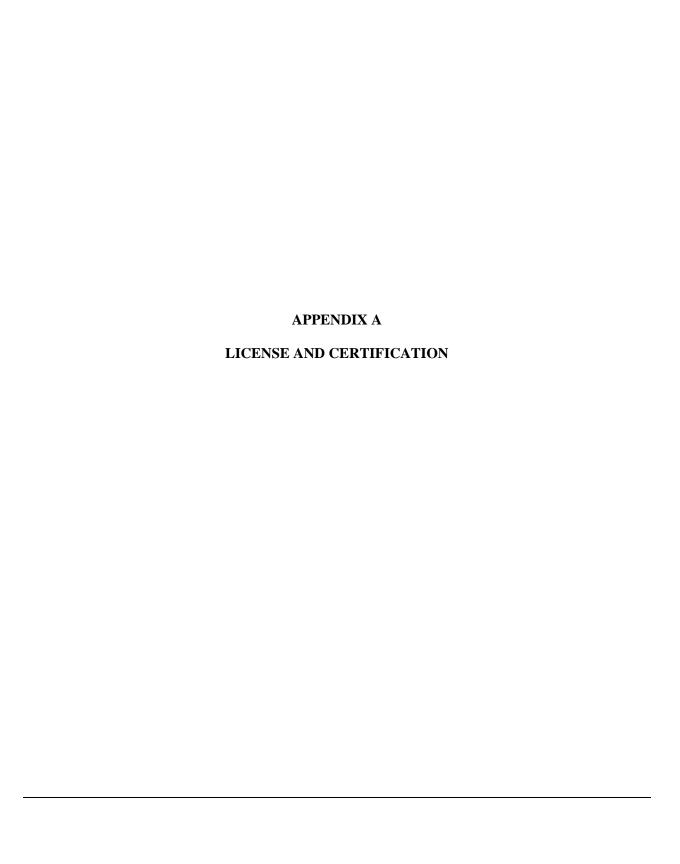
Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Air movement (high-moderate-low) Water (extensive-moderate-slight-none)
Accessibility (within reach-barely reachable-not reachable)
Air conduits (air plenum - air shaft -elevator shaft - duct)

Deterioration (heavy-moderate-light-none)

Received By/Date: Received By/Date:

Friability (yes-no; hard-mod-soft surface) DFC 08 2017 Barriers (Gen Trughenersedenturs)

Texture (raygn-pitted-moderate-smooth)



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BELOW IS GERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

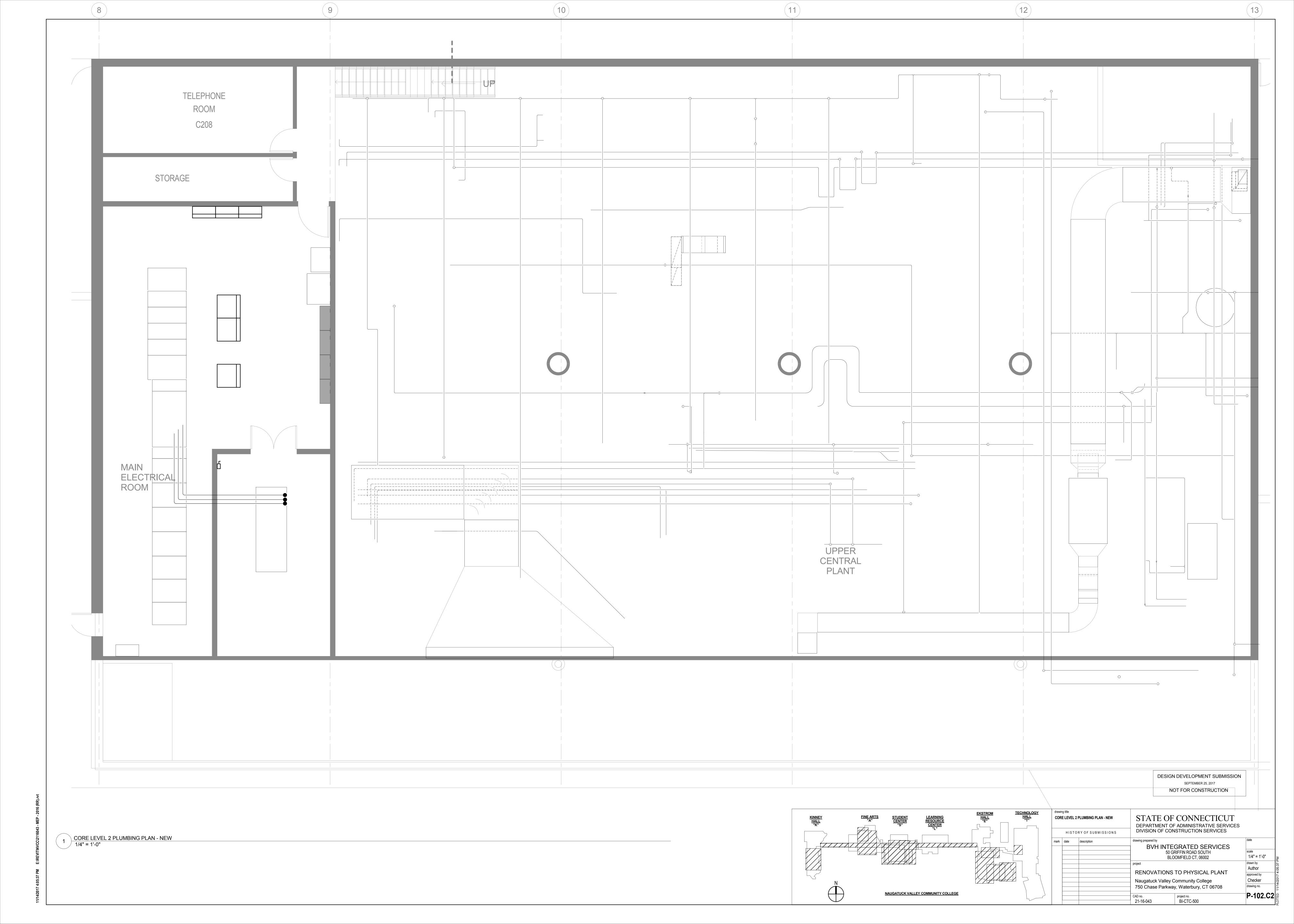
October 12, 2017 Examination Date

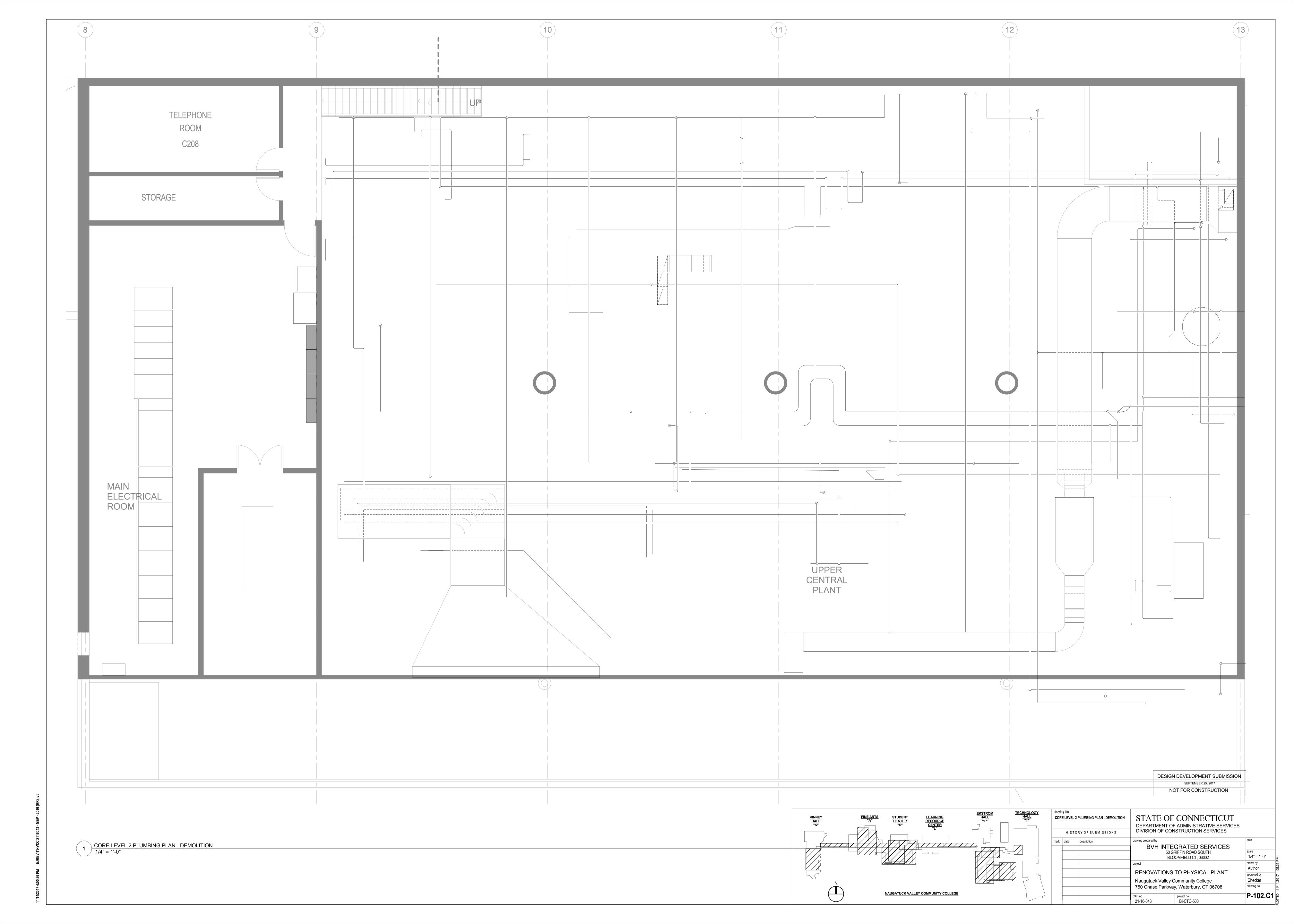
Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

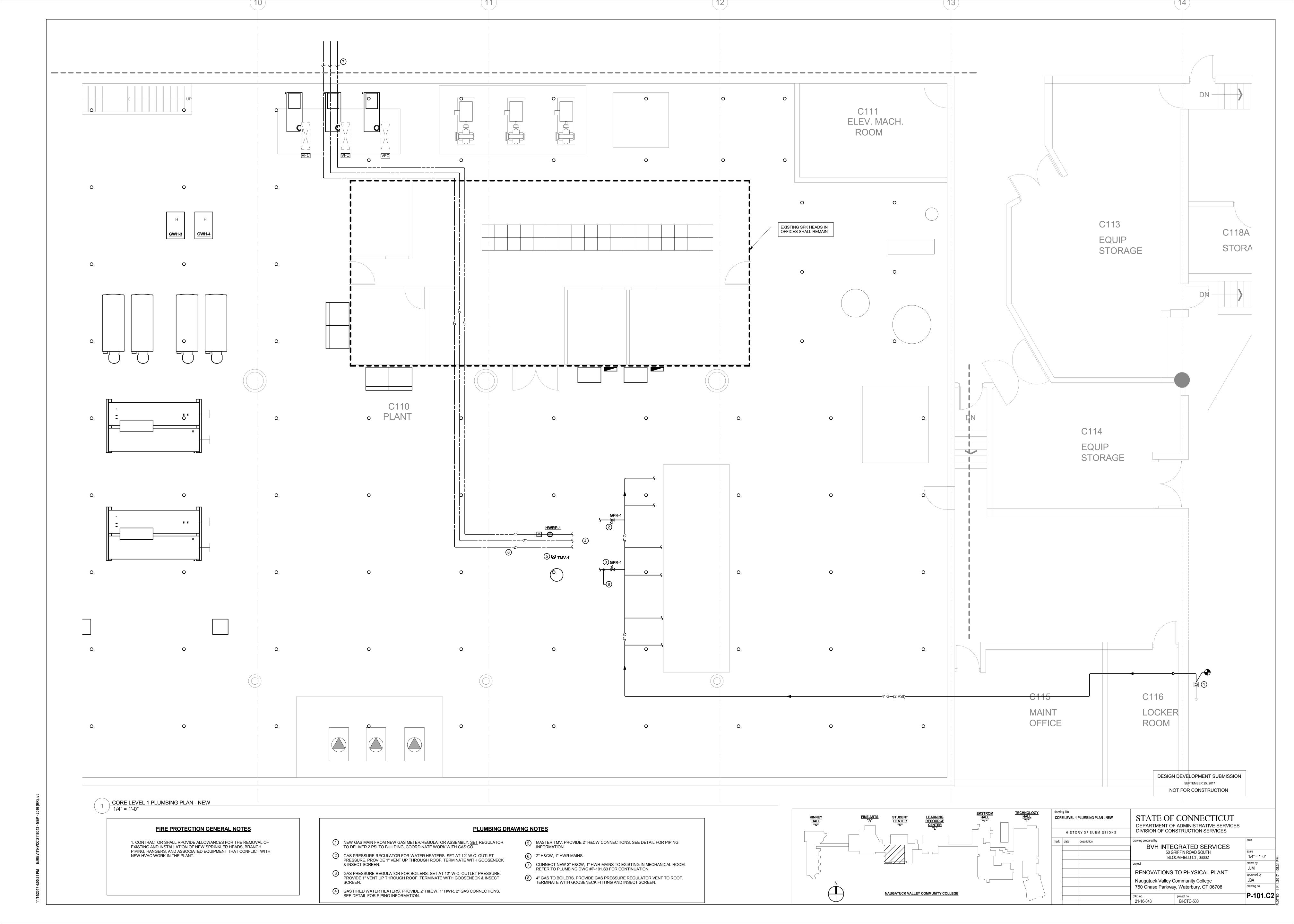
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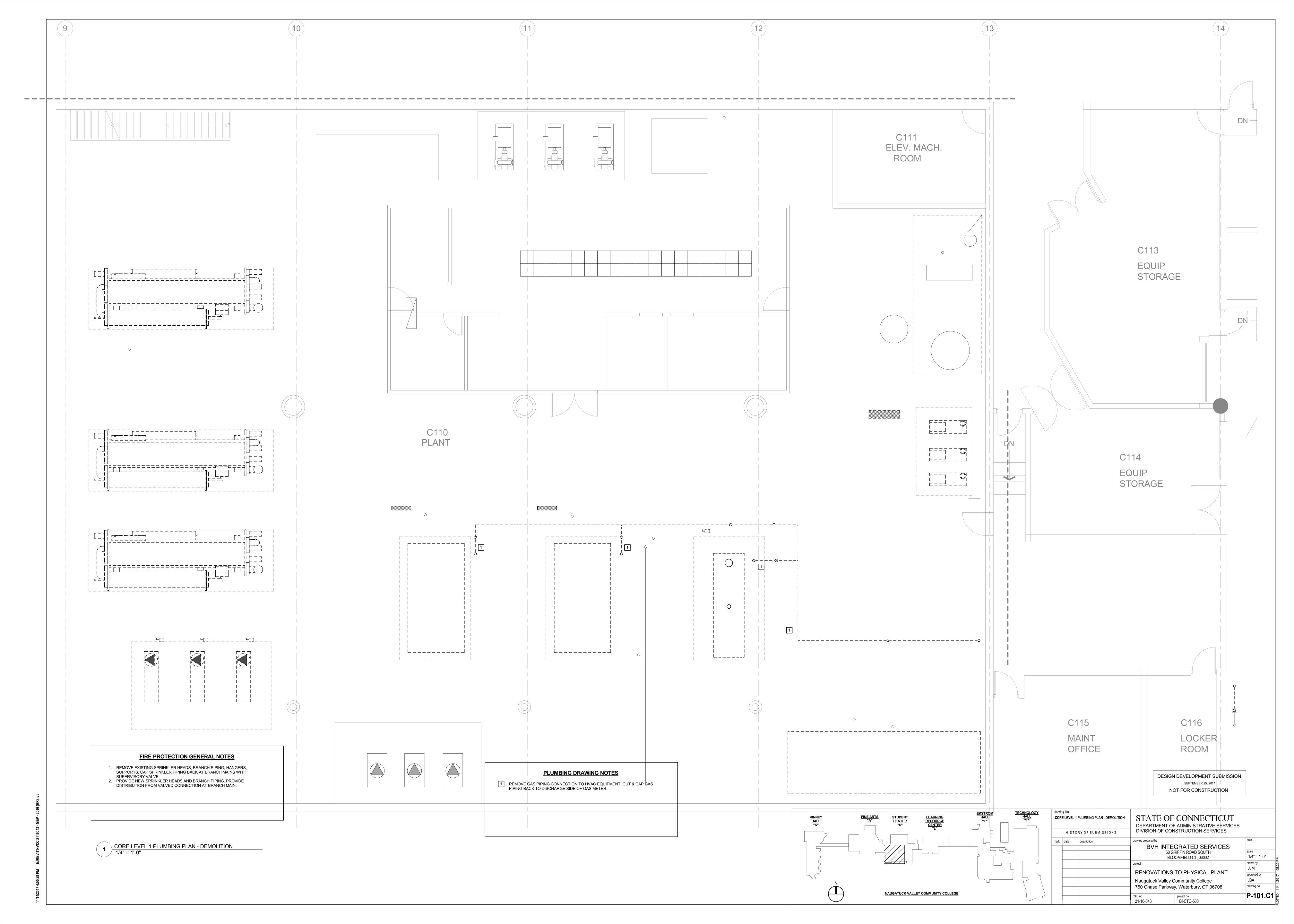
October 12, 2018
Expiration Date

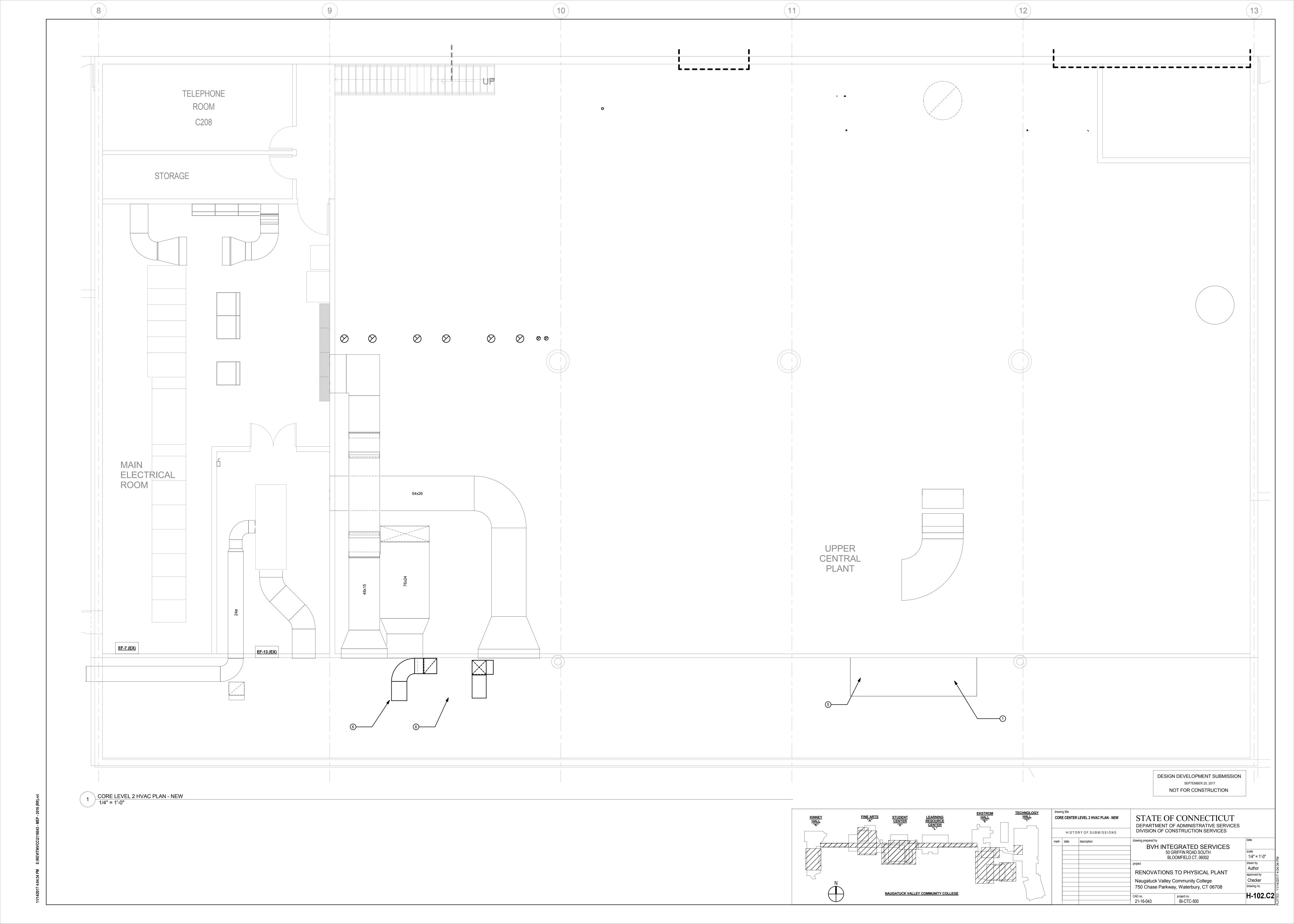


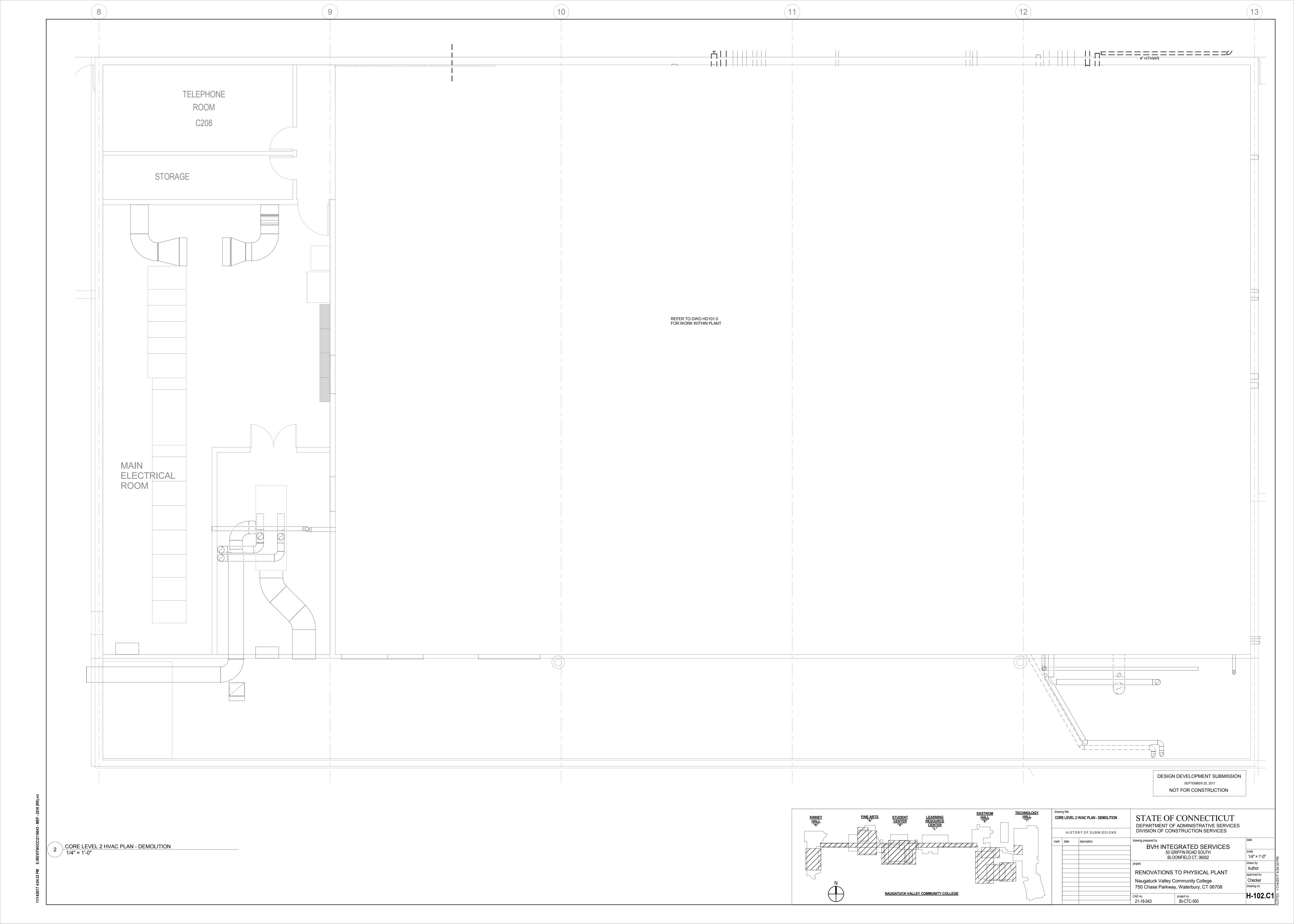


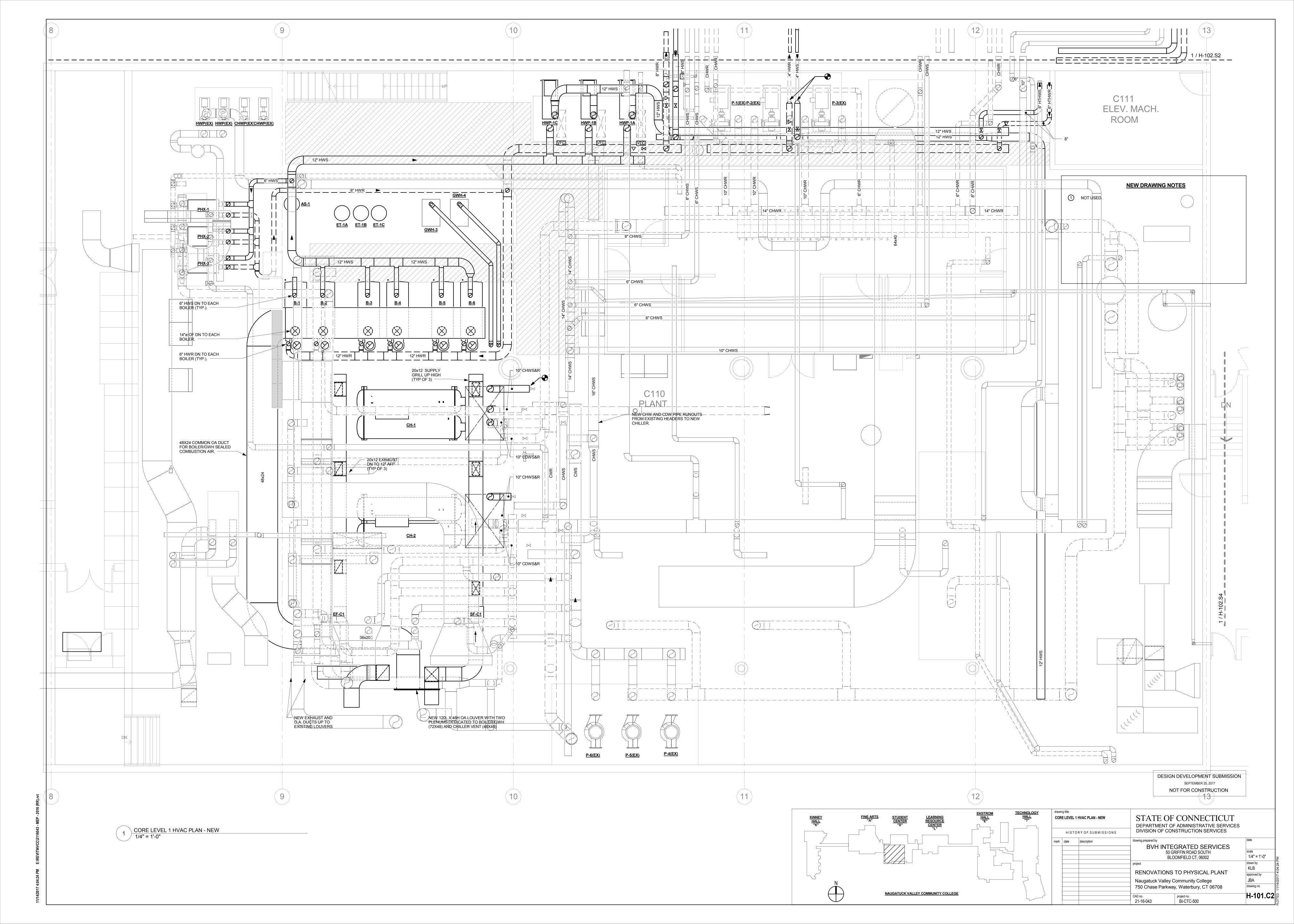


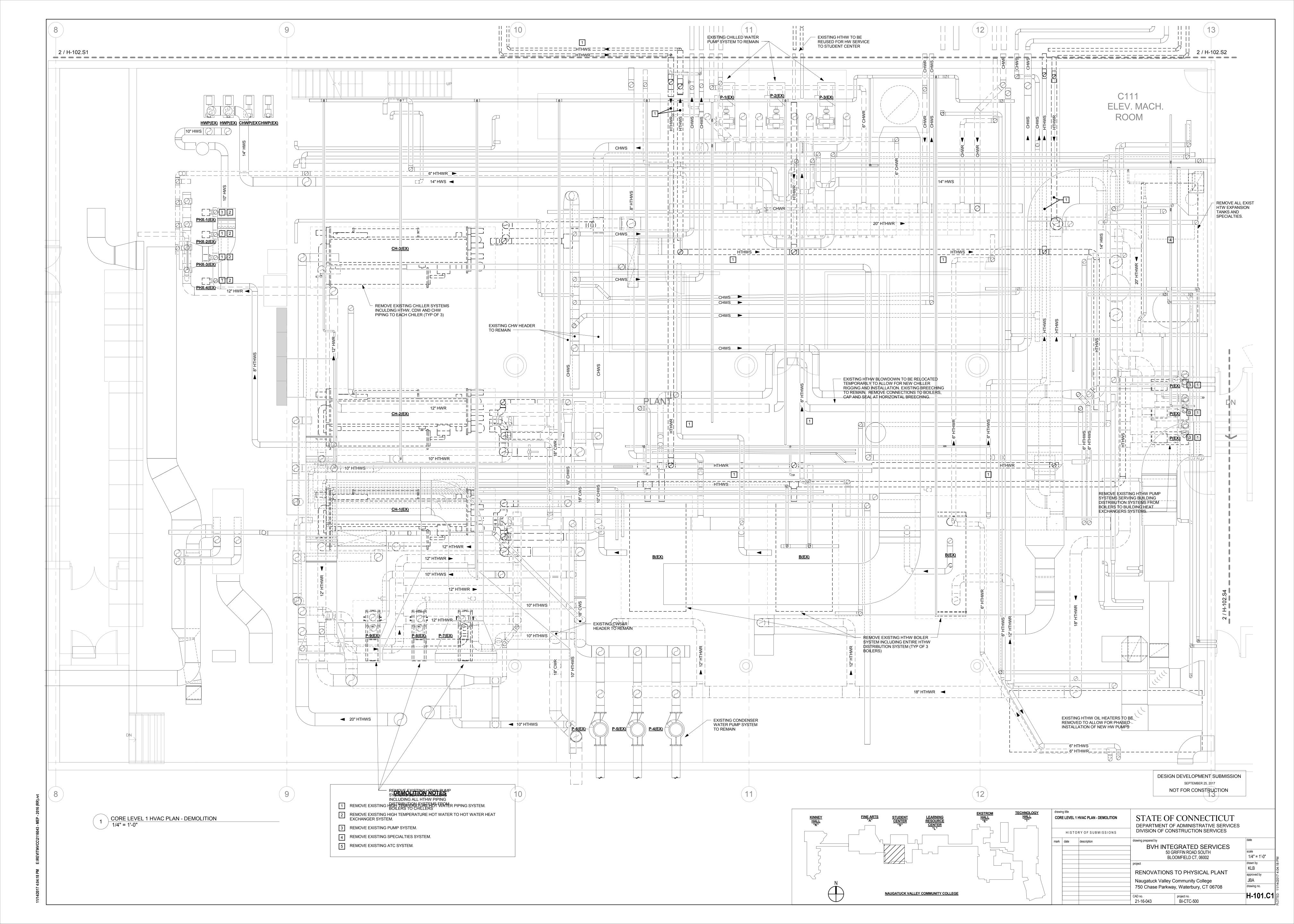












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290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Fine Arts

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63261

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for Fine Arts at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

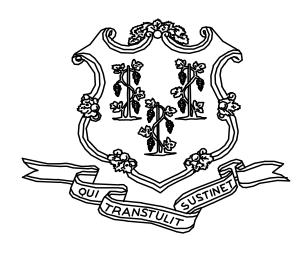
Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Fine Arts NVCC

ASBESTOS INSPECTION REPORT

FINE ARTS NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63261 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 19, 2017

Table of Contents

SECTION

1.0	INTRODUCTIO	N

- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a prerenovation inspection at Fine Arts located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 28, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included pipe fitting insulation, fiberglass pipe insulation paper/adhesive, spray-on fireproofing, end cap sealant, penetration sealants, suspended ceiling tile, gypsum board and joint compound, duct sealants, duct gasket putty, and fire stop sealant. Suspect materials that are inaccessible and were not sampled include gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.

- (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

• Duct Gasket Putty – Tan

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Spray-On Fireproofing Brown
- Mudded Pipe Fitting Insulation (All Sizes, All Systems)
- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive
- Fire Stop Sealant
- Floor Penetration Caulk
- Duct Sealant Green
- Gypsum Board
- Joint Compound White
- 2'x 2' Suspended Ceiling Tile Coral Pattern

• Black Tar Drip at Electrical Penetration

Spray-On Fireproofing – Brown was identified to contain Vermiculite.

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

Duct Gasket Putty – Tan could possibly be found on duct work throughout.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE FINE ARTS

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-FA-1A	5 th Floor Corridor Near A512C	Spray-On Fire Proofing Insulation – Brown	ND	-
112817-FA-1B	4 th Floor Auditorium	Spray-On Fire Proofing Insulation – Brown	ND	-
112817-FA-1C	Mechanical Room A510	Spray-On Fire Proofing Insulation – Brown	ND	-
112817-FA-1D	Mechanical Room A510	Spray-On Fire Proofing Insulation – Brown	ND	-
112817-FA-1E	Mechanical Room A510	Spray-On Fire Proofing Insulation – Brown	ND	-
112817-FA-2A	Mechanical Room A510	White End Cap Sealant at (HW Pump 4)	ND	-
112817-FA-2B	Mechanical Room A510	White End Cap Sealant at (CHW #2)	ND	-
112817-FA-2C	Level 2 Pipe Tunnel	White End Cap Sealant (Drain Line)	ND	-
112817-FA-2D	Level 2 Pipe Tunnel	White End Cap Sealant (CHW Supply)	ND	-
112817-FA-3A	Mechanical Room A510	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112817-FA-3B	Level 2 Pipe Tunnel	Fiberglass Pipe Insulation Paper/Adhesive (CHW Supply)	ND	-
112817-FA-4A	Mechanical Room A510	Floor Penetration Caulk (HTHW Return)	ND	-
112817-FA-4B	Mechanical Room A510	Floor Penetration Caulk (CHW Return)	ND	-
112817-FA-5A	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (HTHW Return)	ND	-
112817-FA-5B	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (HTHW Supply at Ramp)	ND	-
112817-FA-5C	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (CHW Supply)	ND	-
112817-FA-5D	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (CHW Return)	ND	-
112817-FA-6A	Mechanical Room A510	Duct Gasket Putty – Tan	3	Chrysotile
112817-FA-6B	Mechanical Room A510	Duct Gasket Putty – Tan	2	Chrysotile

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE FINE ARTS

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-FA-7A	Mechanical Room A510	Duct Sealant on Air Supply Duct – Tan/Green	ND	-
112817-FA-7B	Mechanical Room A510	Duct Sealant – Green	<1	Chrysotile
112817-FA-8A	Level 2 Pipe Tunnel	Red Fire Stop Sealant	ND	-
112817-FA-9A	Level 2 Pipe Tunnel	Black Tar Drip at Electrical Penetration	ND	-
112817-FA-9B	Level 2 Pipe Tunnel	Black Tar Drip at Electrical Penetration	ND	-
112817-FA-10A	4 th Floor Auditorium	2' x 2' Suspended Ceiling Tile – Coral Pattern	ND	-
112817-FA-10B	5 th Floor Hall	2' x 2' Suspended Ceiling Tile – Coral Pattern	ND	-
112817-FA-11A	5 th Floor Hall	Joint Compound – White	ND	-
112817-FA-11B	5 th Floor Hall	Joint Compound – White	ND	-
112817-FA-12A	5 th Floor Hall	Gypsum Board	ND	-
112817-FA-12B	5 th Floor Hall	Gypsum Board	ND	-

ND = None Detected

HTHW = High Temp Hot Water HW = Hot Water CHW = Chilled Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS				



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705223

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

 Attention:
 Ed Fennell
 Phone:
 (860) 282-9924

 ATC Group Services LLC
 Fax:
 (860) 282-9826

290 Roberts Street Received Date: 12/08/2017 2:35 PM

 Suite 301
 Analysis Date:
 12/13/2017

 East Hartford, CT 06108
 Collected Date:
 11/30/2017

Project: 2257317033/NYCC-FINE ARTS, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>stos</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-FA-1A 241705223-0001	5th floor corridor near A512C - spray on fire proofing, brown	Tan Fibrous Homogeneous	35% Cellulose	10% Vermiculite 55% Non-fibrous (Other)	None Detected
112817-FA-1B	4th floor auditorium - spray on fire proofing,	Tan Fibrous	30% Cellulose	10% Vermiculite 60% Non-fibrous (Other)	None Detected
241705223-0002	brown	Homogeneous			
112817-FA-1C 241705223-0003	A510 - spray on fire proofing, brown	Tan Fibrous Homogeneous	35% Cellulose 5% Glass	10% Vermiculite 50% Non-fibrous (Other)	None Detected
112817-FA-1D	A510 - spray on fire	Tan	40% Cellulose	10% Vermiculite	None Detected
241705223-0004	proofing, brown	Fibrous Homogeneous	15% Glass	35% Non-fibrous (Other)	None Detected
112817-FA-1E	A510 - spray on fire proofing, brown	Tan Fibrous	40% Cellulose 15% Glass	10% Vermiculite 35% Non-fibrous (Other)	None Detected
241705223-0005		Homogeneous			
112817-FA-2A 241705223-0006	A510 - white end cap sealant @ HW pump 4	White Non-Fibrous Homogeneous	5% Cellulose 10% Glass	85% Non-fibrous (Other)	None Detected
112817-FA-2B	A510 - white end cap sealant @ CHW #2	White/Yellow Fibrous	25% Glass	75% Non-fibrous (Other)	None Detected
241705223-0007		Homogeneous			
112817-FA-2C 241705223-0008	Level 2 tunnel - white end cap sealant on drain line	White/Yellow Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
112817-FA-2D	Level 2 tunnel - white	Tan	20% Glass	200/ Non fibrous (Other)	None Detected
241705223-0009	end cap sealant on CHW supply	Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
112817-FA-3A	A510 - fiberglass paper pipe insulation	Tan/Silver Fibrous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
241705223-0010		Homogeneous			
112817-FA-3B 241705223-0011	Level 2 tunnel - fiberglass pipe insulation paper @ CW supply	Tan/Silver Fibrous Homogeneous	70% Cellulose 30% Glass		None Detected
112817-FA-4A	A510 - penetration caulk @ HTHW return	Gray/White Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705223-0012		Homogeneous			
112817-FA-4B	A510 - penetration caulk @ CHW return	White Non-Fibrous	5% Glass	95% Non-fibrous (Other)	None Detected
241705223-0013		Homogeneous			
112817-FA-5A	Level 2 pipe tunnel - mudded pipe fitting @	Gray/White Fibrous	20% Cellulose 30% Min. Wool	50% Non-fibrous (Other)	None Detected
241705223-0014	HTHW return	Homogeneous			
112817-FA-5B 241705223-0015	Level 2 pipe tunnel - mudded pipe fitting @	Gray/White Fibrous Homogeneous	20% Cellulose 30% Min. Wool	50% Non-fibrous (Other)	None Detected
112817-FA-5C	ramp Level 2 pipe tunnel - mudded pipe fitting @	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705223-0016	CHW supply	Homogeneous			

Initial report from: 12/13/2017 13:46:16

EMSL Order: 241705223 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbesto	<u>s</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-FA-5D	Level 2 pipe tunnel - mudded pipe fitting @	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705223-0017	CHW return	Homogeneous			
112817-FA-6A	A510 - duct gasket sealant putty, tan	Tan Non-Fibrous	3% Cellulose	94% Non-fibrous (Other)	3% Chrysotile
241705223-0018		Homogeneous			
112817-FA-6B	A510 - gasket putty, tan	Gray Non-Fibrous		98% Non-fibrous (Other)	2% Chrysotile
241705223-0019		Homogeneous			
112817-FA-7A	A510 - duct sealant on air supply duct, tan	Gray Non-Fibrous	10% Fibrous (Other)	90% Non-fibrous (Other)	None Detected
241705223-0020		Homogeneous			
112817-FA-7B	A510 - duct sealant, green	Gray Non-Fibrous		100% Non-fibrous (Other)	<1% Chrysotile
241705223-0021 The sample group is not	homogeneous.	Homogeneous			
		Dad	F0/ Class	OFO/ Non fibrary (Other)	None Detected
112817-FA-8A 241705223-0022	Level 2 pipe tunnel - red fire stop sealant	Red Non-Fibrous	5% Glass	95% Non-fibrous (Other)	None Detected
		Homogeneous			
112817-FA-9A 241705223-0023	Level 2 tunnel - black tar drip @ electrical penetration	Black Non-Fibrous		100% Non-fibrous (Other)	None Detected
	· · · · · · · · · · · · · · · · · · ·	Homogeneous			
112817-FA-9B	Level 2 tunnel - black tar drip @ electrical	Black Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705223-0024	penetration	Homogeneous	750/ 14: 14/ 1	050/ N	N 5
112817-FA-10A	4th floor auditorium - suspended ceiling tile,	Gray Fibrous	75% Min. Wool	25% Non-fibrous (Other)	None Detected
241705223-0025	2'x2' coral pattern	Homogeneous	000/ Min 14/ 1	000/ Nov. 5h (011)	None Barana
112817-FA-10B	5th floor - 2'x2' suspended ceiling tile,	Gray Fibrous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
241705223-0026	coral pattern	Homogeneous			
112817-FA-11A	5th floor - joint compound-white	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705223-0027		Homogeneous			
112817-FA-11B	5th floor - joint compound-white	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705223-0028		Homogeneous			
112817-FA-12A	5th floor - gypsum board-white	Gray/Tan Fibrous	15% Cellulose	85% Non-fibrous (Other)	None Detected
241705223-0029		Homogeneous			
112817-FA-12B	5th floor - gypsum board-white	Gray Non-Fibrous	5% Cellulose	95% Non-fibrous (Other)	None Detected
241705223-0030		Homogeneous			

Initial report from: 12/13/2017 13:46:16



EMSL Order: 241705223

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Analyst(s)

Lauren Buffone (18) Quetcy Castro Romero (12) In Rom

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/13/2017 13:46:16

ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

241705223

of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924

Field Number 11 2817-FA-30 12317-FA 112817 -FA No. Samples Collected (homogeneous Sample_of I 5 material) 9 0 0 0 V 5 1 ce 4 3 J 5 K 3 J (SD D ND) Condition 5 DY 12 Project No./Task No.: 2257317033 3 DY Waterbra Fennell Friable Y/N 48 HR Requested Completion Date: > > 2 2 2 222 eTDcs Project Manager: 24 HR Estimated Quantity Beleury Client Name: 6 HR Charc MISC 3 HR Lype TSI 5 S S ٤ 2 2 ٤ I Requested turnaround time (circle) Address: while End Cap Scalart on CHW Supply End Cup Scalant @ Hw Pump 4 white End Cup Scalant on Drain line Scalart @ CHW #2 Fiber glass paper Pite insulation Brown Spruy on Fire Proofing, Brown Brown Material Description File proofing, Brown Fice proofing, Brown Spray on Fire proofing, on Fice proofed white End Cop Acts ATC Inspector: Scott JaHwsow 00 Spind on While Fine Spray Sp tou Accreditation No.: 000293 11/30/17 EMSI Building: NYCC -5+" floor near ASIZE Sittion Auditorium Larnel Location LANKC Survey Date: Lab Name: Signature: evel 2 וכשכו א ASIO A 510 ASIO ASIO A 510 ASIO

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Penetrution Caulk @ CHW return muddon pir fitting 12THW return

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A 510

Mudded pipe fitting @ Camp

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Fibre alass pige insulation pape OCU Supply Penetration caulk & HTHW ceturn

Lunnel

Level 2

A510

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112917 - FA-

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Comments:

Notes Damage Factors:

Physical (sig dmg-dmg-no dmg) PLM.

Ventilation (yes-no; if yes, type) Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Deterioration (heavy-moderate-light-none) Water (extensive-moderate-slight-Accessibility (within reach-barely reachable-not reachable)

Air movement (high-moderate-low)

Received By/Date: Received By/Date:

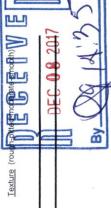
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12/11

Air conduits (air plenum - air shaft - elevator shaft - duct)

Friability (yes-no; hard-mod-soft surface)

Barriers (perm airtight-enclosed-encapsulated)



Relinquished By/Date: Relinquished By/Date:

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page 2 of 2

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

		24	241705223	6			(860) 282-9924	(860) 282-9924 Fax: (860) 282-9826
ATC Inspector: Jean Jakkson		1. 多种	Client Name:	lame: cTbcs	200			
Accreditation No.: 00297			Project	No./Task No.:	Project No./Task No.: 2257317033	2		
Survey Date: 11/30/17	(12		Project	Project Manager:	Ed Fennell			
Signature:		N 1	Rednes	Requested Completion Date:	n Date:			7 118
Lab Name:	Requested turnaround time (circle)	d time (circle)	3 HR 61	6 HR 24 HR	48 HR (3 DY	5 DY	No. Samples Collected	llected 30
Building: NYCC -	Fine Acts	Address: 7	No Char	Below.	Waterbur	13.	474	
Location	Material Description		Type S TSI MISC	Estimated Quantity	Friable Y/N	SIS)	Sample_of_ (homogeneous material)	Field Number
lovel 2 pipe tunnel	Mudded pipe fitting @ CHW Supply		TST		5-		3 4	112817-FA- 5C
level 2 pipe jubinel	mudden pipe fitting @ CHW Getuin	u	TST		9		7	Jan SD
A Slo	Duct Gosker sculent puddy, Tan		N		2		п -	112817-FA- GA
A SIO	Gaskel Puddy, Tan		¥	,	2		4	10 CB
ASIO	Duct Soulant on Air supply Duct, TAN		¥		2		4	112817-FA - 7A
Asio	Duch Scalant, Green		ī		5		2	DE - 900
lovel 2 pipe funnel	Ged Fire Stop Scalant		¥		2		1	112817-FA-8A
Level 2 Tunnel	Black Tar Drip @ cleckrical Penetralion	enetration	¥		2		~	112817-FA- 9A
level 2 Tunnel	Black Tar Drip B electrical penetralion	netration	7		×		K	J 4 93
P + floor Anditorium	Suspenden ceiling tile, 2 kg', cotal	Pattern	7		>		1 2	112817-FA- 10 A
5 th floor	2x2' Suspended Ceiling tile, Cocal patter	patter.	¥		2		2	St 01 8
5th floor	Juin compound white		٤		>		1 3	112817-FA - 11A
ist floor	Soint Compound white		٤		<u>ب</u>		2	4 4 11B
5 to floor	Gypsum Board - white		ĭ		2		α	112817-FA . 1214
							2	J 3-12B

Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Deterioration (heavy-moderate-light-none) Air movement (high-moderate-low) Air conduits (air plenum - air shaft - elevator shaft - duct) Water (extensive-moderate-slight-none) Accessibility (within reach-barely reachable-not reachable) Ventilation (yes-no; if yes, type) Physical (sig dmg-dmg-no dmg) Proximity (<1ft- 1-6ft- >6ft) Disturbance Factors: Notes Damage Factors: Comments:

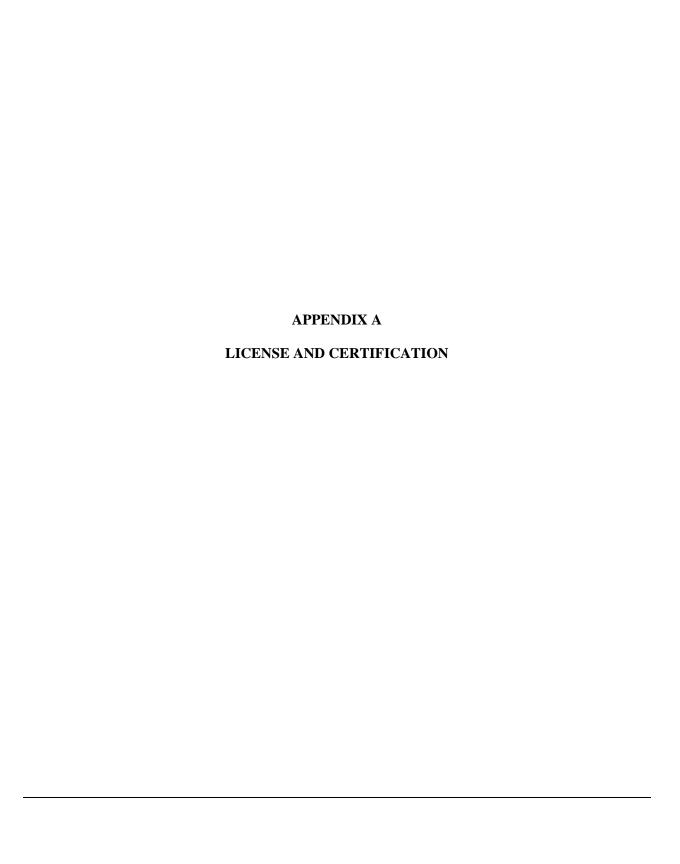
Received By/Date: Received By/Date:

Barriers (perm airtight-enclosed-encapsulated)

Friability (yes-no; hard-mod-soft surface)

DEC 08 2017 Texture

Relinquished By/Date: Relinquished By/Date:



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BECOW IS CERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

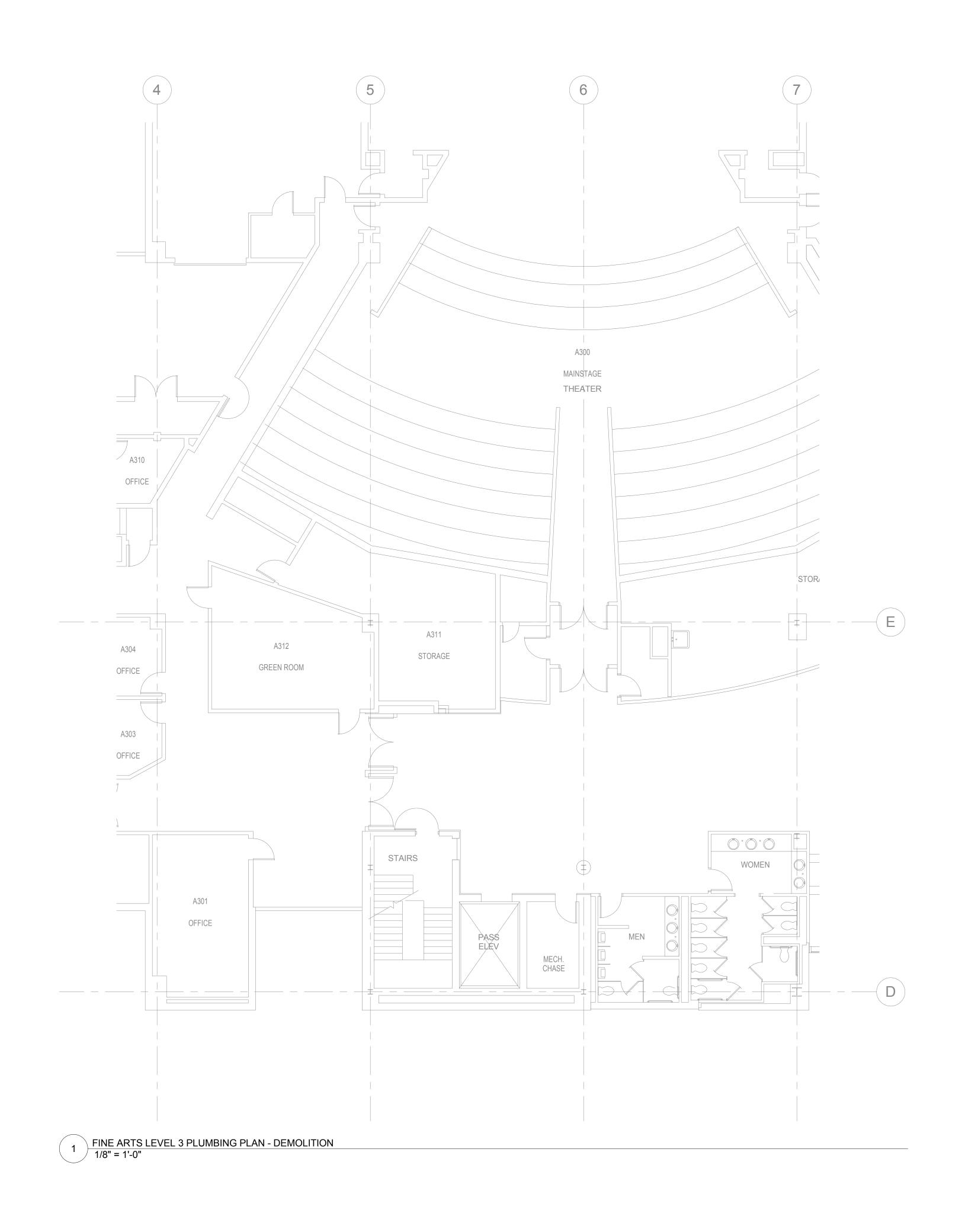
October 12, 2017 Examination Date

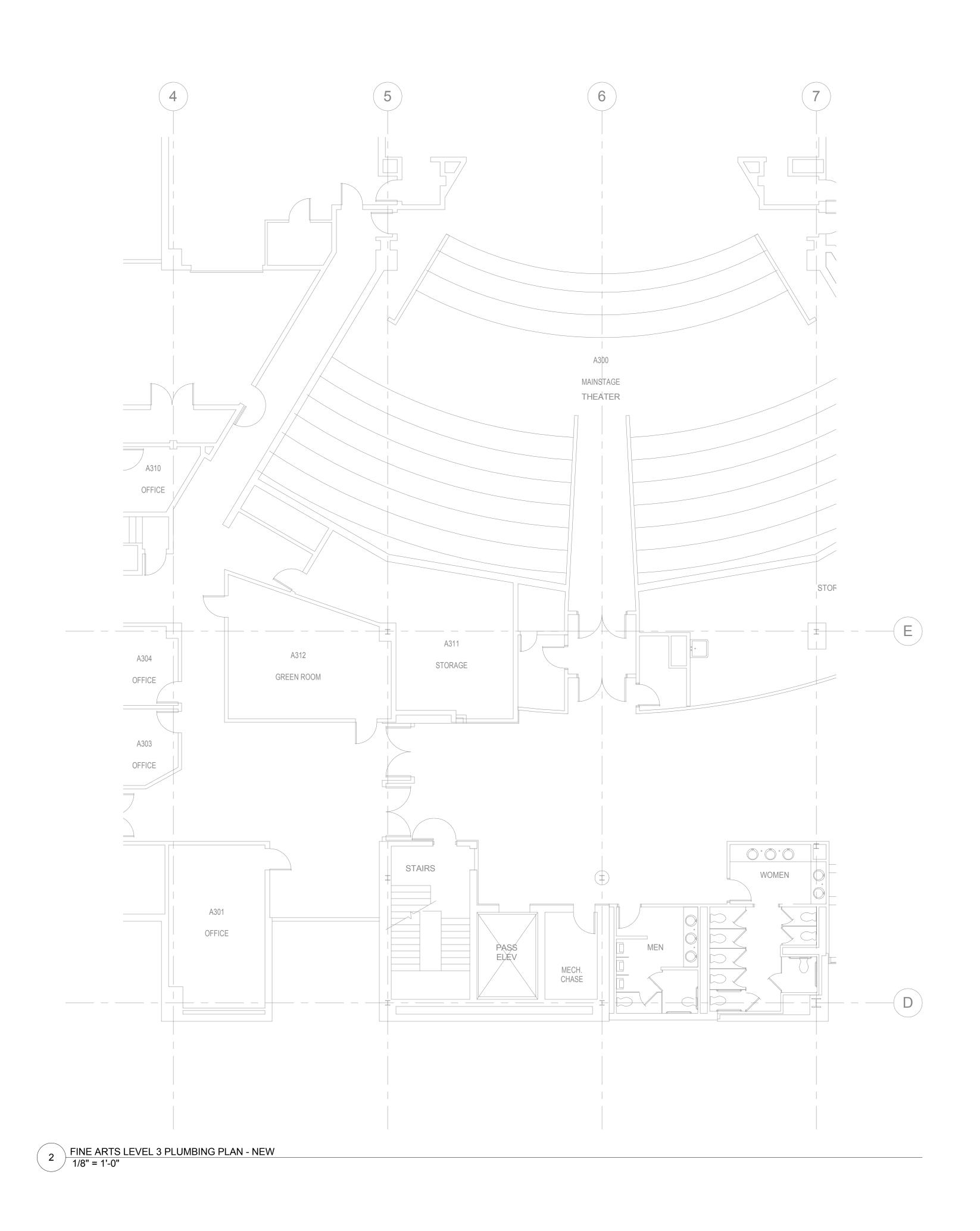
Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

Date of Course

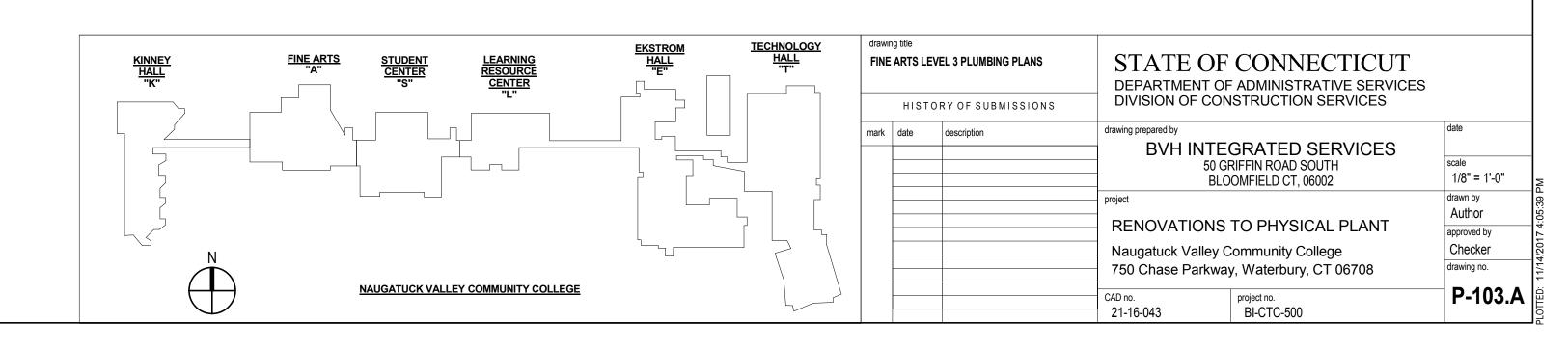
October 12, 2018 Expiration Date

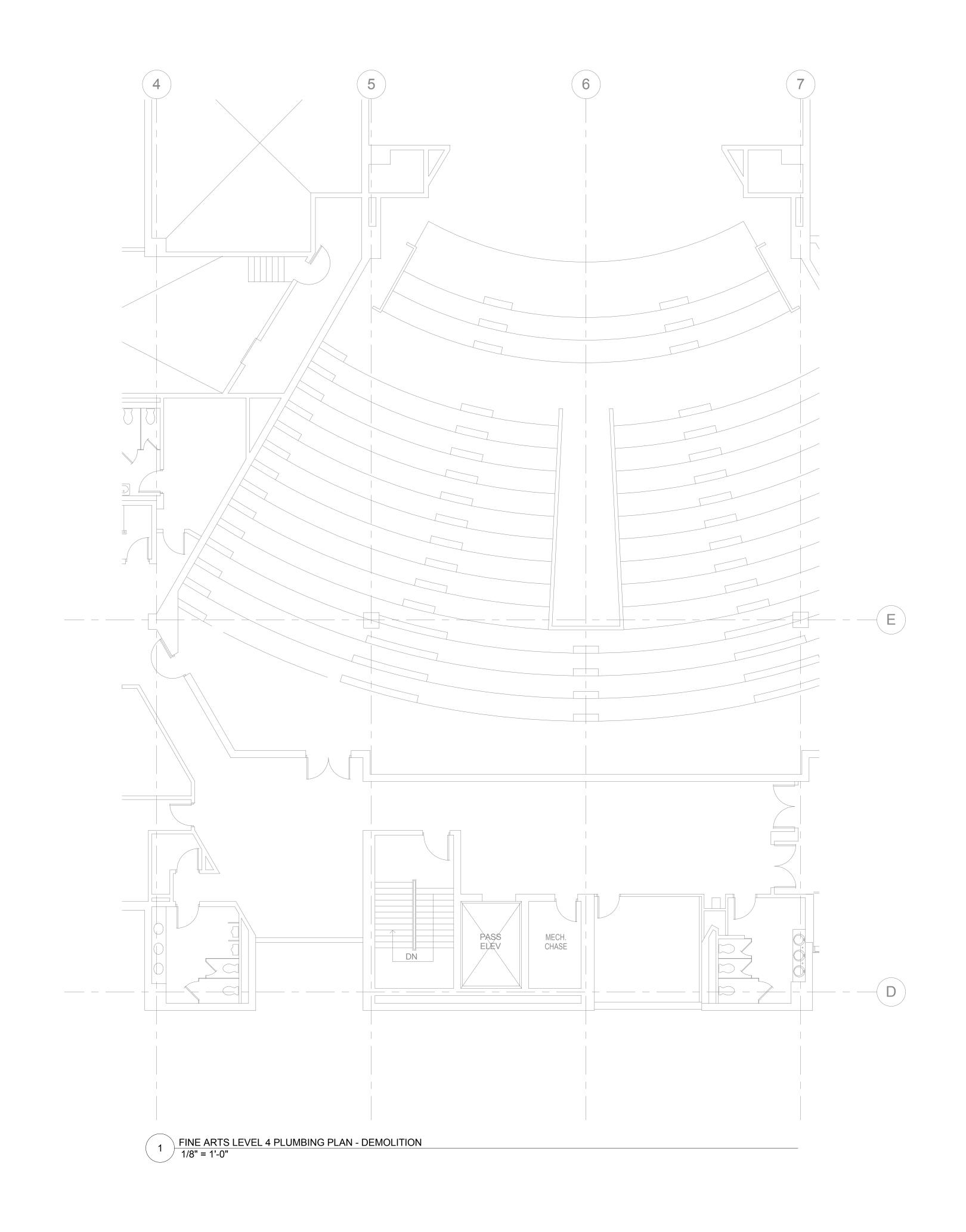


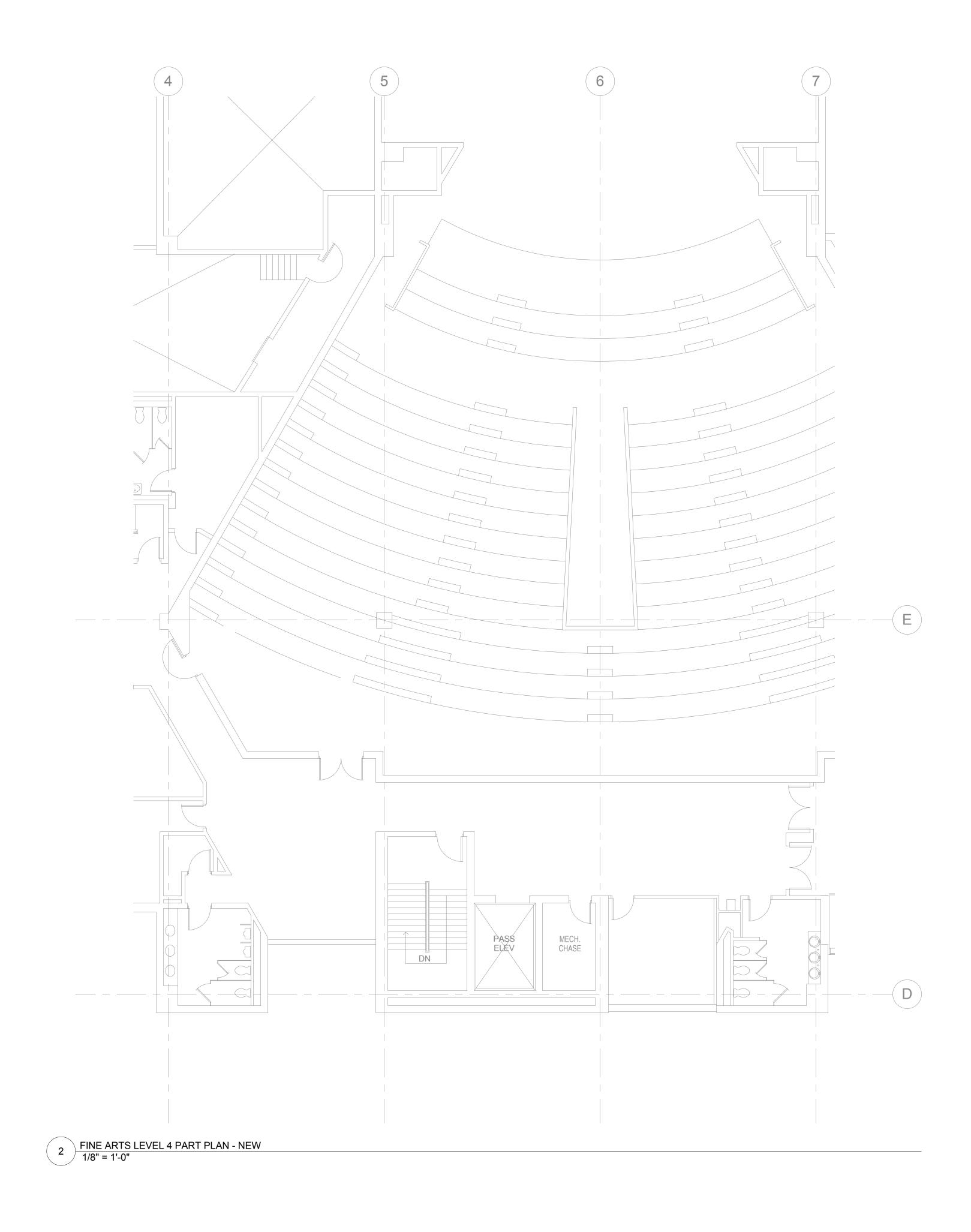




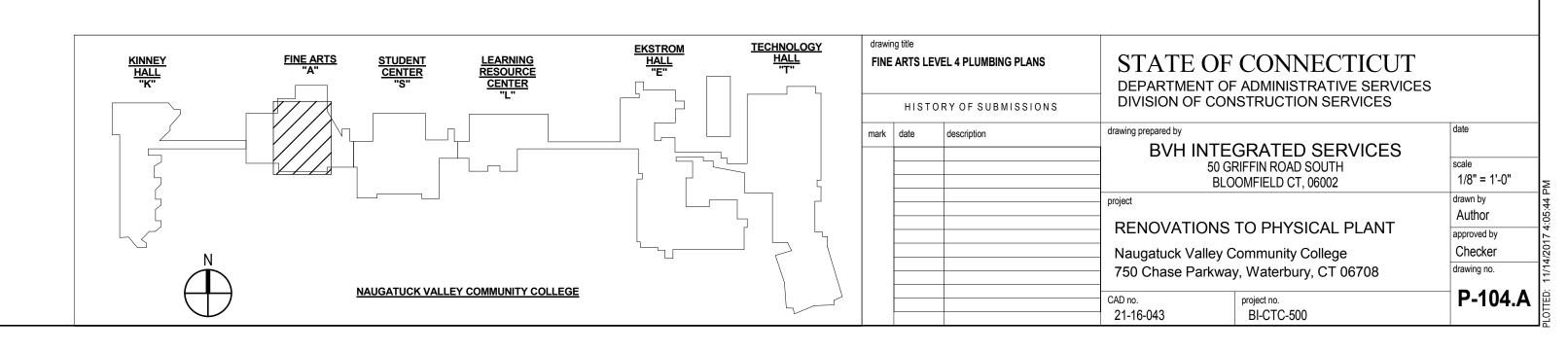
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

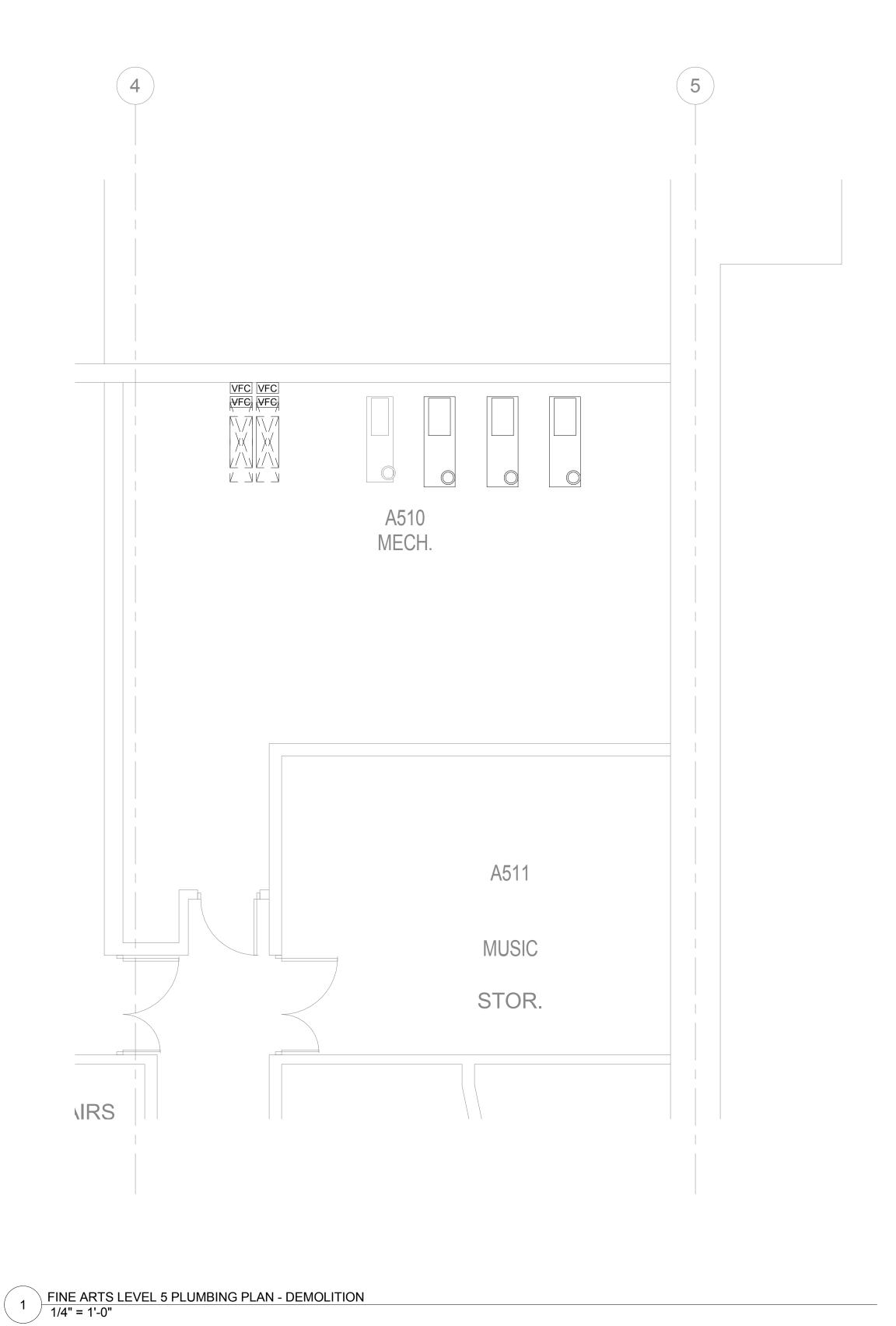






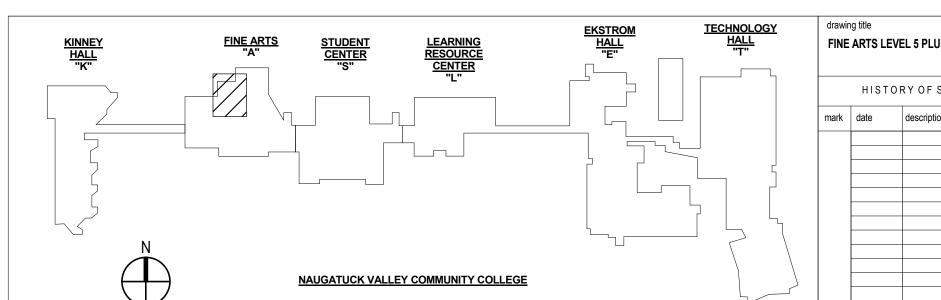
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION





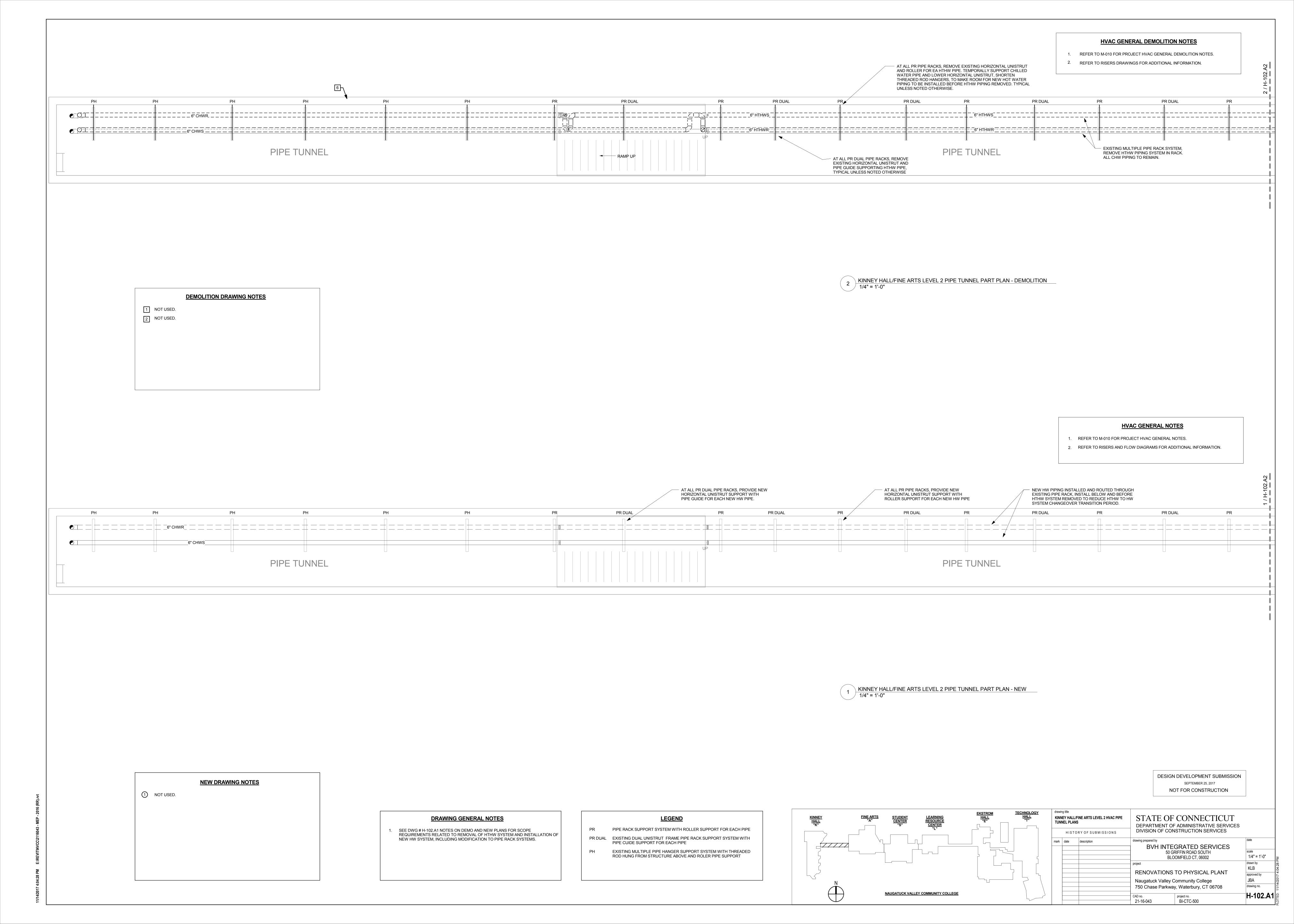
A510 MECH. ELR A511 MUSIC STOR. AIRS FINE ARTS LEVEL 5 PLUMBING PLAN - NEW 1/4" = 1'-0"

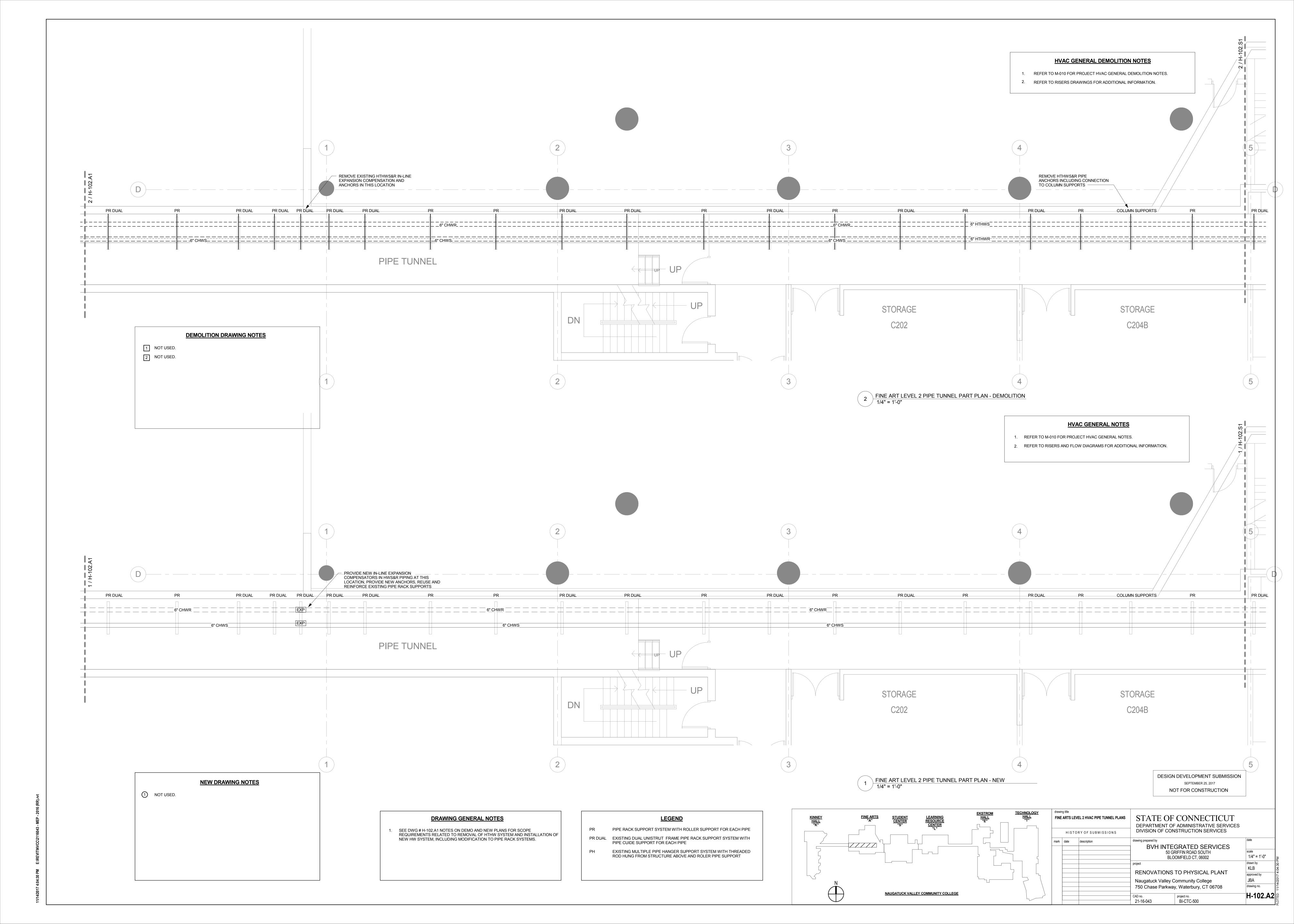
DESIGN DEVELOPMENT SUBMISSION

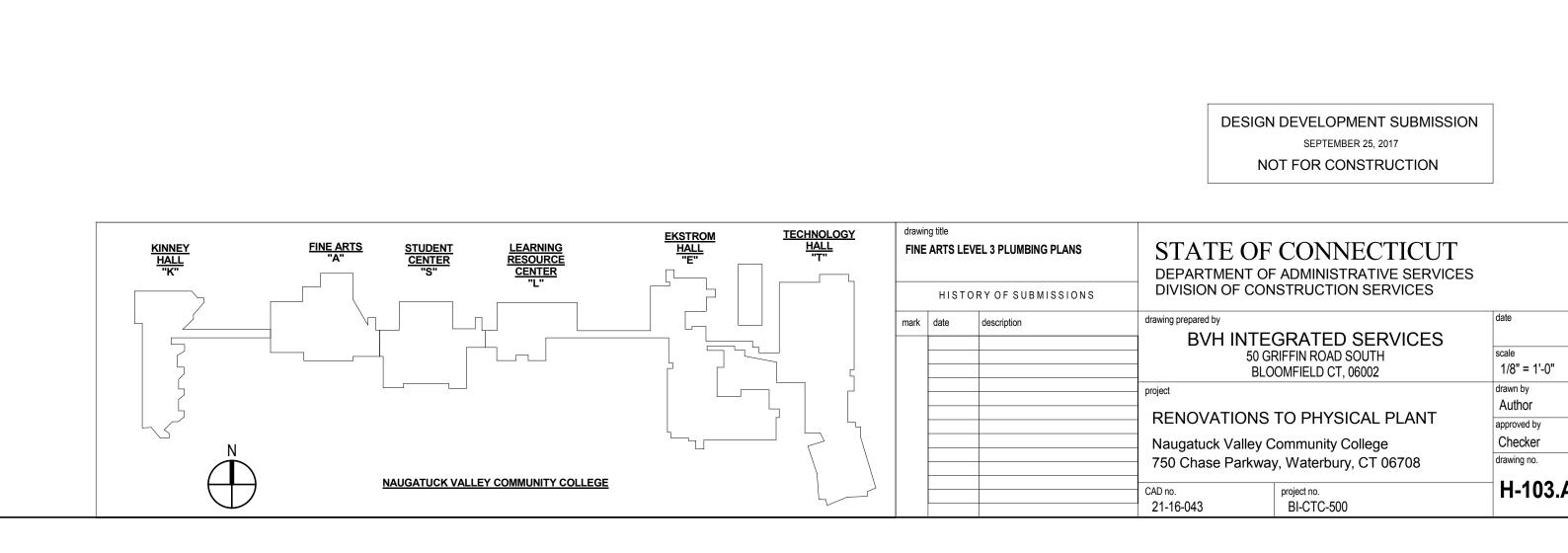


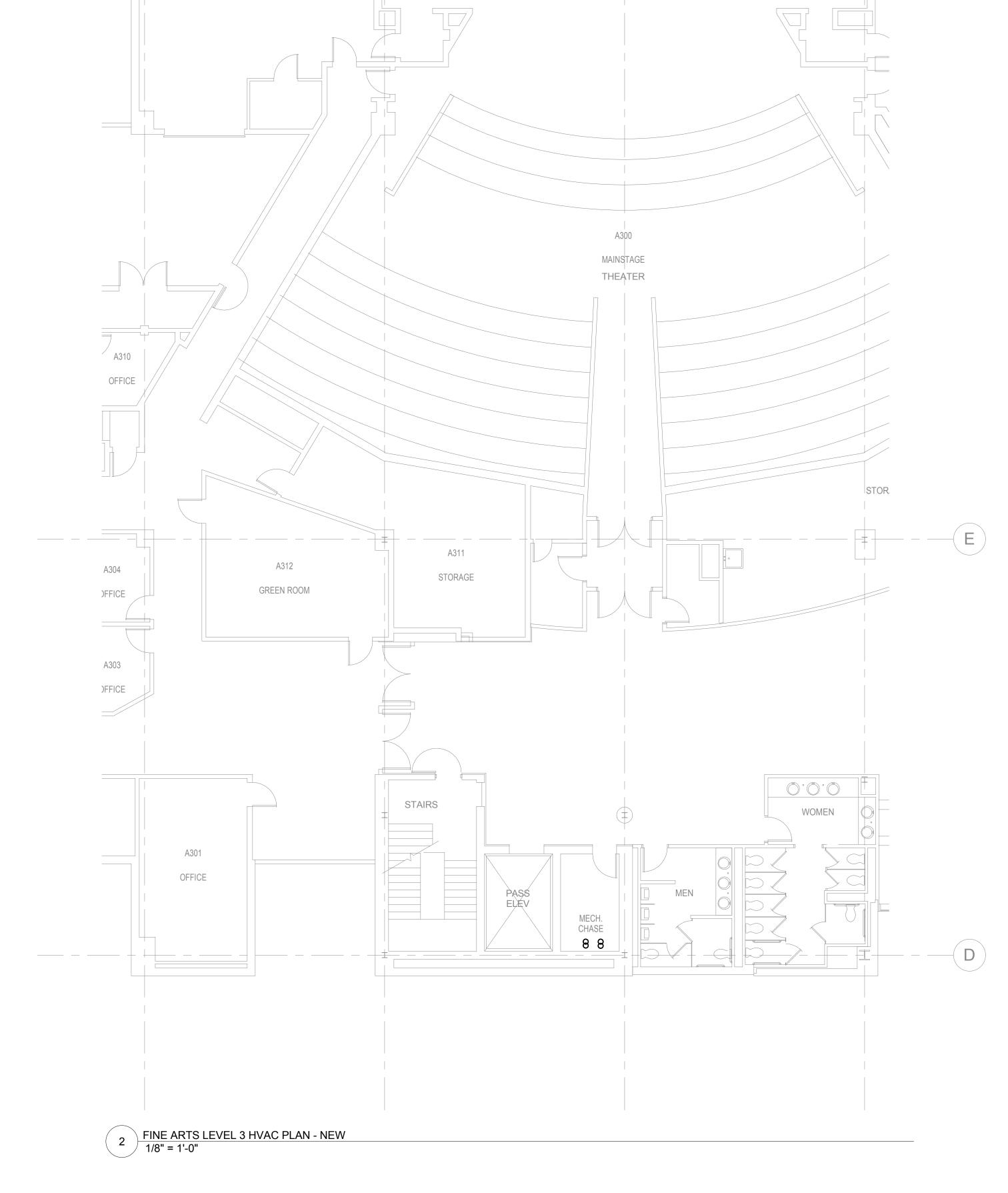
drawir FINE	•	EVEL 5 PLUMBING PLANS	, ,	OF CONNECTICU'	_
	HIST	ORY OF SUBMISSIONS	DIVISION OF	CONSTRUCTION SERVICES	
mark	date	description	drawing prepared by		date
		'	BVH IN	ITEGRATED SERVICES	
				50 GRIFFIN ROAD SOUTH	scale
				BLOOMFIELD CT, 06002	1/4" = 1'-0"
			project		drawn by
				TO DUNGLOAL DUANT	Author
			- RENOVATIO	ONS TO PHYSICAL PLANT	approved by
			Naugatuck Va	lley Community College	Checker
				rkway, Waterbury, CT 06708	drawing no.
			CAD no.	project no.	P-105.A
			21-16-043	BI-CTC-500	1 10012

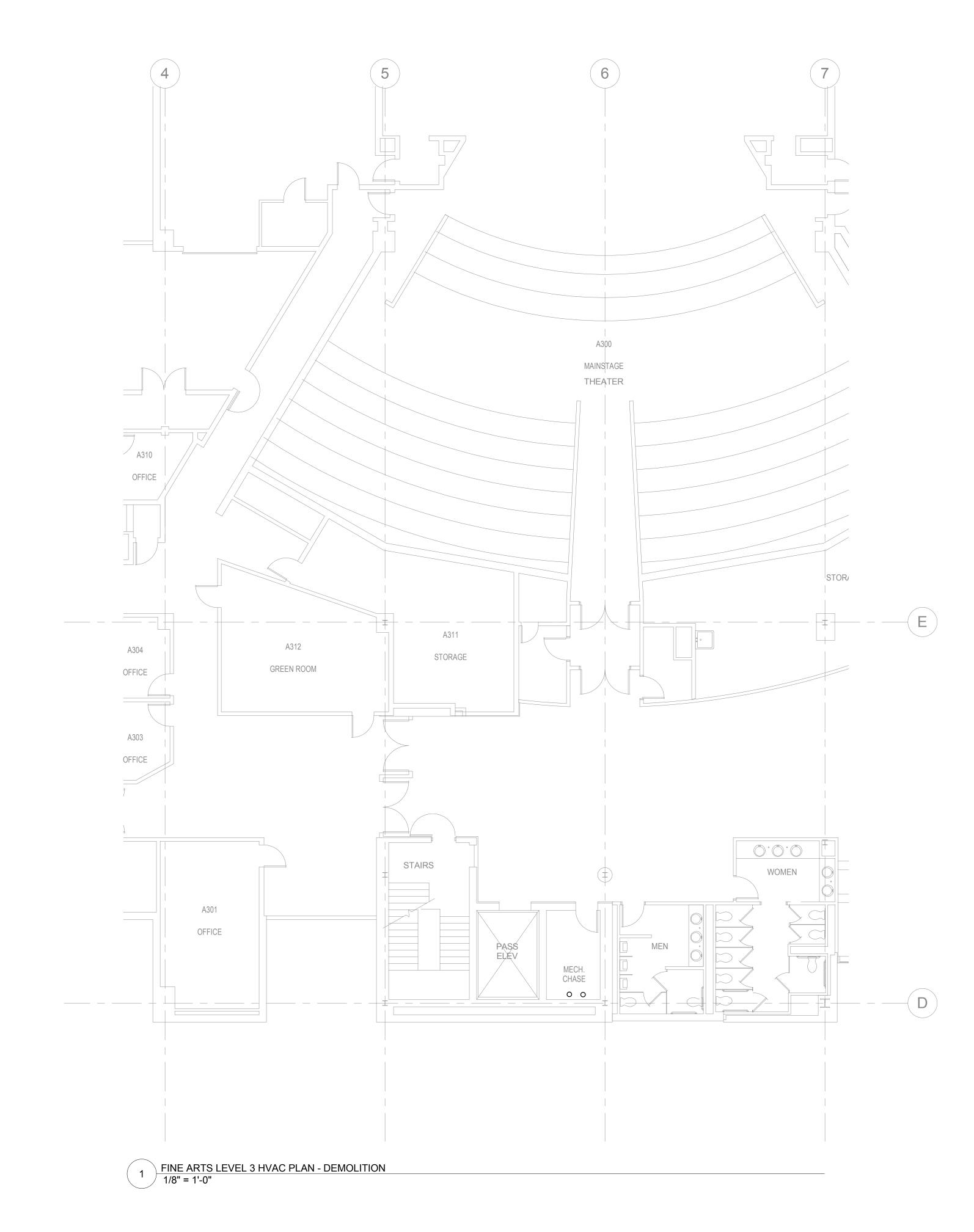
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

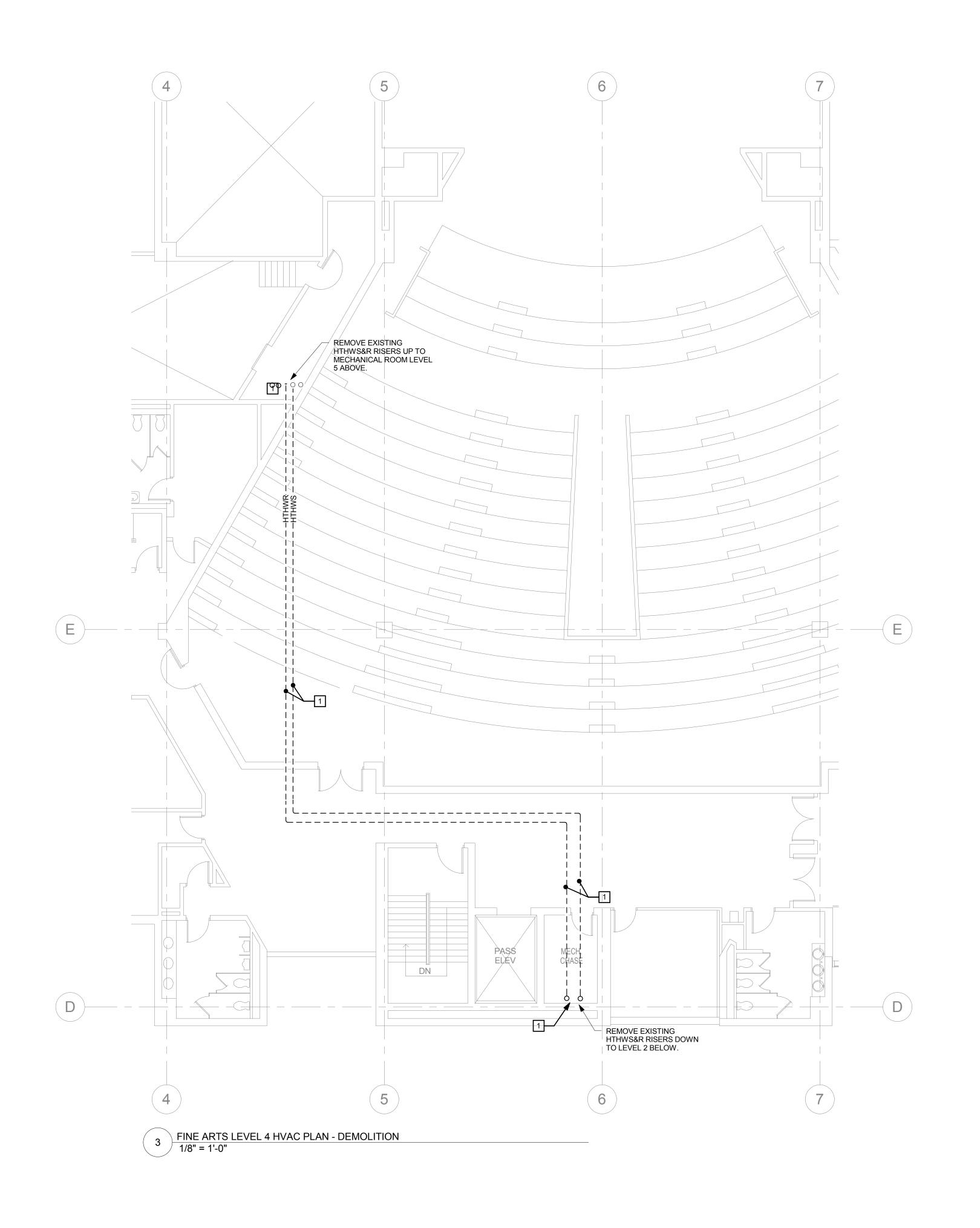


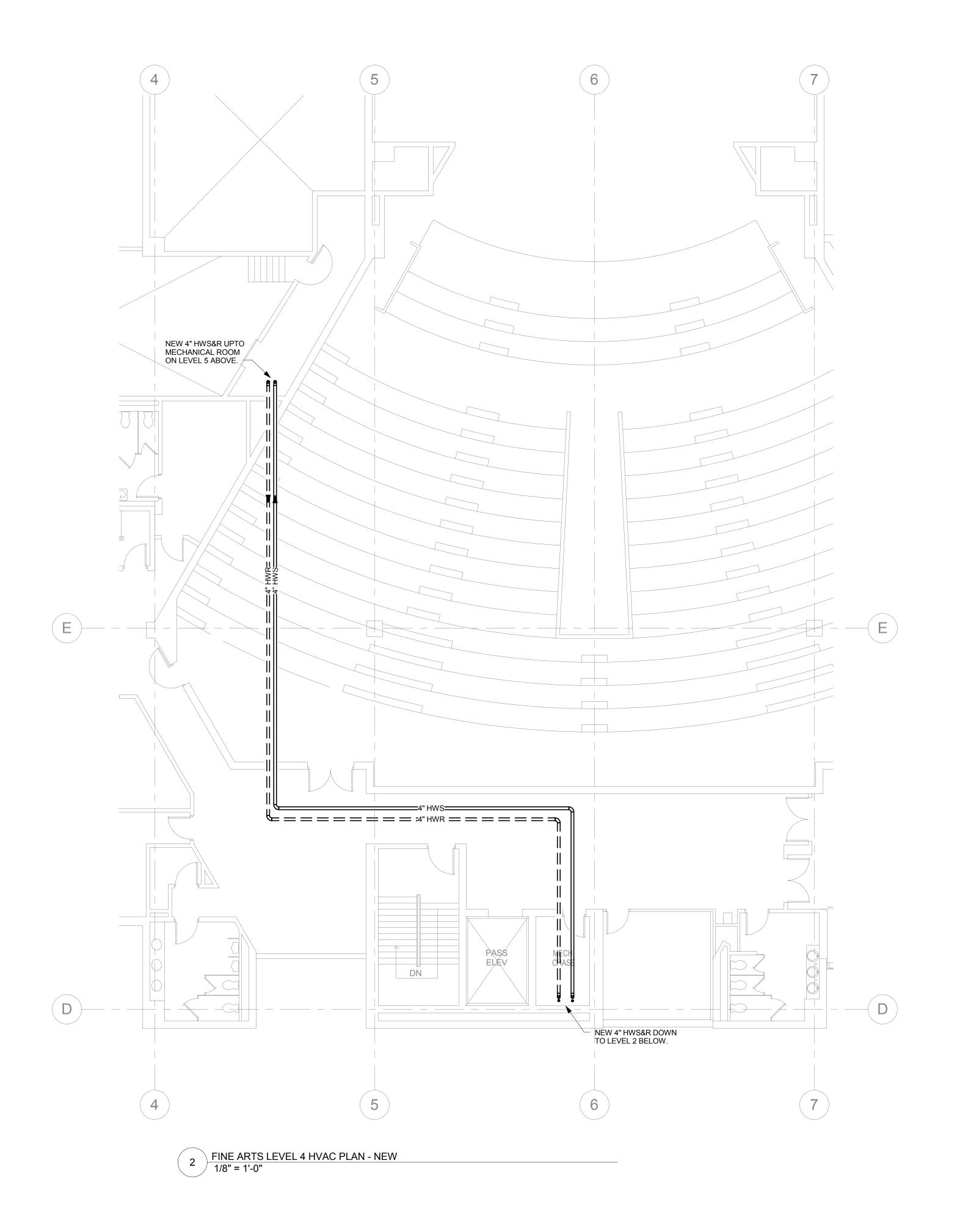












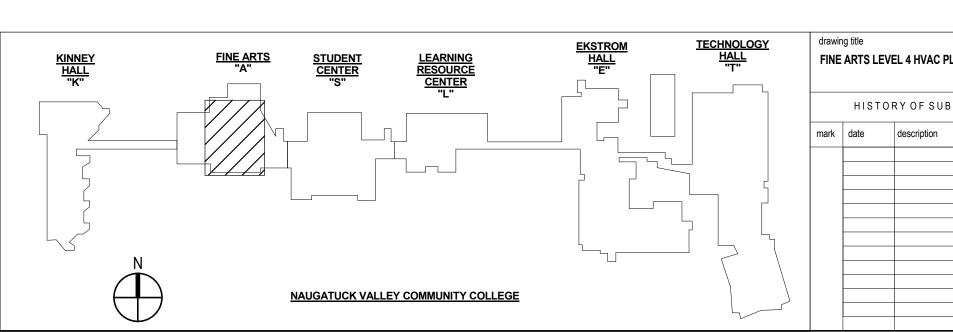
DEMOLITION NOTES

- 1 REMOVE EXISTING HIGH TEMPERATURE HOT WATER PIPING SYSTEM.
- 2 REMOVE EXISTING HIGH TEMPERATURE HOT WATER TO HOT WATER HEAT EXCHANGER SYSTEM.
- 3 REMOVE EXISTING PUMP SYSTEM.
- 4 REMOVE EXISTING SPECIALTIES SYSTEM.
- 5 REMOVE EXISTING ATC SYSTEM.

NEW DRAWING NOTES

1 NOT USED.

DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION



drawing title

FINE ARTS LEVEL 4 HVAC PLANS

STATE OF CONNECTICUT

DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DIVISION OF CONSTRUCTION SERVICES

BVH INTEGRATED SERVICES

50 GRIFFIN ROAD SOUTH

BLOOMFIELD CT, 06002

project

RENOVATIONS TO PHYSICAL PLANT

Naugatuck Valley Community College

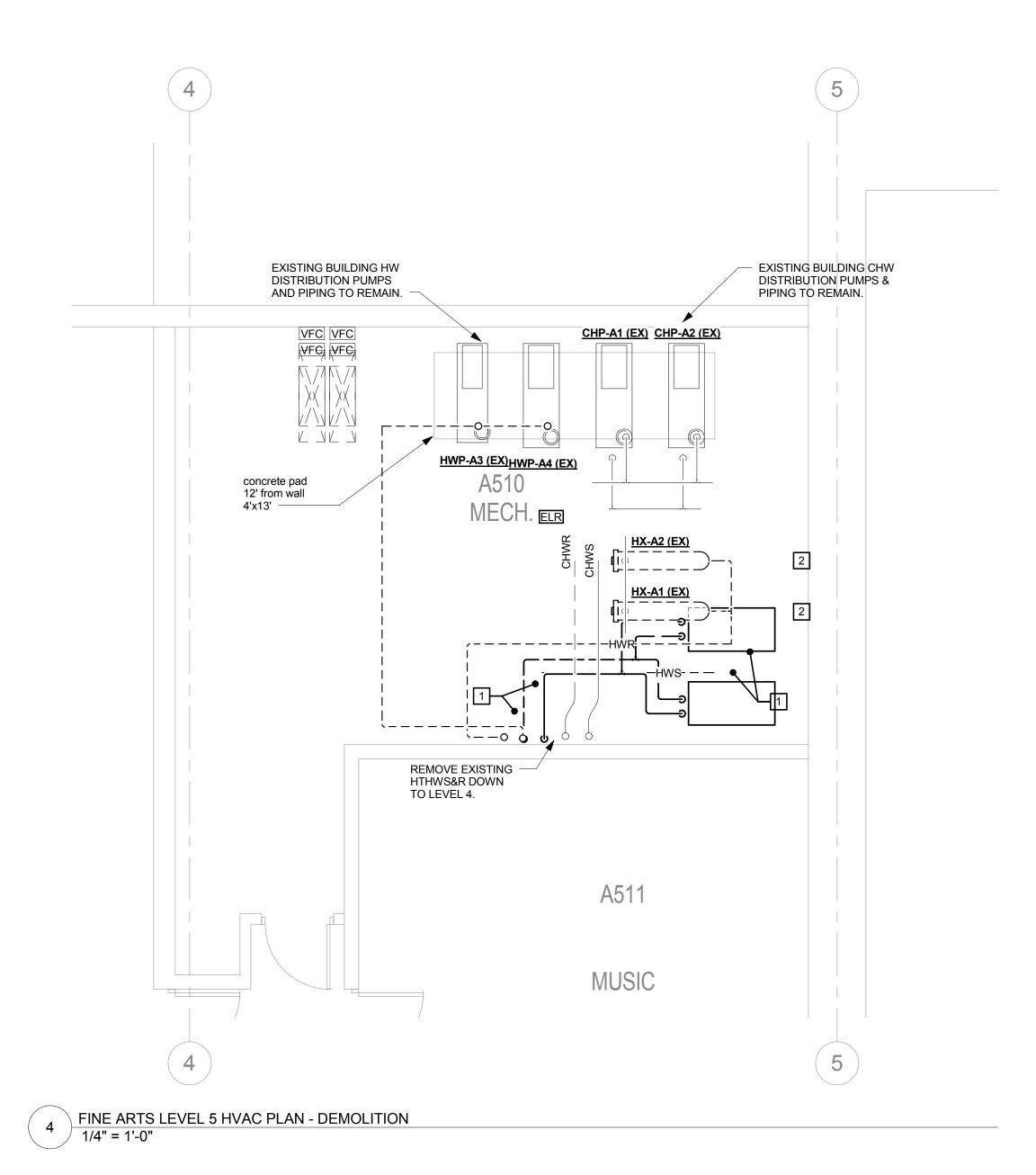
750 Chase Parkway, Waterbury, CT 06708

RENOVATIONS TO PHYSICAL PLANT

Naugatuck Valley Community College

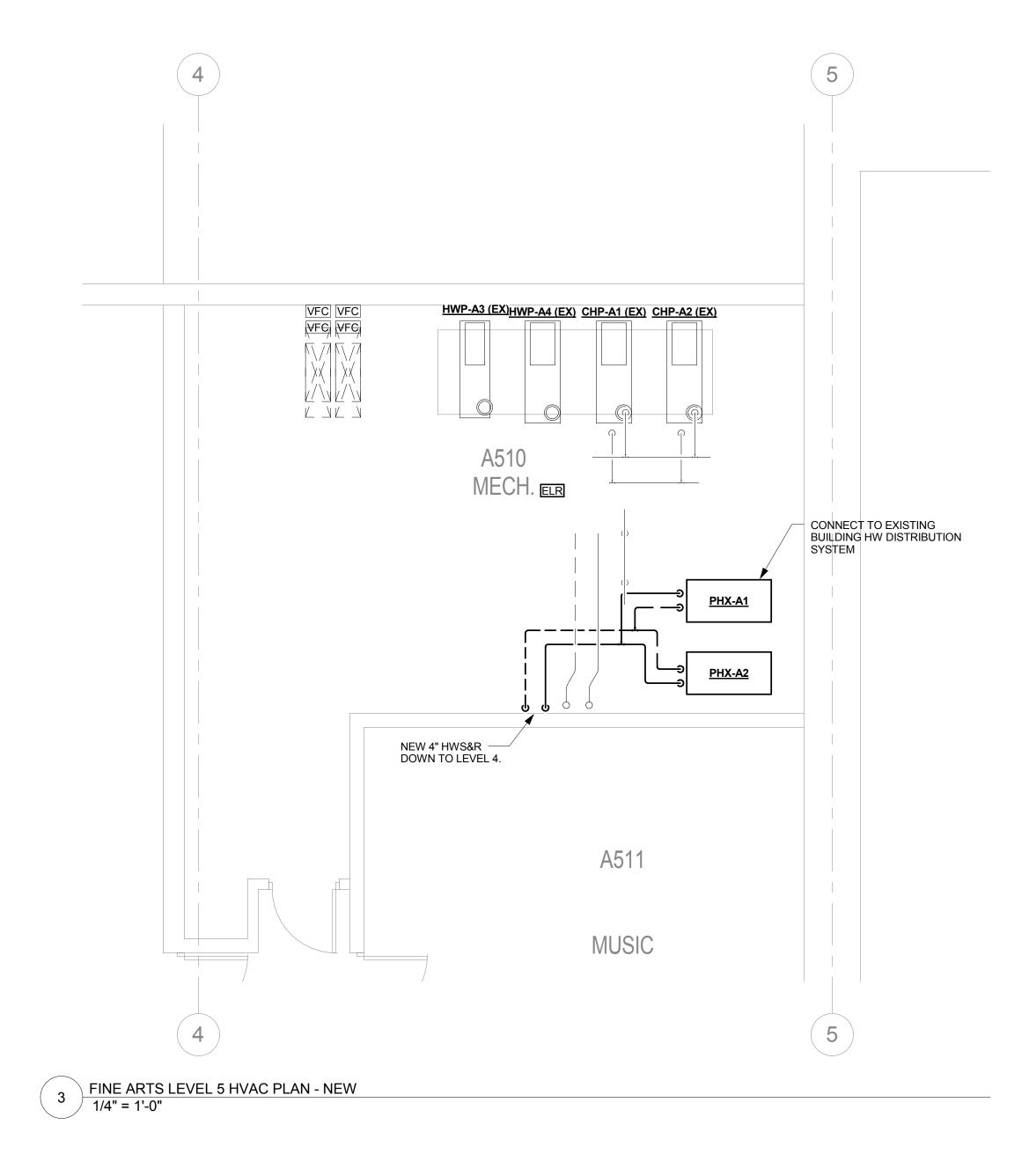
750 Chase Parkway, Waterbury, CT 06708

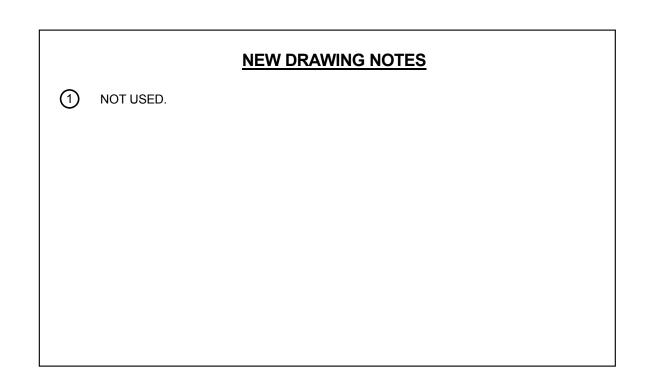
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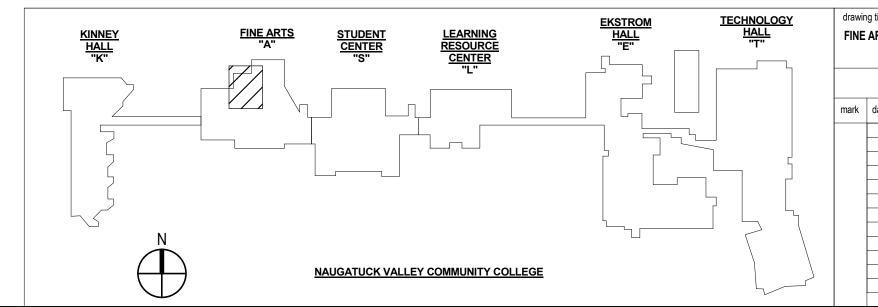
DEMOLITION NOTES

- 1 REMOVE EXISTING HIGH TEMPERATURE HOT WATER PIPING SYSTEM.
- 2 REMOVE EXISTING HIGH TEMPERATURE HOT WATER TO HOT WATER HEAT EXCHANGER SYSTEM.
- 3 REMOVE EXISTING PUMP SYSTEM.
- 4 REMOVE EXISTING SPECIALTIES SYSTEM.
- 5 REMOVE EXISTING ATC SYSTEM.





DESIGN DEVELOPMENT SUBMISSION SEPTEMBER 25, 2017 NOT FOR CONSTRUCTION



drawin	ng title				
FINE		EVEL 5 HVAC PLANS	DEPARTMENT OF	CONNECTICUT ADMINISTRATIVE SERVICES ISTRUCTION SERVICES	
	нібі	ORY OF SUBMISSIONS			date
mark	date	description	drawing prepared by		uale
				GRATED SERVICES	
				RIFFIN ROAD SOUTH	scale
			BLC	OMFIELD CT, 06002	1/4" = 1'-0"
			project		drawn by
					KLB
			RENOVATIONS	TO PHYSICAL PLANT	approved by
			Naugatuck Valley C	Community College	JBA
				y, Waterbury, CT 06708	drawing no.
			CAD no.	project no.	H-105.A
			21-16-043	BI-CTC-500	

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290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Learning Resource Center

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63261

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for the Learning Resource Center at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

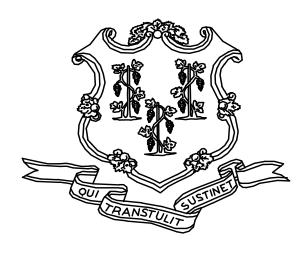
Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Learning Resource Center NVCC

ASBESTOS INSPECTION REPORT

LEARNING RESOURCE CENTER NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63261 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 19, 2017

Table of Contents

SECTION

- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a prerenovation inspection at Learning Resource Center located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 28, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included pipe fitting insulation, fiberglass pipe insulation paper/adhesive, spray-on fireproofing, gaskets, and end cap sealant, penetration sealants, suspended ceiling g tile, gypsum board, joint compound, cove base and adhesive. Suspect materials that are inaccessible and were not sampled include gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.

- (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

None

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Spray-On Fireproofing Brown
- Mudded End Cap Sealant
- Mudded Pipe Fitting Insulation (All Sizes, All Systems)
- Mudded Valve Insulation
- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive
- Fire Stop Sealant
- Electrical Penetration Putty
- Duct Sealant
- Gypsum Board

- Joint Compound White
- 2'x 2' Suspended Ceiling Tile Coral Pattern
- 2'x 4' Suspended Ceiling Tile Fissured
- Cove Base and Associated Adhesive

Spray-On Fireproofing – Brown was identified to contain Vermiculite.

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

Duct Gasket Putty – Tan could possibly be found on duct work throughout.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE LEARNING RESOURCE CENTER

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-LC-1A	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (HW Return)	ND	-
112817-LC-1B	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (Drain Line)	ND	-
112817-LC-1C	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (Drain Line)	ND	-
112817-LC-1D	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (HW Supply)	ND	-
112817-LC-1E	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (Cold Water Supply)	ND	-
112817-LC-1F	Level 2 Pipe Tunnel	Mudded Pipe Fitting Insulation (CHW Supply)	ND	-
112817-LC-2A	Level 2 Pipe Tunnel	White End Cap Sealant (Drain Line)	ND	-
112817-LC-2B	Level 2 Pipe Tunnel	Mudded Valve Fitting Insulation (CHW Return)	ND	-
112817-LC-2C	Level 2 Pipe Tunnel	Mudded Valve Fitting Insulation (CHW Supply)	ND	-
112817-LC-2D	Level 2 Pipe Tunnel	White End Cap Sealant (HW Supply)	ND	-
112817-LC-3A	Level 2 Pipe Tunnel	Fiberglass Insulation Paper/Adhesive (CHW Return)	ND	-
112817-LC-3B	Level 2 Pipe Tunnel	Fiberglass Insulation Paper/Adhesive (HW Return)	ND	-
112817-LC-4A	L500	4" Red Cove Base	ND	-
112817-LC-4B	L500	Tan Adhesive for 4" Red Cove Base	ND	-
112817-LC-5A	L500	Green Duct Sealant	ND	-
112817-LC-6A	L500 Upper Level	Spray-On Fire Proofing Insulation	ND	-
112817-LC-6B	L500	Spray-On Fire Proofing Insulation	ND	-

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE LEARNING RESOURCE CENTER

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112817-LC-6C	L500	Spray-On Fire Proofing Insulation	ND	-
112817-LC-7A	L500	White Penetration Caulk	ND	-
112817-LC-7B	L500	Electrical Penetration Putty	ND	-
112817-LC-7C	L500	Red Fire Proof Putty	ND	-
112817-LC-7D	L500	Brown Fire Stop Sealant	ND	-
112817-LC-8A	L500	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112817-LC-8B	L500	White End Cap Sealant (HW Return)	ND	-
112817-LC-9A	L500 Corridor Outside	2'x2' Suspended Ceiling Tile – Coral Pattern	ND	-
112817-LC-10A	L500	Joint Compound – White	ND	-
112817-LC-10B	L500	Gypsum Board	ND	-
112817-LC-11A	L316 Custodial Room	2' X 4' Suspended Ceiling Tile – Fissured	ND	-
112817-LC-12A	L316	Fiberglass Pipe Insulation Paper/Adhesive	ND	-

ND = None Detected HW = Hot Water CHW = Chilled Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS



Attention: Ed Fennell

EMSL Analytical, Inc.

ATC Group Services LLC

290 Roberts Street

Suite 301

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com EMSL Order: 241705222

Customer ID: ATCE54

Customer PO: 17-10133-0001

Dunings ID.

Project ID:

Phone: (860) 282-9924

Fax: (860) 282-9826

Received Date: 12/08/2017 2:35 PM

Analysis Date: 12/09/2017 - 12/12/2017

East Hartford, CT 06108 Collected Date: 11/30/2017

Project: 2257317033/NYCC-LEARNING CENTER, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>stos</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-LC-1A 241705222-0001	Level 2 pipe tunnel - mudded fitting, HW return	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
112817-LC-1B	Level 2 pipe tunnel - mudded fitting on	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705222-0002	drain line	Homogeneous			
112817-LC-1C 241705222-0003	Level 2 pipe tunnel - mudded fitting on drain line	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
			40% Min. Wool	600/ Non fibrous (Other)	None Detected
112817-LC-1D 241705222-0004	Level 2 pipe tunnel - mudded fitting on HW supply	Gray Fibrous Homogeneous	40% WIIII. WOOI	60% Non-fibrous (Other)	None Detected
112817-LC-1E	Level 2 pipe tunnel -	Tan	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705222-0005	mudded fitting on cold water supply	Fibrous Homogeneous	33 % Will . WOO!	03 // Non-holous (Other)	None Detected
112817-LC-1F	Level 2 pipe tunnel -	Tan	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705222-0006	mudded fitting on CHW supply	Fibrous Homogeneous	CO / Willing Wood	70 % Non horodo (Galler)	None Beleeted
112817-LC-2A	Level 2 pipe tunnel - white end cap sealant	White/Yellow Fibrous	20% Glass	80% Non-fibrous (Other)	None Detected
241705222-0007	on drain line	Homogeneous			
112817-LC-2B	Level 2 pipe tunnel - mudded valve fitting	Gray Fibrous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
241705222-0008	CHW return	Homogeneous			
112817-LC-2C	Level 2 pipe tunnel - mudded valve fitting	Tan Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705222-0009	CHW supply	Homogeneous			
112817-LC-2D 241705222-0010	Level 2 pipe tunnel - white end cap sealant HW supply	Tan Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
		-	70% Callulana	100/ Non fibrous (Other)	None Detected
112817-LC-3A 241705222-0011	Level 2 pipe tunnel - fiberglass insulation paper, CHW return	Tan/Silver Fibrous Homogeneous	70% Cellulose 20% Glass	10% Non-fibrous (Other)	None Detected
112817-LC-3B	Level 2 pipe tunnel -	Tan/Silver	70% Cellulose	5% Non-fibrous (Other)	None Detected
241705222-0012	fiberglass insulation paper, HW return	Fibrous Homogeneous	25% Glass		
112817-LC-4A	L500 - 4" red cove base	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705222-0013		Homogeneous			
112817-LC-4B	L500 - 4" red cove base adhesive	Yellow Non-Fibrous	2% Glass	98% Non-fibrous (Other)	None Detected
241705222-0014		Homogeneous			
112817-LC-5A	L500 - green duct sealant	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705222-0015		Homogeneous			
112817-LC-6A	L500 upper level - spray on fire proofing	Brown Fibrous	50% Cellulose	20% Vermiculite 30% Non-fibrous (Other)	None Detected
241705222-0016		Homogeneous			

Initial report from: 12/12/2017 16:53:50



EMSL Order: 241705222

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>stos</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-LC-6B	L500 - spray on fire proofing	Brown Fibrous	60% Cellulose 5% Glass	20% Vermiculite 15% Non-fibrous (Other)	None Detected
241705222-0017		Homogeneous		,	
112817-LC-6C	L500 - spray on fire proofing	Tan Fibrous	60% Cellulose 10% Glass	10% Vermiculite 20% Non-fibrous (Other)	None Detected
241705222-0018		Homogeneous			
112817-LC-7A	L500 - white penetration caulk	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705222-0019		Homogeneous			
112817-LC-7B	L500 - electrical penetration putty	Brown Non-Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
241705222-0020		Homogeneous			
112817-LC-7C	L500 - red fire proof putty	Tan Non-Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
241705222-0021		Homogeneous			
112817-LC-7D	L500 - brown fire stop sealant	Brown Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705222-0022		Homogeneous			
112817-LC-8A 241705222-0023	L500 - fiberglass pipe insulation	Tan/Silver Fibrous	70% Cellulose 20% Glass	10% Non-fibrous (Other)	None Detected
	paper/adhesive	Homogeneous	200/ 0 # 1	00% N 51 (0%)	
112817-LC-8B	L500 - white end cap sealant, HWP	Tan/Yellow Fibrous	60% Cellulose 20% Glass	20% Non-fibrous (Other)	None Detected
241705222-0024		Homogeneous			
112817-LC-9A 241705222-0025	L500 corridor outside - suspended ceiling	Gray/Silver Fibrous	70% Min. Wool	30% Non-fibrous (Other)	None Detected
	tile coral pattern 2'x2'	Homogeneous		4000/ New Characte (Others)	New Detected
112817-LC-10A 241705222-0026	L500 - joint compound white	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
112817-LC-10B	L500 - gypsum board	Gray	10% Cellulose	90% Non-fibrous (Other)	None Detected
241705222-0027	3,7	Fibrous Homogeneous		, , , , , , , , , , , , , , , , , , , ,	
112817-LC-11A	L316 custodial rm - 2'x4' suspended	Gray Fibrous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
241705222-0028	ceiling tile, fissured	Homogeneous			
112817-LC-12A 241705222-0029	L316 custodial - fiberglass pipe insulation paper/adhesive	Tan/Silver Fibrous Homogeneous	70% Cellulose 20% Glass	10% Non-fibrous (Other)	None Detected

Analyst(s)

Lauren Buffone (19) Quetcy Castro Romero (10) Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/12/2017 16:53:50

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page 1 of 2

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

			8	241705220	20			(860) 282-9924	(860) 282-9924 Fax: (860) 282-9826	2-9826
ATC Inspector: Scort Jahwsow	JOHW	Nos		Client Name:	ame: cTDcs	SCS				
Accreditation No.: 00297	297			Project	No./Task No.:	Project No./Task No.: 3257317033	3			
Survey Date: 11/30/17	0			Project	Project Manager:	Ed Fennell				
Signature:	2			Rednes	Requested Completion Date:	n Date:				
Lab Name:	03	Requested turnaround time (circle)	time (circle)	3 HR 6 H	6 HR 24 HR	48 HR (3 DY	5 DY	No. Samples Collected	Sollected 29	
Building: NYCC - Learning Contect	Learning	Center	Address: 7	To Chare	Beleur	Waterbra	15	474		
Location		Material Description		Type S TSI MISC	Estimated Quantity	Friable Y/N	condition D D NE	Sample of (homogeneous material)	us Field Number	
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7 500	Gren D	Given Duck Sculant		٤		3		-	112817-6-519	4
										1

Analyze by PLM Comments: Notes Damage Factors:

Physical (sig dmg-dmg-no dmg)

Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

Ventilation (yes-no; if yes, type) Relinquished By/Date: Relinquished By/Date:

Vibration (gym-music rm-auditorium-mechanical rm-elevator-Air movement (high-moderate-low) Air conduits (air plenum - air shaft - elevator shaft - duct)

Deterioration (heavy-moderate-light-none)

Water (extensive-moderate-slight-none) Accessibility (within reach-barely reachable-not reachable)

Received By/Date: Received By/Date:



ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page 2 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

ATC Inspector: Scort Jahrson Accreditation No.: Occasion Survey Date: 1/30/17 Survey Date: 1/30/17 Signature: Location L	Requested turnaround time (circle) 3 H Type Material Description Requested turnaround time (circle) 3 H Material Description Repropries Sire Proofing Sire Proofing	ient Name: ient Name: oject No./Task Noject Manager: equested Comple 6 HR 24 HI 6 HR 24 HI 6 AR 24 HI 7 Auantity Auantity	317033 Action CT Condition //N (SD D NE	No. Samples Collected 2924 Fax. Field Sample of	Field Number Field Number Field Number Fiel
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Analyze by PLM Notes Damage Factors: Comments:

Ventilation (yes-no; if yes, type) Physical (sig dmg-dmg-no dmg) Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

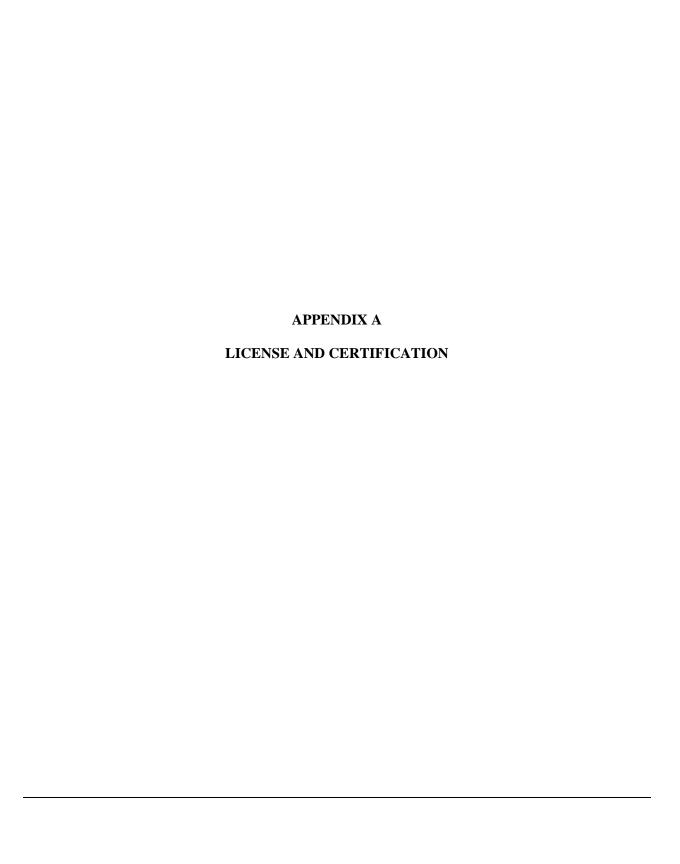
Relinquished By/Date: Relinquished By/Date:

Air conduits (air plenum - air shaft - elevator shaft - duct) Water (extensive-moderate-slight-Accessibility (within reach-barely reachable-not reachable)

Deterioration (heavy-moderate-light-none)

Received By/Date: Received By/Date: Air movement (high-moderate-low)

Friability (yes-no; hard-mod-soft surface) Vibration (gym-music rm-auditorium-mechanical rm-elevator-oth



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BELOW IS GERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

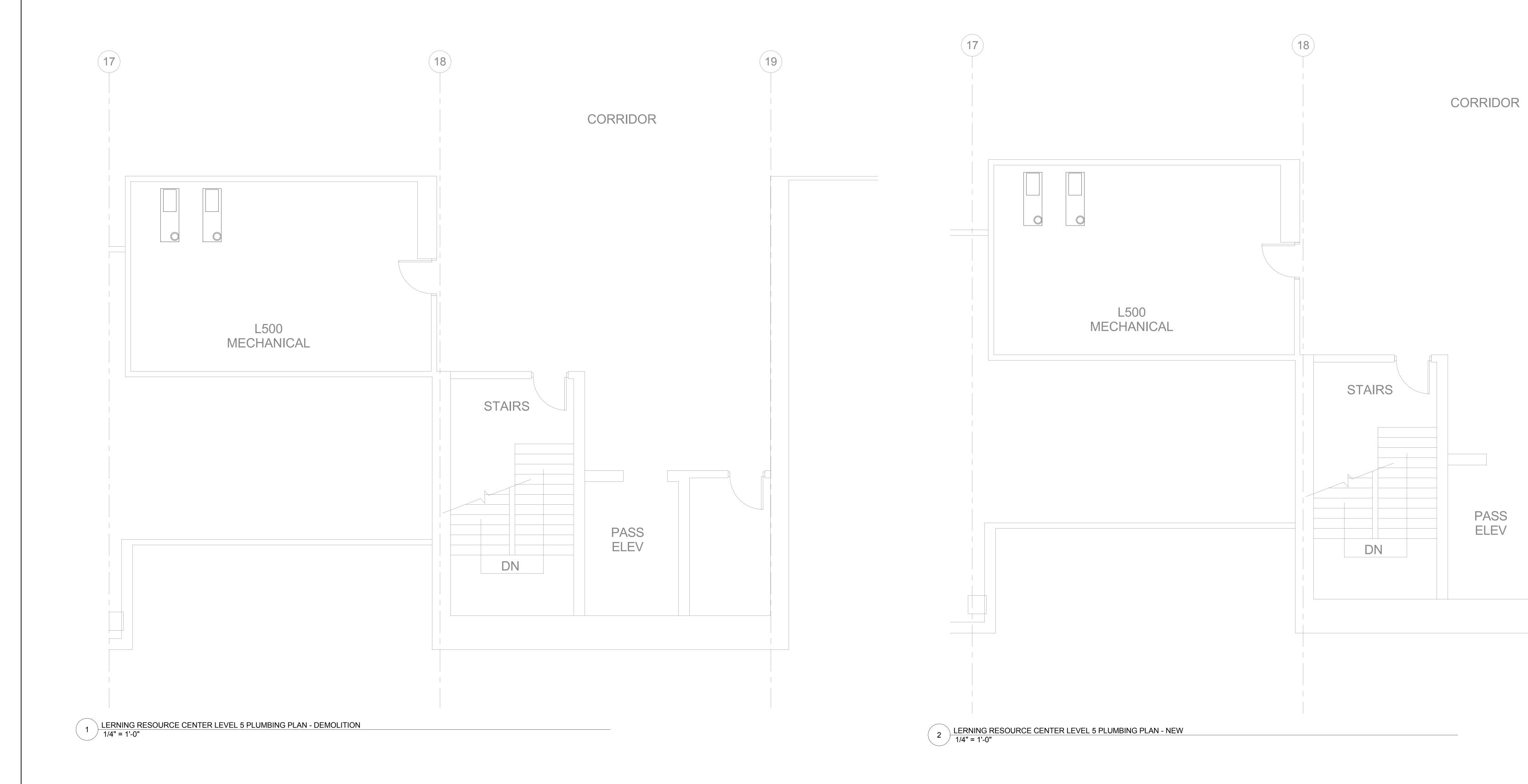
October 12, 2017 Examination Date

Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

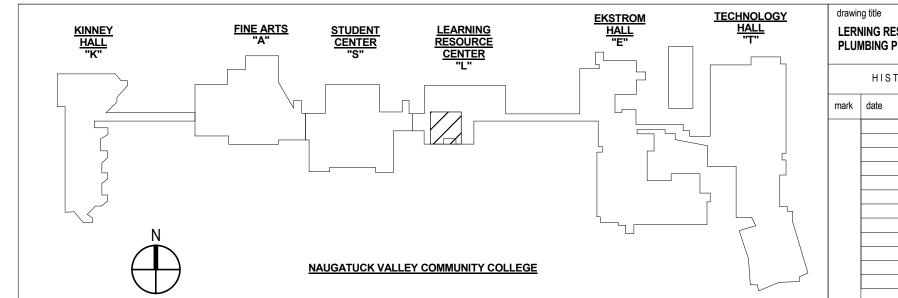
Date of Course

October 12, 2018 Expiration Date

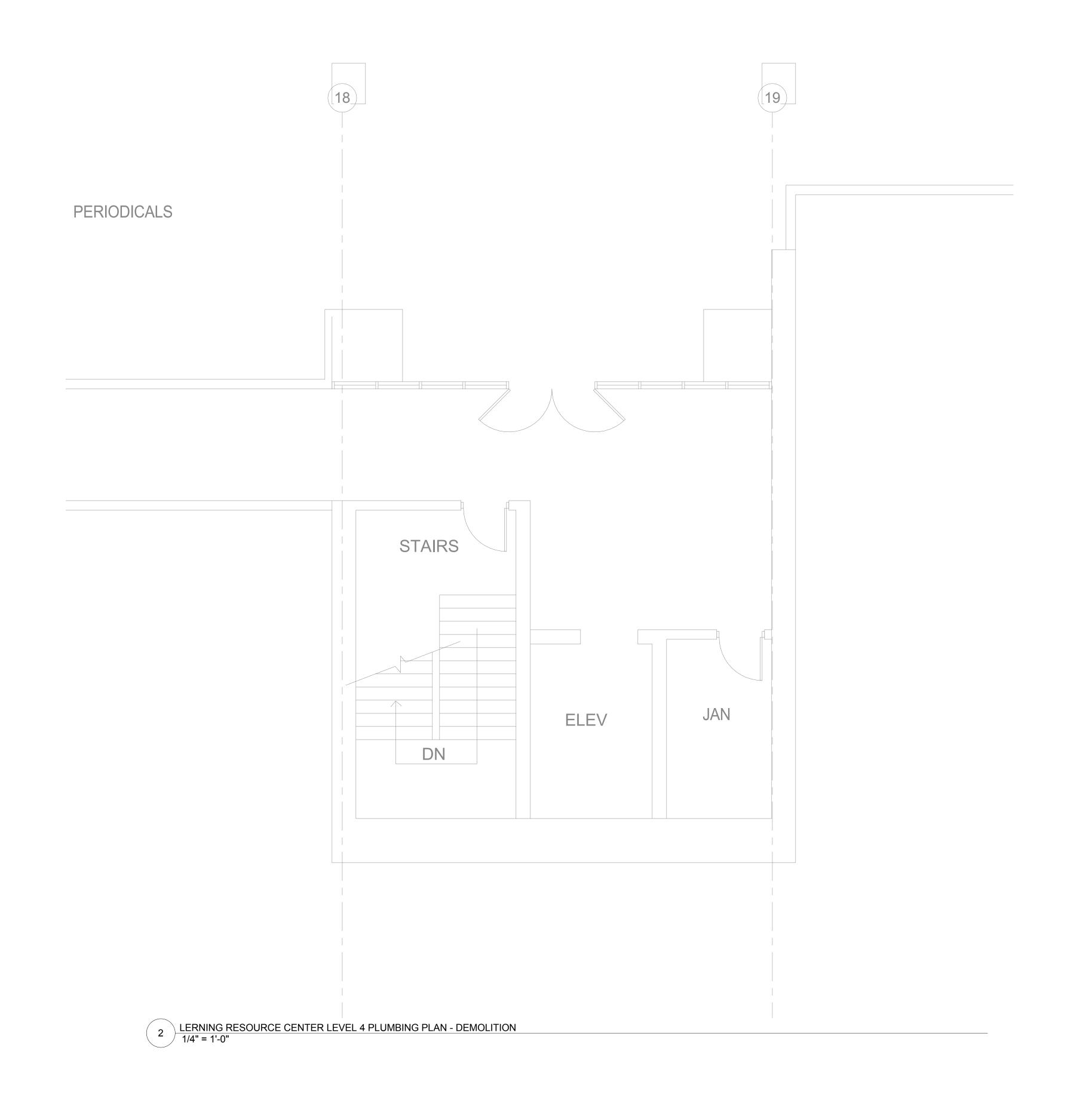


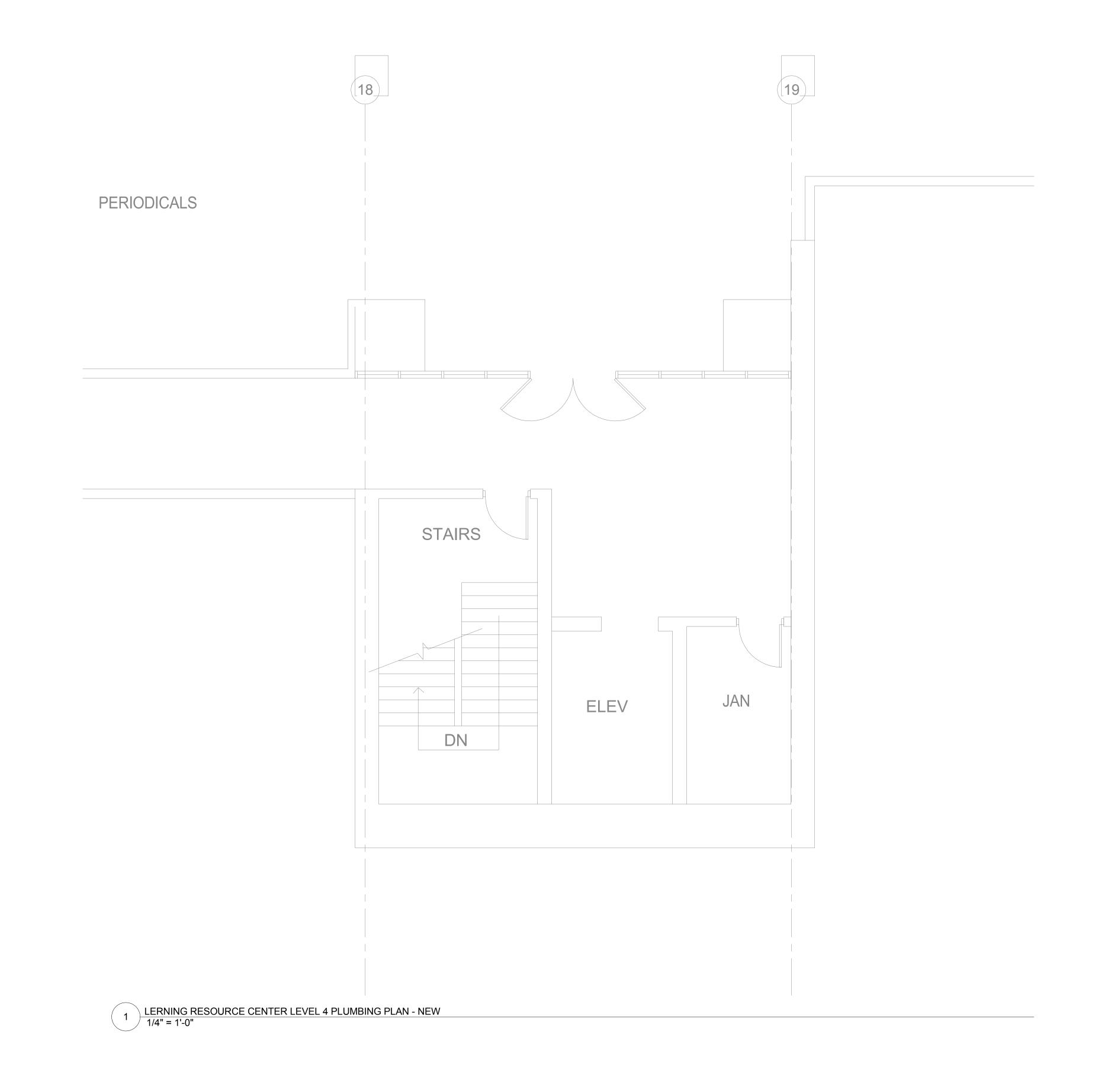


DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

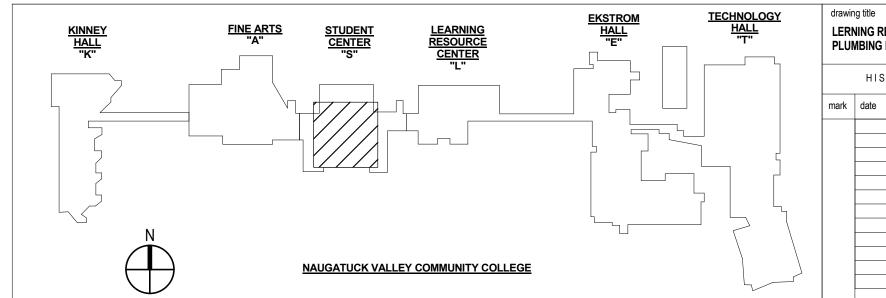


drawir	ng title				
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	HIST	ORY OF SUBMISSIONS	DIVISION OF	CONSTRUCTION SERVICES	
mark	date	description	drawing prepared by		date
				TEGRATED SERVICES 50 GRIFFIN ROAD SOUTH BLOOMFIELD CT, 06002	scale 1/4" = 1'-0"
			project	NS TO PHYSICAL PLANT	drawn by Author
			- RENOVATIO	approved by	
			Naugatuck Val	Checker	
			750 Chase Par	drawing no.	
			CAD no. 21-16-043	project no. BI-CTC-500	P-105.L

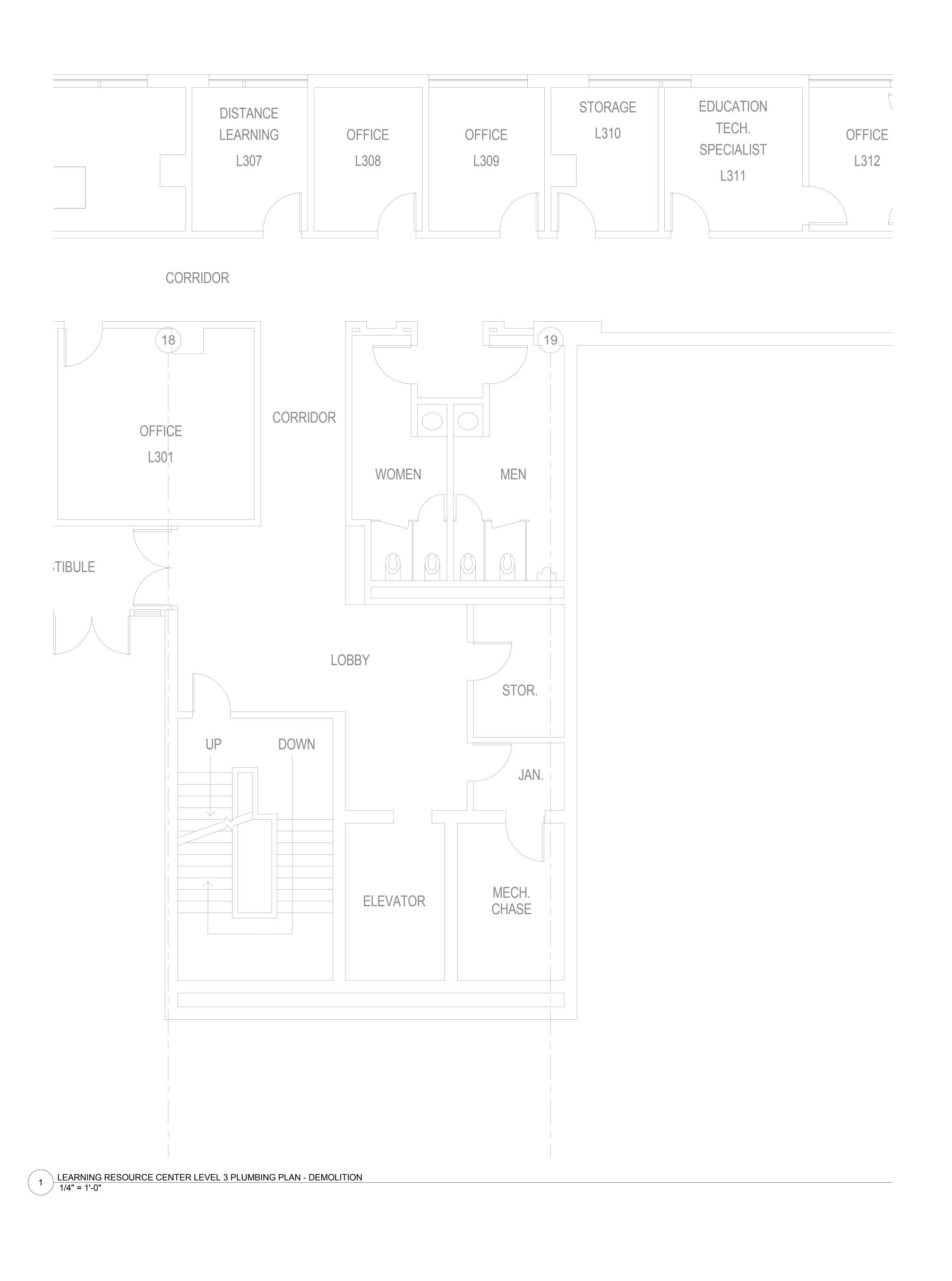


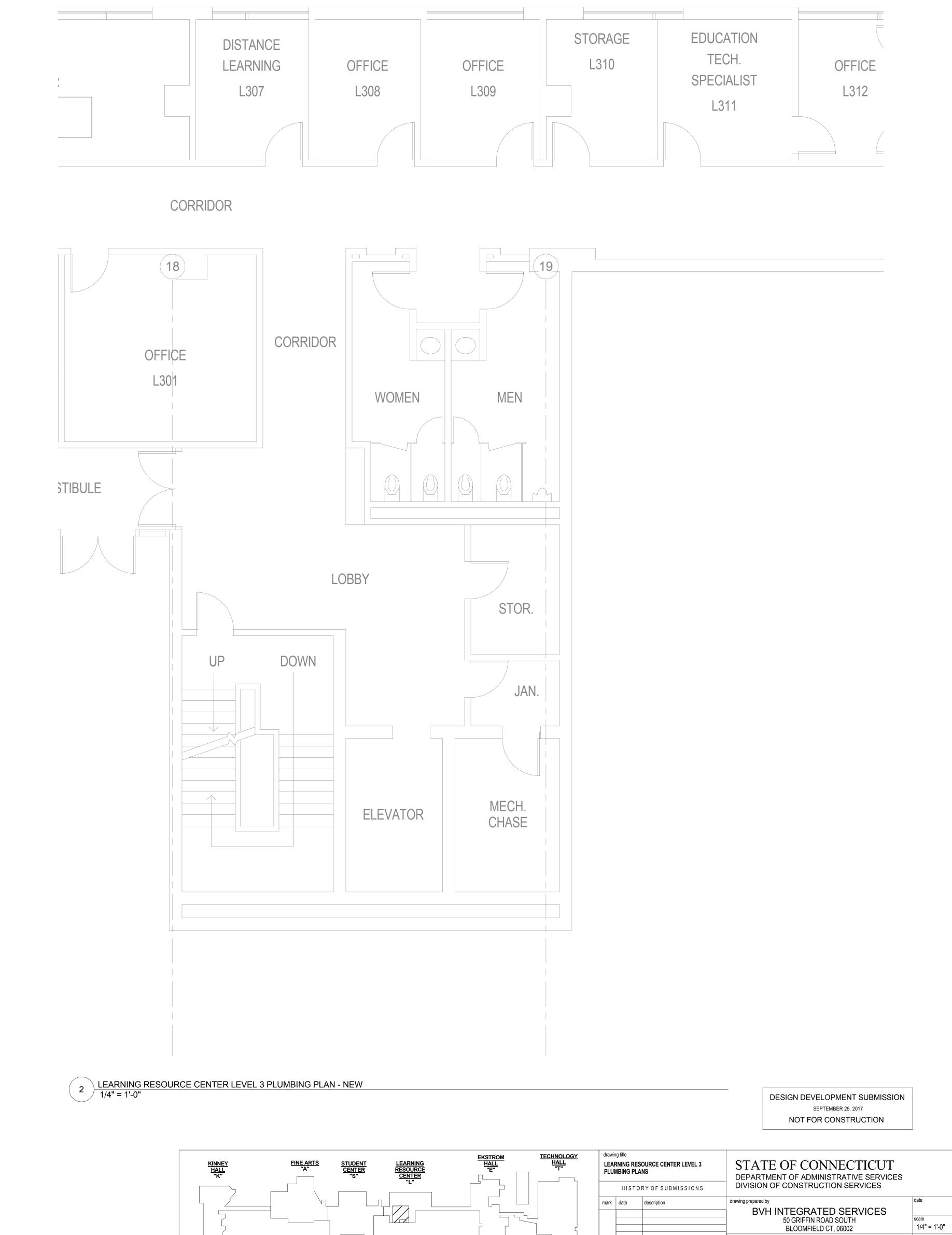


DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION



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			project	ONS TO PHYSICAL PLANT	drawn by JJM
				alley Community College	approved by JBA
			750 Chase Pa	arkway, Waterbury, CT 06708	drawing no.
			CAD no. 21-16-043	project no. BI-CTC-500	P-104.L





NAUGATUCK VALLEY COMMUNITY COLLEGE

1/4" = 1'-0"

Author

approved by Checker

drawing no.

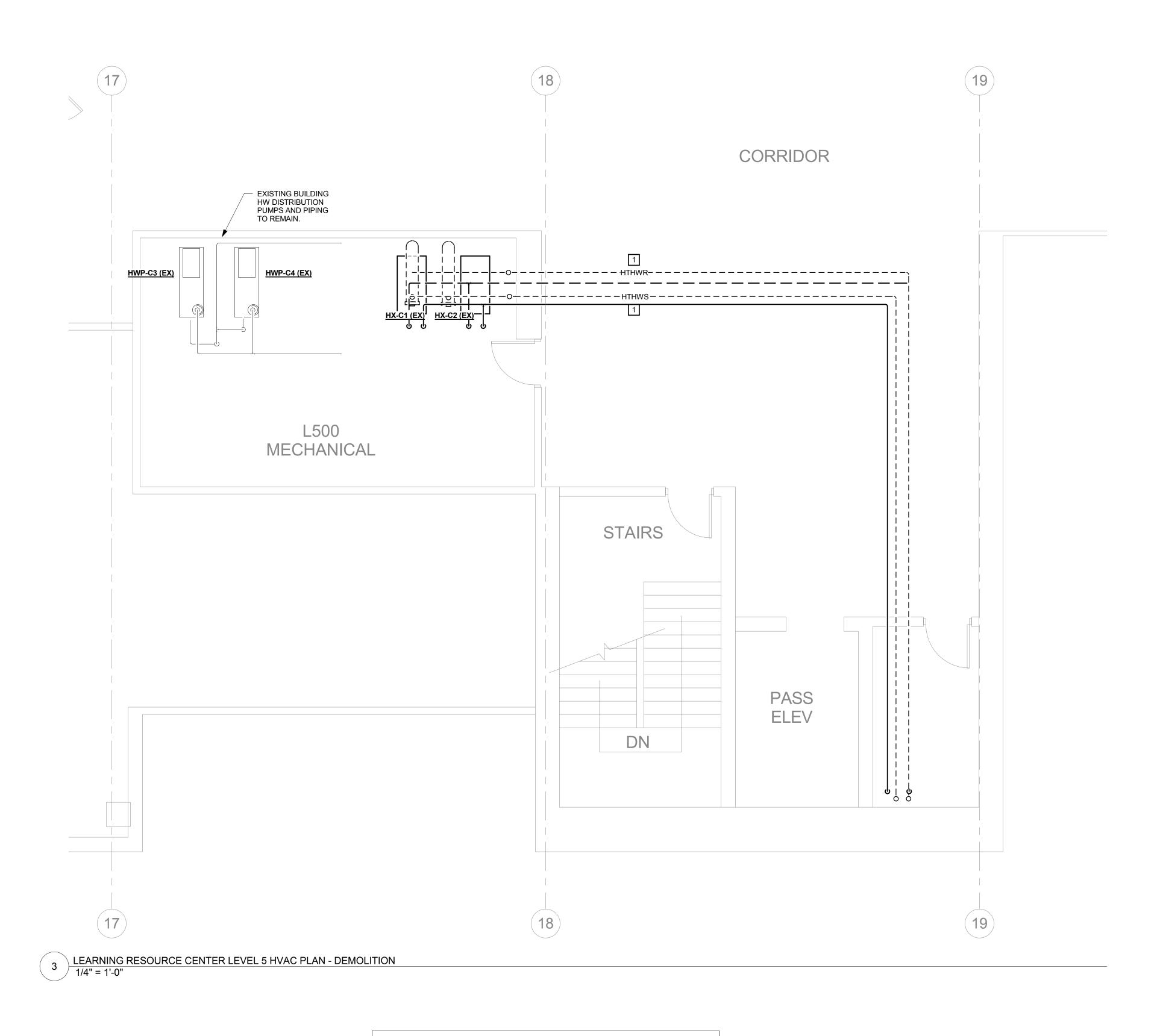
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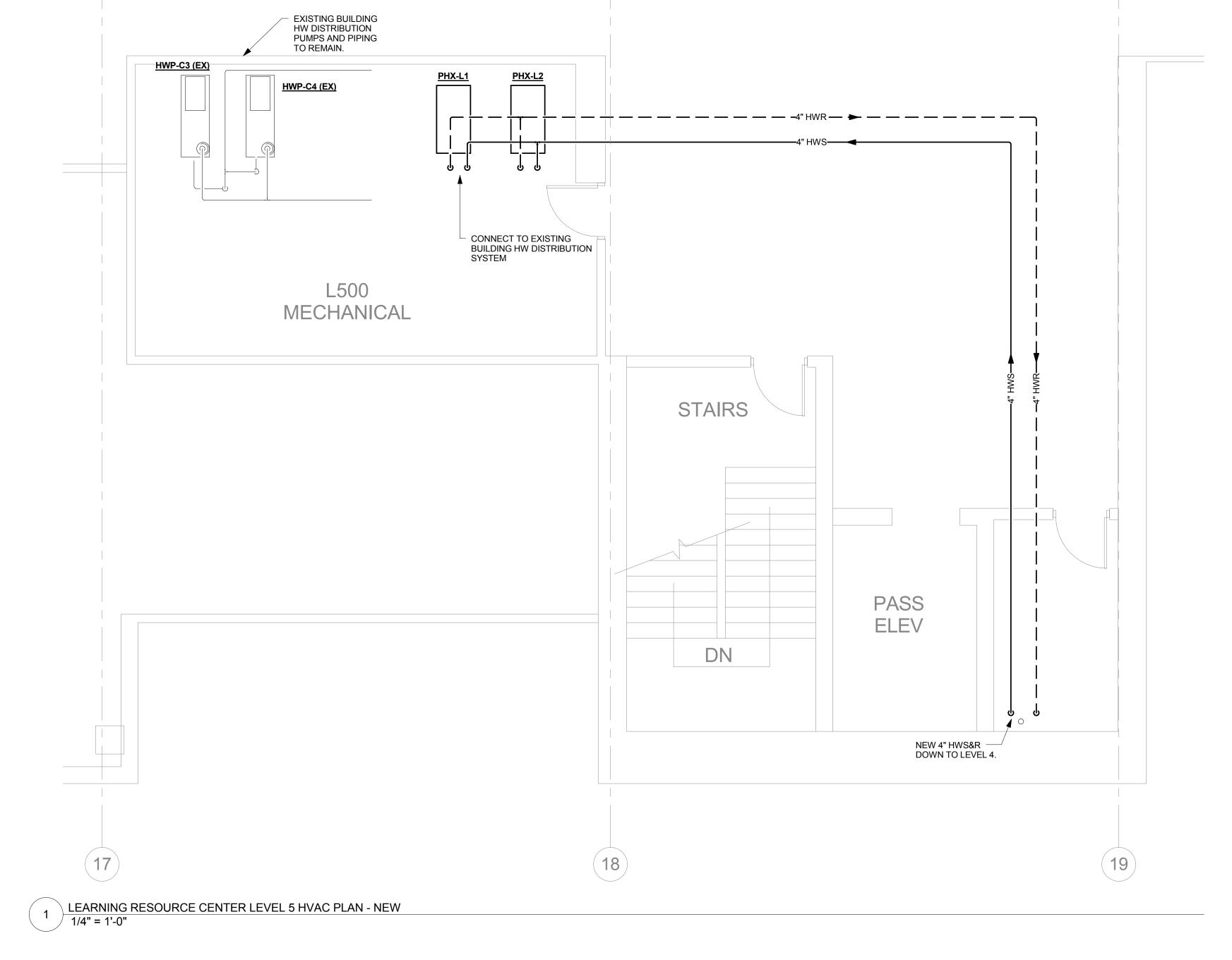
RENOVATIONS TO PHYSICAL PLANT

project no. BI-CTC-500

Naugatuck Valley Community College 750 Chase Parkway, Waterbury, CT 06708

CAD no. 21-16-043





CORRIDOR

DEMOLITION NOTES

1 REMOVE EXISTING HIGH TEMPERATURE HOT WATER PIPING SYSTEM.

2 REMOVE EXISTING HIGH TEMPERATURE HOT WATER TO HOT WATER HEAT EXCHANGER SYSTEM.

3 REMOVE EXISTING PUMP SYSTEM.

4 REMOVE EXISTING SPECIALTIES SYSTEM.

5 REMOVE EXISTING ATC SYSTEM.

① NOT USED.

NEW DRAWING NOTES

DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

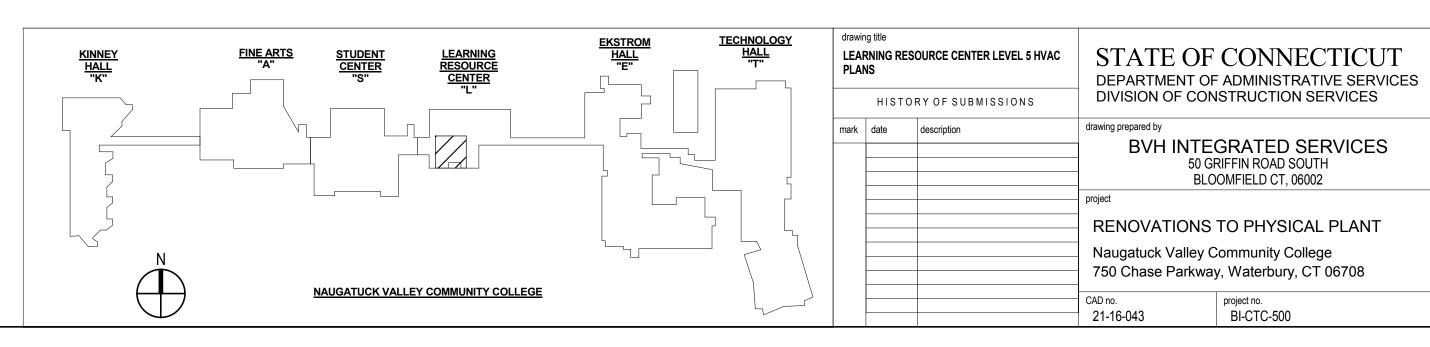
1/4" = 1'-0"

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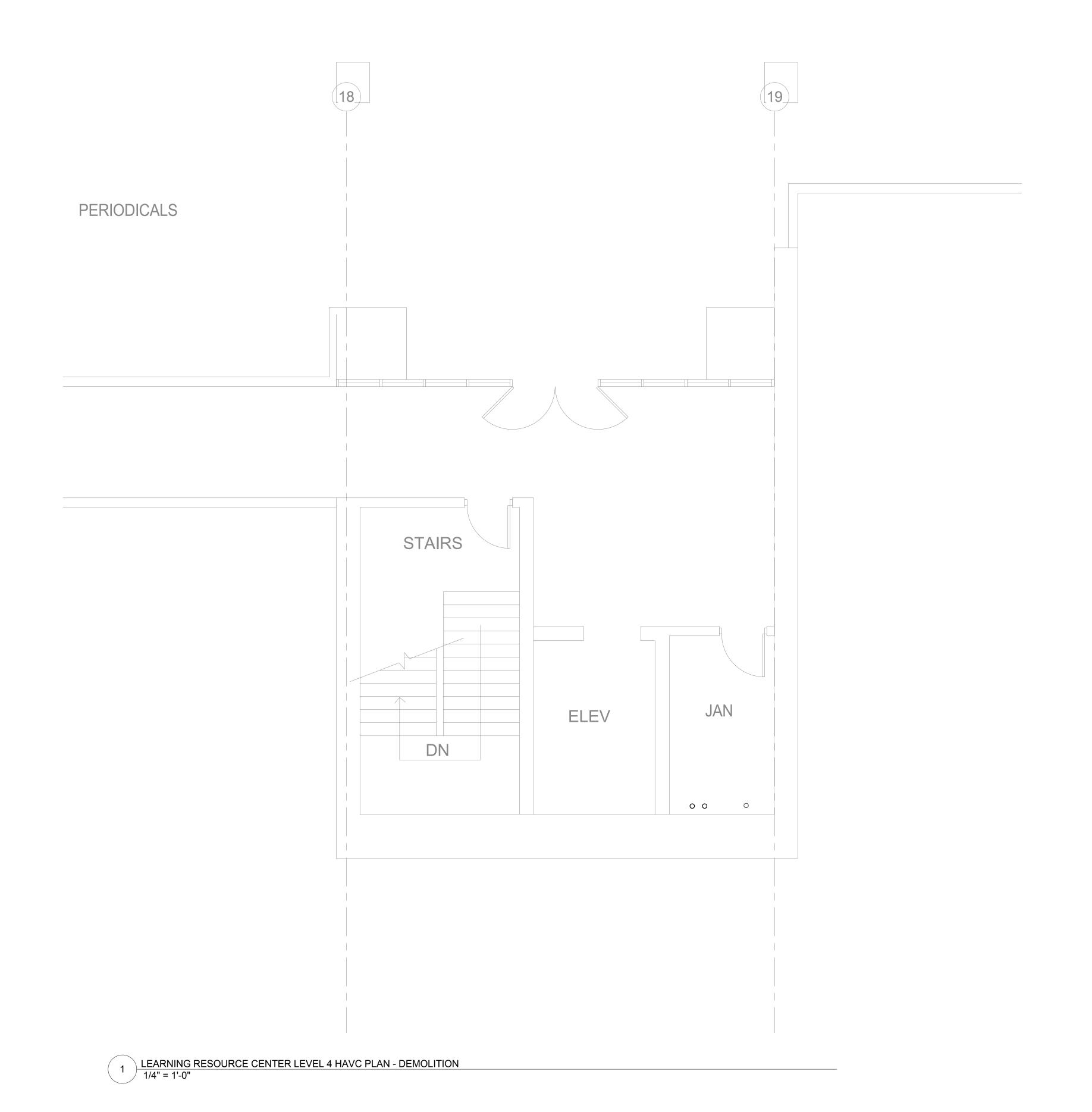
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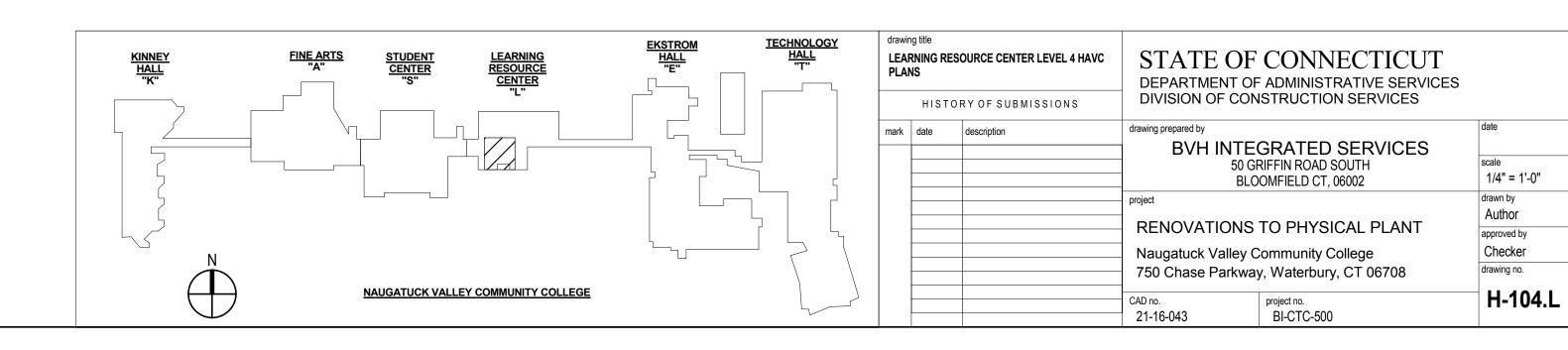


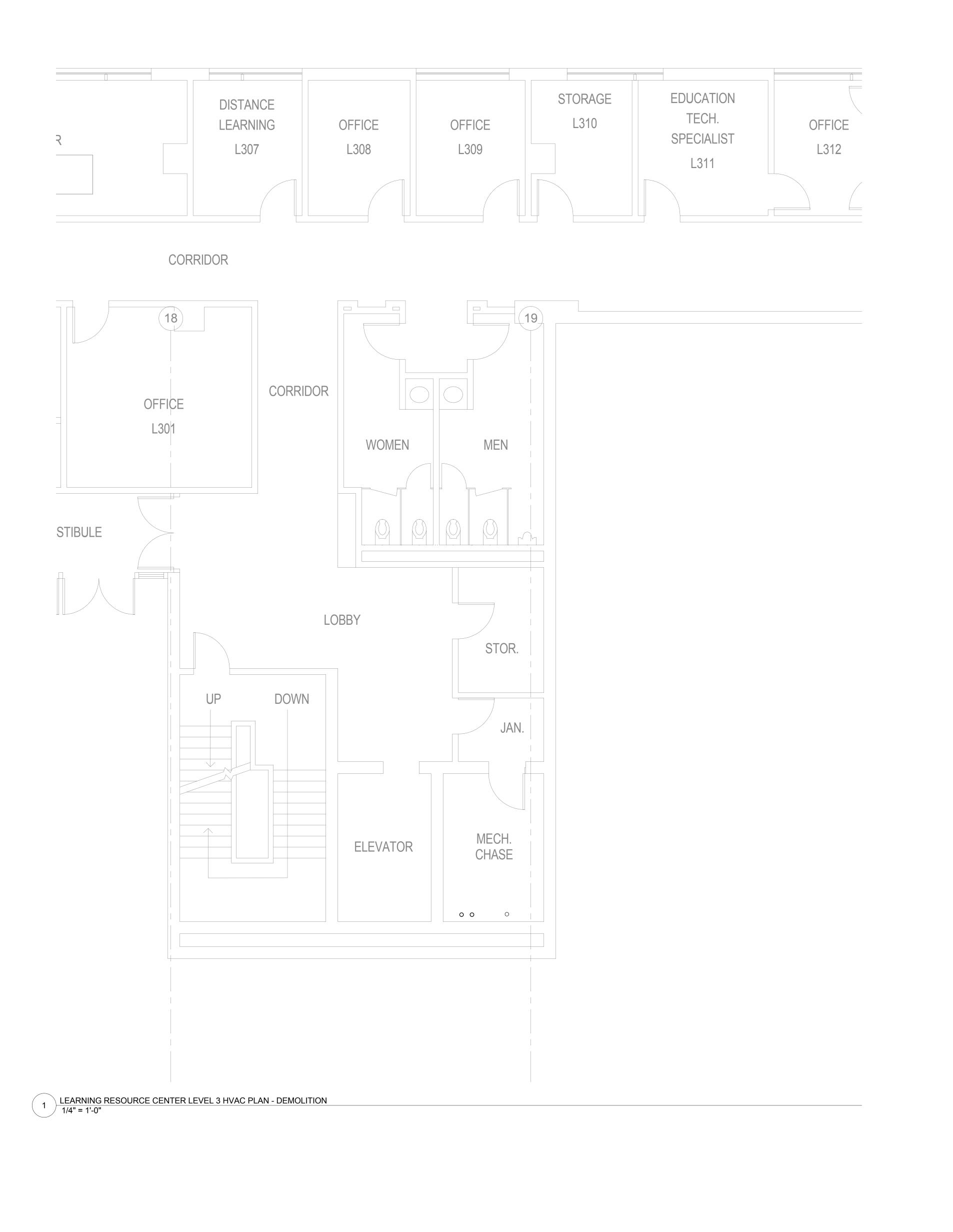
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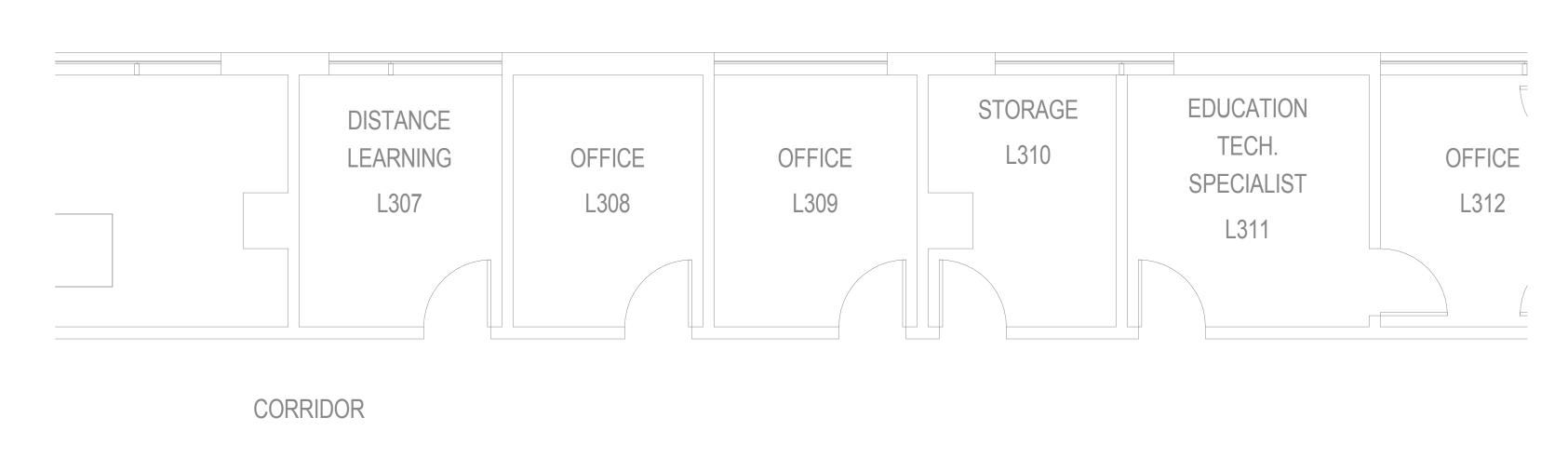


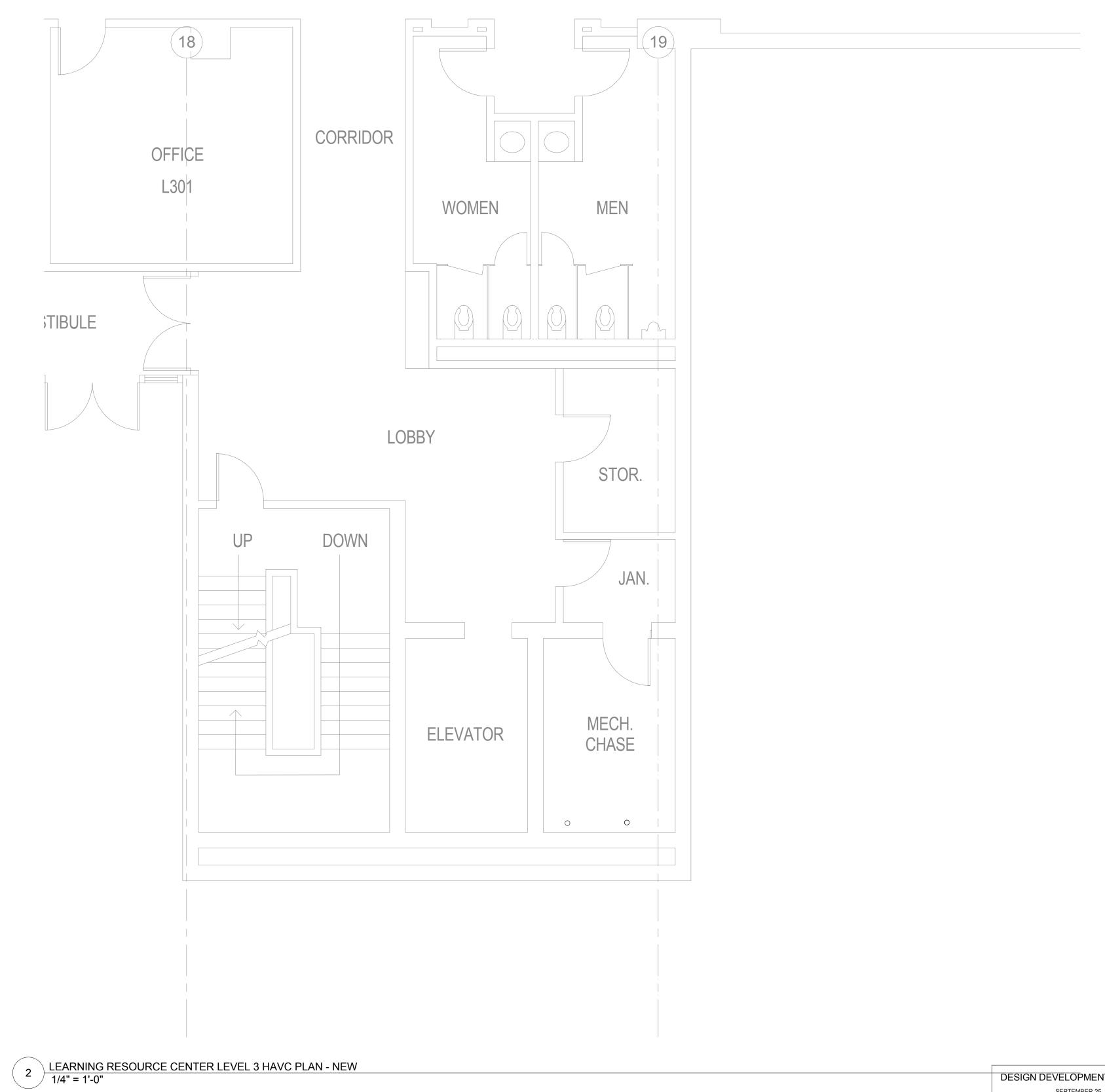
PERIODICALS STAIRS ELEV DN 2 LEARNING RESOURCE CENTER LEVEL 4 HAVC PLAN - NEW 1/4" = 1'-0"

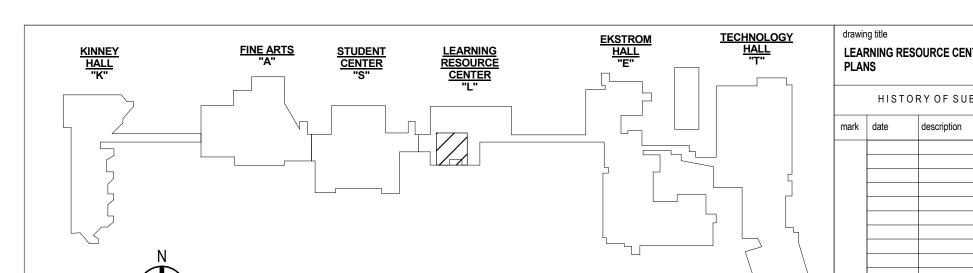
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION







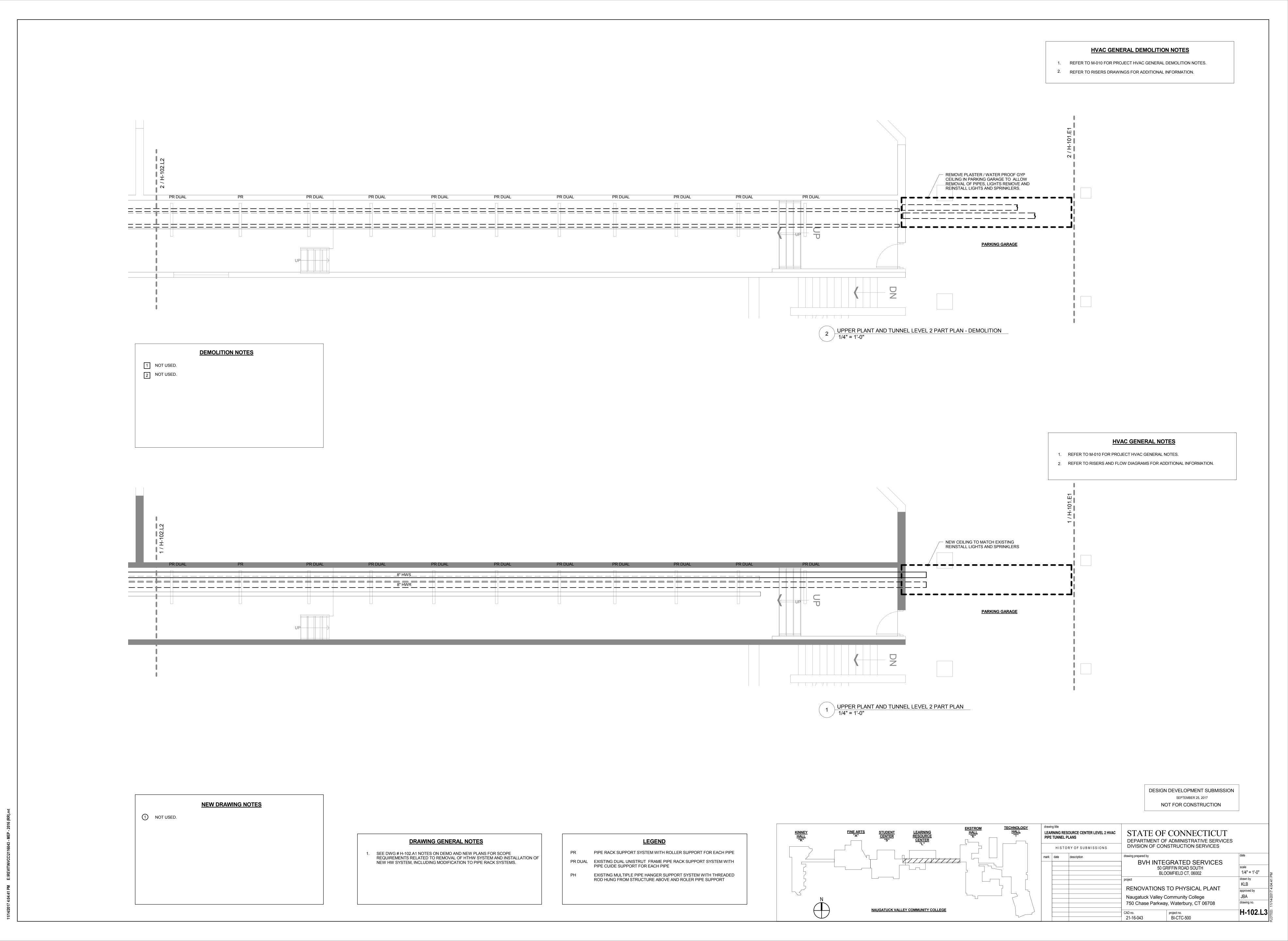


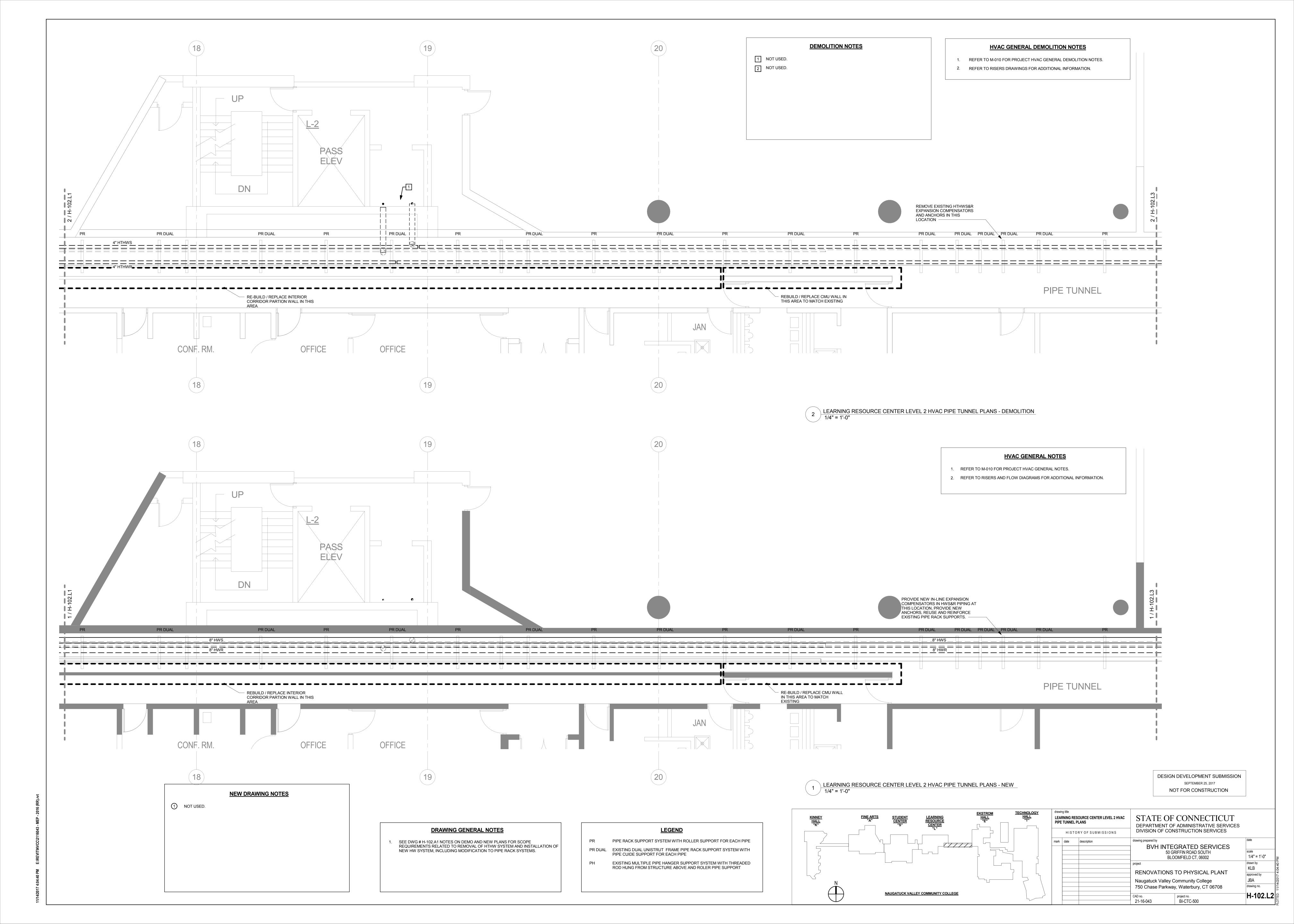


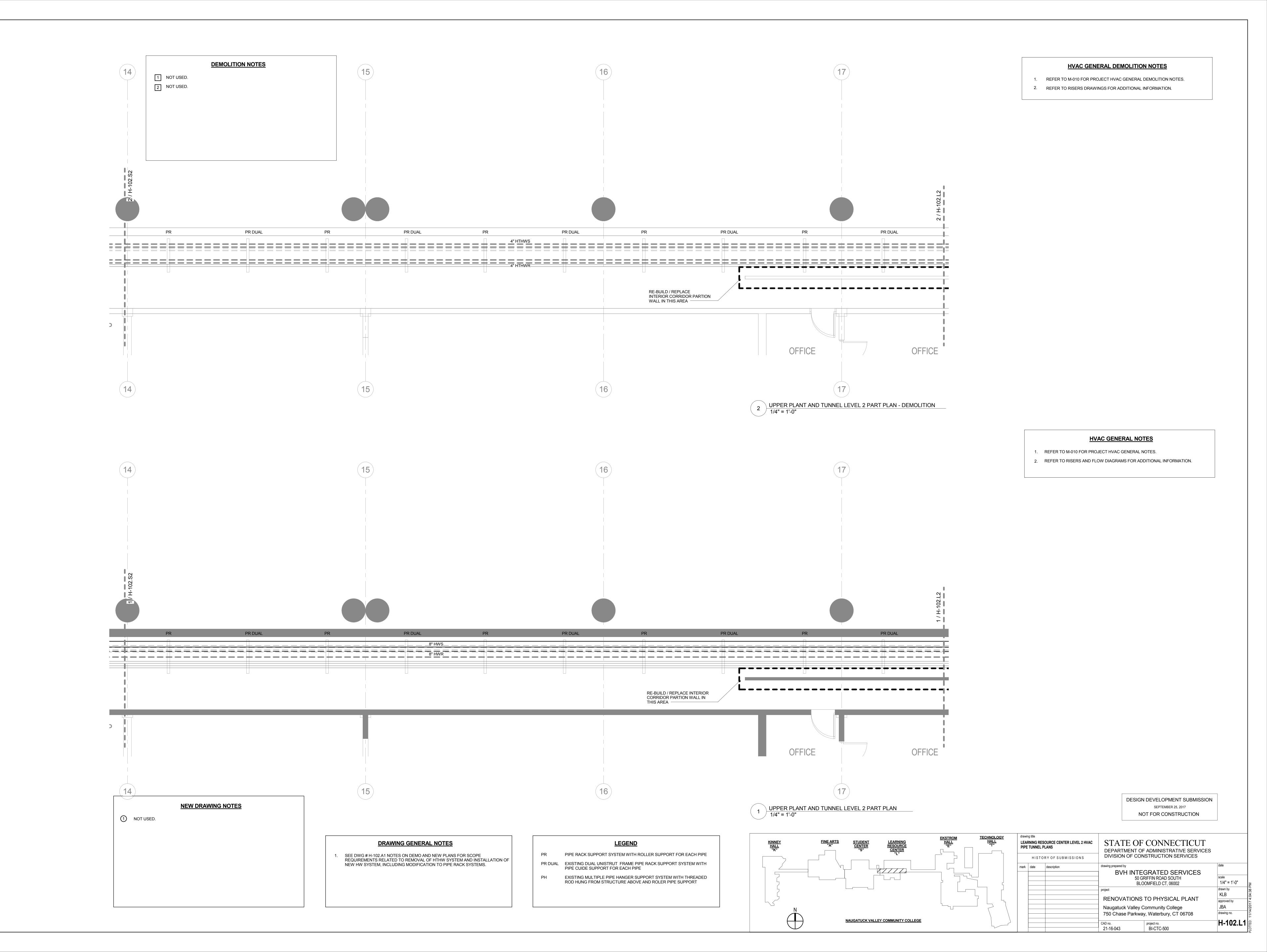
NAUGATUCK VALLEY COMMUNITY COLLEGE

NOT FOR CONSTRUCTION LEARNING RESOURCE CENTER LEVE 3 HVAC PLANS STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES HISTORY OF SUBMISSIONS BVH INTEGRATED SERVICES
50 GRIFFIN ROAD SOUTH
BLOOMFIELD CT, 06002 1/4" = 1'-0" Author approved by RENOVATIONS TO PHYSICAL PLANT Checker Naugatuck Valley Community College 750 Chase Parkway, Waterbury, CT 06708 drawing no. H-103.L project no. BI-CTC-500 CAD no. 21-16-043

DESIGN DEVELOPMENT SUBMISSION SEPTEMBER 25, 2017







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290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Student Center

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63261

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for the Student Center at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

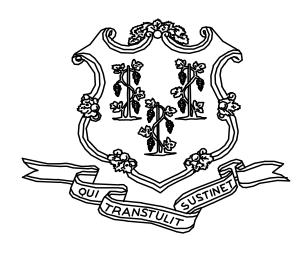
Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Student Center NVCC

ASBESTOS INSPECTION REPORT

STUDENT CENTER NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63261 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 19, 2017

Table of Contents

SECTION

1.0	INTRODUCTION

- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a pre-renovation inspection at the Student Center located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 29, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included pipe fitting insulation, fiberglass pipe insulation paper/adhesive, spray-on fireproofing, gaskets, end cap sealant, penetration sealants, suspended ceiling tile, gypsum board and joint compound. Suspect materials that are inaccessible and were not sampled include gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.

- (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

- Vermiculite Debris Pile Level 2 Tunnel
- White/Gray Pipe Penetration Caulk in Wall Level 2 Tunnel

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Spray-On Fireproofing Brown
- Mudded Pipe Fitting Insulation (All Sizes, All Systems)
- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive
- Fire Stop Sealant
- Gray Penetration Caulk
- Duct Sealant
- Gypsum Board
- Joint Compound White

- 2'x 2' Suspended Ceiling Tile Coral Pattern
- 2'x 2' Suspended Ceiling Tile Pinholes
- 2'x 4' Suspended Ceiling Tile Fissured
- Expansion Joint Caulk

Spray-On Fireproofing – Brown was identified to contain Vermiculite.

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

Duct Gasket Putty – Tan could possibly be found on duct work throughout.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE STUDENT CENTER

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112917-SC-1A	Level 2 Tunnel	Mudded Pipe Fitting Insulation (CHW Return)	ND	-
112917-SC-1B	Level 2 Tunnel	Mudded Pipe Fitting Insulation (CHW Supply)	ND	-
112917-SC-1C	Level 2 Tunnel	Mudded Pipe Fitting Insulation (CHW Supply 8")	ND	-
112917-SC-2A	Level 2 Tunnel	Mudded Pipe Fitting Insulation (HW Supply)	ND	-
112917-SC-2B	Level 2 Tunnel	Mudded Pipe Fitting Insulation (HW Return)	ND	-
112917-SC-2C	Level 2 Tunnel	Mudded Pipe Fitting Insulation (HW Return)	ND	-
112917-SC-3A	A409/S407	Spray-On Fireproofing Insulation –Brown	ND	-
112917-SC-3B	A409/S407	Spray-On Fireproofing Insulation –Brown	ND	-
112917-SC-4A	Level 2 Tunnel	White End Cap Sealant	ND	-
112917-SC-4B	A409/S407	White End Cap Sealant	ND	-
112917-SC-5A	A409/S407	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112917-SC-5B	Level 2 Tunnel	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
112917-SC-6A	Level 2 Tunnel	Pipe Penetration Calk Gray/White (CHW Supply)	5	Chrysotile
112917-SC-6B	Level 2 Tunnel	Pipe Penetration Calk Gray/White (HW Return)	5	Chrysotile
112917-SC-7A	A409/S407	4" Red Cove Base	ND	-
112917-SC-8A	A409/S407	Tan Adhesive for 4" Red Cove Base	ND	-
112917-SC-9A	S402	2' X 4' Suspended Ceiling Tile – Fissured	ND	-
112917-SC-9B	S402	2' X 4' Suspended Ceiling Tile – Fissured	ND	-
112917-SC-10A	Hall at A409/S407	2' X 2' Suspended Ceiling Tile – Pinholes	ND	-
112917-SC-10B	Hall at A409/S407	2' X 2' Suspended Ceiling Tile – Pinholes	ND	

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE STUDENT CENTER

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
112917-SC-11A	Hall at S403	2' X 2' Suspended Ceiling Tile – Coral Pattern	ND	-
112917-SC-11B	Hall at S403	2' X 2' Suspended Ceiling Tile – Coral Pattern	ND	-
112917-SC-12A	S402	12" x 12" Gray Mottled Floor Tile	ND	-
112917-SC-12B	S402	12" X 12" Gray Mottled Floor Tile	ND	-
112917-SC-13A	S402	Black Mastic for 12" Gray Mottled Floor Tile	ND	-
112917-SC-14A	A409/S407	Gypsum Board	ND	-
112917-SC-15A	A409/S407	Joint Compound – White	ND	-
112917-SC-16A	A409/S407	Green Duct Seam Sealant	ND	-
112917-SC-16B	A409/S407	Green Duct Seam Sealant	ND	-
112917-SC-17A	A409/S407	Gray Pipe Penetration Caulk	ND	-
112917-SC-18A	Level 2 Tunnel	Red Fire Stop	ND	-
112917-SC-19A	A409/S407	Gasket at Pressure Valve Release	ND	-
112917-SC-20A	Level 2 Tunnel	Yellow Expansion Joint Caulk	ND	-
112917-SC-20B	Level 2 Tunnel	Yellow Expansion Joint Caulk	ND	-
112917-SC-21A	Level 2 Tunnel	Vermiculite Debris Pile	ACM	Libby Amphibole

ND = None Detected

ACM = Asbestos Containing Material

HW = Hot Water CHW = Chilled Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS



Attention: Ed Fennell

EMSL Analytical, Inc.

ATC Group Services LLC

290 Roberts Street

Suite 301

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com **EMSL Order:** 241705183 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Phone: (860) 282-9924

Fax: (860) 282-9826

Received Date: 12/06/2017 4:35 PM

Analysis Date: 12/08/2017 - 12/09/2017

East Hartford, CT 06108 Collected Date: 11/30/2017

Project: 2257317033/NYCC-STUDENT CENTER, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	<u>stos</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112917-SC-1A 241705183-0001	Level 2 tunnel - mudded pipe fitting- CHW return	Gray Fibrous Homogeneous	30% Min. Wool	70% Non-fibrous (Other)	None Detected
112917-SC-1B	Level 2 tunnel - mudded pipe fitting-	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705183-0002	CHW supply	Homogeneous			
112917-SC-1C	Level 2 tunnel - mudded pipe fitting-	Gray Fibrous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
241705183-0003	CHW supply 8"	Homogeneous	050/ Min 14/1	OFN/ New Shares (Others)	News Between
112917-SC-2A 241705183-0004	Level 2 tunnel - mudded pipe fitting- HW supply	Gray Fibrous Homogeneous	35% Min. Wool	65% Non-fibrous (Other)	None Detected
	Level 2 tunnel -	-	35% Min. Wool	65% Non-fibrous (Other)	None Detected
112917-SC-2B 241705183-0005	mudded pipe fitting- HW return	Gray Fibrous Homogeneous	35% WIII. WOOI	03% Noti-fibious (Other)	None Detected
112917-SC-2C	Level 2 tunnel - mudded pipe fitting-	Gray Fibrous	10% Cellulose 35% Min. Wool	55% Non-fibrous (Other)	None Detected
241705183-0006	HW return	Homogeneous			
112917-SC-3A	A409/S407 - spray on fireproofing-brown	Tan Fibrous	25% Cellulose 10% Glass	10% Vermiculite 55% Non-fibrous (Other)	None Detected
241705183-0007		Homogeneous			
112917-SC-3B	A409/S407 - spray on fireproofing-brown	Tan Fibrous	30% Cellulose 15% Glass	5% Vermiculite 50% Non-fibrous (Other)	None Detected
241705183-0008		Homogeneous			
112917-SC-4A	Level 2 tunnel - white end cap sealant	White/Yellow Fibrous	3% Cellulose 15% Glass	82% Non-fibrous (Other)	None Detected
241705183-0009		Homogeneous			
112917-SC-4B	A409/S407 - white end cap sealant	White Fibrous	25% Glass	75% Non-fibrous (Other)	None Detected
241705183-0010		Homogeneous			
112917-SC-5A 241705183-0011	A409/S407 - fiberglass pipe insulation paper/adhesive	White/Silver Fibrous Homogeneous	75% Cellulose 20% Glass	5% Non-fibrous (Other)	None Detected
112917-SC-5B	Level 2 tunnel -	White/Silver	65% Cellulose		None Detected
241705183-0012	fiberglass pipe insulation paper/adhesive	Fibrous Homogeneous	35% Glass		
112917-SC-6A	Level 2 tunnel - pipe penetration caulk	White Non-Fibrous		95% Non-fibrous (Other)	5% Chrysotile
241705183-0013	gray/white- CHW supply	Homogeneous			
112917-SC-6B	Level 2 tunnel - pipe penetration caulk	Gray Non-Fibrous	5% Glass	90% Non-fibrous (Other)	5% Chrysotile
241705183-0014	gray/white- HW return	Homogeneous			
112917-SC-7A	A409/S407 - 4" red cove base	Gray/Red Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0015		Homogeneous			

Initial report from: 12/09/2017 14:58:35

EMSL Order: 241705183 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos	<u>s</u>	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112917-SC-8A	A409/S407 - tan adhesive for 4" red	Yellow Non-Fibrous	2% Cellulose	98% Non-fibrous (Other)	None Detected
241705183-0016	cove base	Homogeneous			
112917-SC-9A	S402 - 2'x4' suspended ceiling	Gray Fibrous	40% Cellulose 40% Min. Wool	10% Perlite 10% Non-fibrous (Other)	None Detected
241705183-0017	tile-fissured	Homogeneous			
112917-SC-9B	S402 - 2'x4' suspended ceiling	Gray Fibrous	40% Cellulose 40% Min. Wool	10% Perlite 10% Non-fibrous (Other)	None Detected
241705183-0018	tile-fissured	Homogeneous			
112917-SC-10A	Hall at A409/S407 - 2'x2' suspended	Gray Fibrous	40% Cellulose 40% Min. Wool	10% Perlite 10% Non-fibrous (Other)	None Detected
241705183-0019	ceiling tile-pinholes	Homogeneous			
112917-SC-10B	Hall at A409/S407 - 2'x2' suspended	Gray Fibrous	40% Cellulose 40% Min. Wool	10% Perlite 10% Non-fibrous (Other)	None Detected
241705183-0020	ceiling tile-pinholes	Homogeneous			
112917-SC-11A	Hall at S403 - 2'x2' suspended	White Fibrous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
241705183-0021	ceiling-coral pattern	Homogeneous	050/ Min. 14/	450/ Non-Share (Otto)	News Date 6 3
112917-SC-11B 241705183-0022	Hall at S403 - 2'x2' suspended	Gray Fibrous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
	ceiling-coral pattern	Homogeneous		4000/ Nam Shares (Ottom)	Nama Data da d
112917-SC-12A 241705183-0023	S402 - 12"x12" gray mottled floor tile	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
	0.400 400 400			4000/ New Shares (Others)	News Datastad
112917-SC-12B 241705183-0024	S402 - 12"x12" gray mottled floor tile	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
	0.400	Homogeneous	FO/ Oallalaaa	OFN/ New Shares (Others)	News Datastad
112917-SC-13A 241705183-0025	S402 - black mastic for 12" gray mottled ft	Black Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
112917-SC-14A	A409/S407 - gypsum	Gray/Tan	10% Cellulose	90% Non-fibrous (Other)	None Detected
241705183-0026	board	Fibrous Homogeneous	10 / O Cellulose	30 % Non-librous (Other)	None Detected
112917-SC-15A	A409/S407 - joint compound-white	White Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0027	compound-write	Homogeneous			
112917-SC-16A	A409/S407 - green duct seam sealant	Gray Non-Fibrous	5% Fibrous (Other)	95% Non-fibrous (Other)	None Detected
241705183-0028		Homogeneous			
112917-SC-16B	A409/S407 - green duct seam sealant	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0029		Homogeneous			
112917-SC-17A	A409/S407 - gray pipe penetration caulk	Gray Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0030		Homogeneous			
112917-SC-18A	Level 2 tunnel - red fire stop	Red Non-Fibrous	10% Glass	90% Non-fibrous (Other)	None Detected
241705183-0031		Homogeneous			
112917-SC-19A	A409/S407 - gasket at pressure valve	Black Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0032	release	Homogeneous			
112917-SC-20A	Level 2 tunnel - yellow expansion joint caulk	Tan Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0033		Homogeneous			
112917-SC-20B	Level 2 tunnel - yellow expansion joint caulk	Yellow Non-Fibrous		100% Non-fibrous (Other)	None Detected
241705183-0034		Homogeneous			

Initial report from: 12/09/2017 14:58:35



EMSL Order: 241705183

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Analyst(s)

Lauren Buffone (22) Quetcy Castro Romero (12) m hm

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/09/2017 14:58:35



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4, Wallingford, CT 06492

203-284-5948 / (203) 284-5978 Phone/Fax:

wallingfordlab@emsl.com

http://www.EMSL.com

Ed Fennell ATC Group Services LLC 290 Roberts Street Suite 301 East Hartford, CT 06108

Phone: (860) 282-9924 Fax: (860) 282-9826 Received: 12/06/17 4:35 PM Analysis Date: 12/9/2017 Collected: 11/30/2017

EMSL Order:

CustomerID:

CustomerPO:

ProjectID:

241705183

17-10133-0001

ATCE54

Project: 2257317033/NYCC-STUDENT CENTER, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Qualitative Asbestos Analysis by Transmission Electron Microscopy (TEM) and Filtration Technique

Sample	Description	TEM Result	Notes
112917-SC-21A 241705183-0035	Level 2 tunnel - vermiculite debris pile across from C207	Libby Amphibole	

Analyst(s) Lauren Buffone (1)

Lauren Brennan, Asbestos Lab Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This is a qualitative screen only. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT

Initial report from 12/09/2017 14:58:33

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page / of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

ATC Inspector: Scott Jahnson	JOHNSON		Client Name:	Jame: c7bcs)CS			
Accreditation No.: 000297	29.7		Project	No./Task No.:	Project No./Task No.: 2257317033	3		
Survey Date: 11/30/17	2		Project	Project Manager: Ed Fenell	d Fenell			
Signature:			Rednes	Requested Completion Date:	on Date:			
Lab Name:	Requested turnaround time	ne (circle)	3 HR 6	6 HR 24 HR	48 HR (3 DY)	5 DY	No. Samples Collected	ollected 35
Building: NYCC - Student Center		Address: 75	No Chase	Below.	Waterbrass	13	474	
Location	Material Description	ř	Type S TSI MISC	Estimated Quantity	Friable Y/N		Sample of (homogeneous material)	Field Number
Lavel a Twore	Muddled Pipe Fithing CHIN Suph	CHW Rohum CHW Suphi	731		>		2, 3	112917-5C-11A
7	Mudded Pige Fitting - CHU	con such 8"	7.81	,	>		~	71-
Level 2 Travel	Muddled Pige Fiths - HW Supply		757		X		2 3	- 24 - 24
> >	Muddled Ripe FABITY - HW	-	751		入		<u>س</u>	Na -
A409/5407 A409/5467	Jeryon Freeposting- Brown		5		٨		2,	-34
Level 2 Tuncel	While Endup Scalant		ξ		Z		ء م	44.
Level 2 Tuncel	Fibergious Ope Including Poper/Adhesine	dhesm	٤		2		70	S. S.
Level 2 Turnel	Pipe Penetration Could Gray/White	White Red	1		2		۵- م	J-68

Comments:

Notes Damage Factors:

Disturbance Factors:

Proximity (<1ft- 1-6ft- >6ft)

Relinquished By/Date: Relinquished By/Date:

Water (extensive-moderate-slight-Physical (sig dmg-dmg-no dmg)

Accessibility (within reach-barely reachable)-not reachable)
Air conduits (air plenum - air shaft - elevator shaft - duct) Ventilation (yes-no; if yes, type)

Air movement (high-moderate-low)

Deterioration (heavy-moderate-light-none)

<u>Vibration</u> (gym-music rm-auditorium-mechanical rm-elevator-other)

Barriers (perm airtight-enclosed-encapsulated) Friability (yes-no; hard-mod-soft surface)

Lexture (rough-pitted-moderate-smooth)

Received By/Date: Received By/Date:

12/1/17

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

· GEOTECHNICAL

· MATERIALS TESTING

BULK SAMPLE LOG

Page 2 of 3

290 Roberts Street, Suite 301

East Harfford, CT 06108
(860) 282-9924 Fax: (860) 282-9826

ATC Inspector: JCoff JoHwSow	Non	Client Name:	lame: cTbcs	CS			
Accreditation No.: 000,24,7		Project	No./Task No.:	Project No./Task No.: 2257337033	3		
Survey Date: 11/30/17		Project	Project Manager: Ed Fone!	1 Fanell			
Signature:		Rednes	Requested Completion Date:	Date:			
Lab Name:	Requested turnaround time (circle)	3 HR	6 HR 24 HR	48 HR (3 DY	5 DY	No. Samples Collected	ected 35
Building: NYCC - Student	Cester Address:	No Char	Beleur	Waterbon	13.	1674	
Location	Material Description	Type S TSI MISC	Estimated	Friable Y/N	SIS	Sample _of _ (homogeneous material)	Field Number
9. Level Ayog Bayon 4" Red Cove Base	ed Cove Sove	Σ		Z		× ×	113917-56-74
1409/8467 Ton D	Tan Adhesine for 4" Red Case Suse	Į	,	2		` `	\$
3402 344	2x4' Suspended Cally Tive - Fishered	ξ		X		۵,	86-
Hall of A469/5407 XXX	Hall at AYOS/18407 2x2 Suspended Celm Tile-Pinhiks	N		`		8	A01-
Hall at 8403 2/23	2/22 ' Superded Ceils Tile - Coral	ξ		`\		۵, ۵	- 119
5403	12 x12" Gray Mobiled Floor Tile	¥		2		21	A61-
.5402 Block	Black Mouse to 12" 6mg nother FT	ξ		2		`	-134
A409/8407 Gydu	Syptim Board	ξ		2		1 1	NV - 14

Comments: (Analyze by PLM)

Notes Damage Factors:

Disturbance Factors:

Physical (sig dmg-dmg-no dmg)

Ventilation (yes-no; if yes, type)
Relinquished By/Date:

Water (extensive-moderate-slightnone)
Accessibility (within reach-barely reachable-not reachable)
Air conduits (air plenum - air shaft elevator shaft - duct)

Proximity (<1ft- 1-6ft- >6ft)

Deterioration (heavy-moderate-light-none)

<u>Vibration</u> (gym-music rm-auditorium-mechanical rm-elevator-other)

Air movement (high-moderate-low)

Received By/Date:
Received By/Date:

12/1

Friability (yes-no; hard-mod-soft surface)

Barriers (perm airtight-enclosed-encapsulated)

<u>Iexture</u> (rough-pitted-moderate-smooth)

OrderID: 241705183

ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

BULK SAMPLE LOG

Page 3 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

ATC Inspector: Scott JoHwSow	JOHN	Nos	Client	Client Name: CT?	c7bcs			
Accreditation No.: 000,297	197		Projec	t No./Task No.:	Project No.Task No.: 22573,7033	3		
Survey Date: 11/30/17	2		Projec	Project Manager: Ed Fenell	d Feorell			
Signature:	1		Reque	Requested Completion Date:	in Date:			
Lab Name:	0.1	Requested turnaround time (circle)	3 HR 6	6 HR 24 HR	48 HR (3 DY	5 DY	No. Samples Collected	collected 35
Building: NYCC - Ituday Corter	5-fudens	Address:	No chase	Below.	Waterbra	13.	474	
Location		ial Description	Type S TSI MISC	Estimated Quantity	Friable Y/N	Condition SD D NE	Sample of (homogeneous material)	s Field Number
A409 S407	Tornt	Joint Compand - White	3		7		' '	112917-SC-15X
A409/8407 A409/8407	Green	Green Duct Jean Scalud	£	*	2		78	- 164
1400/ 8407	(Sray	Gray Pipe Peretration Could	¥		2		` '	A71-
Level 2 Time!	Red	Red Fre Ship	Z		2		` '	- 18A
A409/ S407	Gashe	Gastlet at Pressure Value Release	Z		2		1 1	761-
Level 2 Turnel	Yellow	Yellow Exponsion Johnst Caulk	Σ		2		2,0	-200A
Level à Tunnel	Vermi	Verniculite Debris Pile arras from	٤		X		1 1	N - 2/A

Comments: Notes Damage Factors:

Physical (sig dmg-dmg-no dmg) Proximity (<1ft- 1-6ft- >6ft) Ventilation (yes-no; if yes, type)

Relinquished By/Date: Relinquished By/Date:

Disturbance Factors:

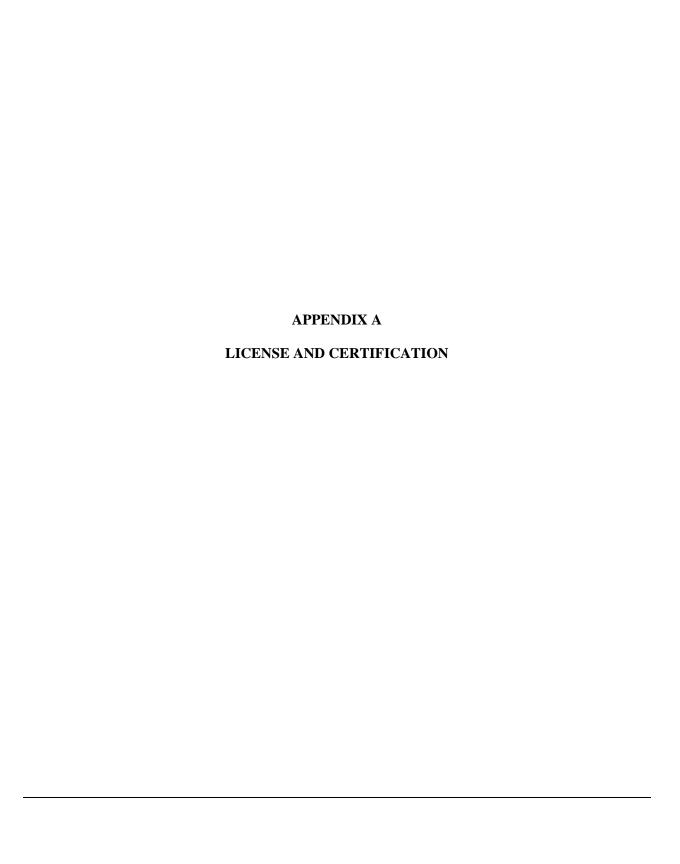
Vibration (gym-music rm-auditorium-mechanical rm-elevator-other) Air movement (high-moderate-low) Accessibility (within reach-barely reachable-not reachable)
Air conduits (air plenum - air shaft - elevator shaft - duct)

Deterioration (heavy-moderate-light-none)

Water (extensive-moderate-slight-none)

Barriers (perm airtight-enclosed-encapsulated) Friability (yes-no; hard-mod-soft surface) Texture (rough-pitted-moderate-smooth)

Received By/Date: Received By/Date:



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BECOW IS CERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

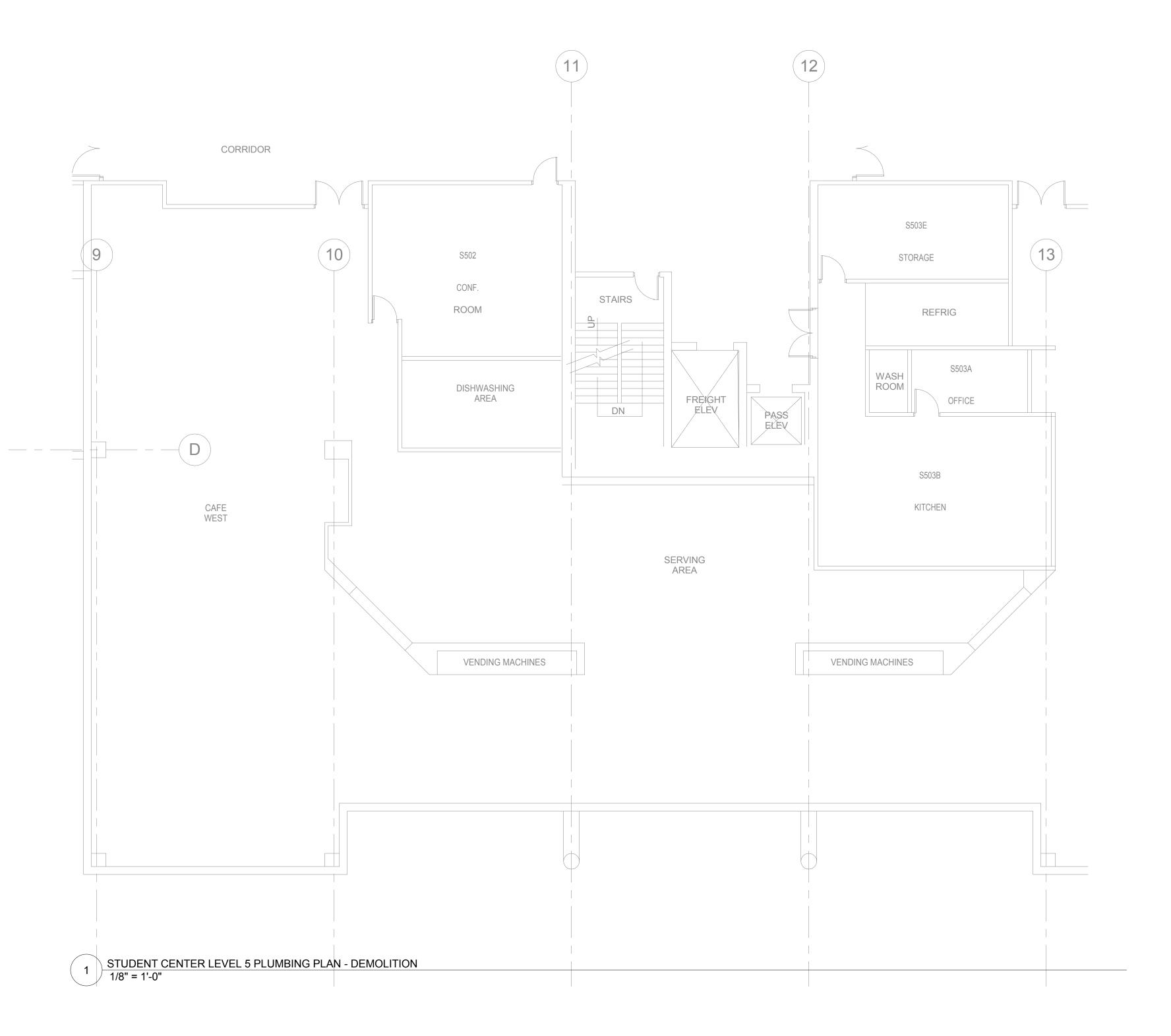
October 12, 2017 Examination Date

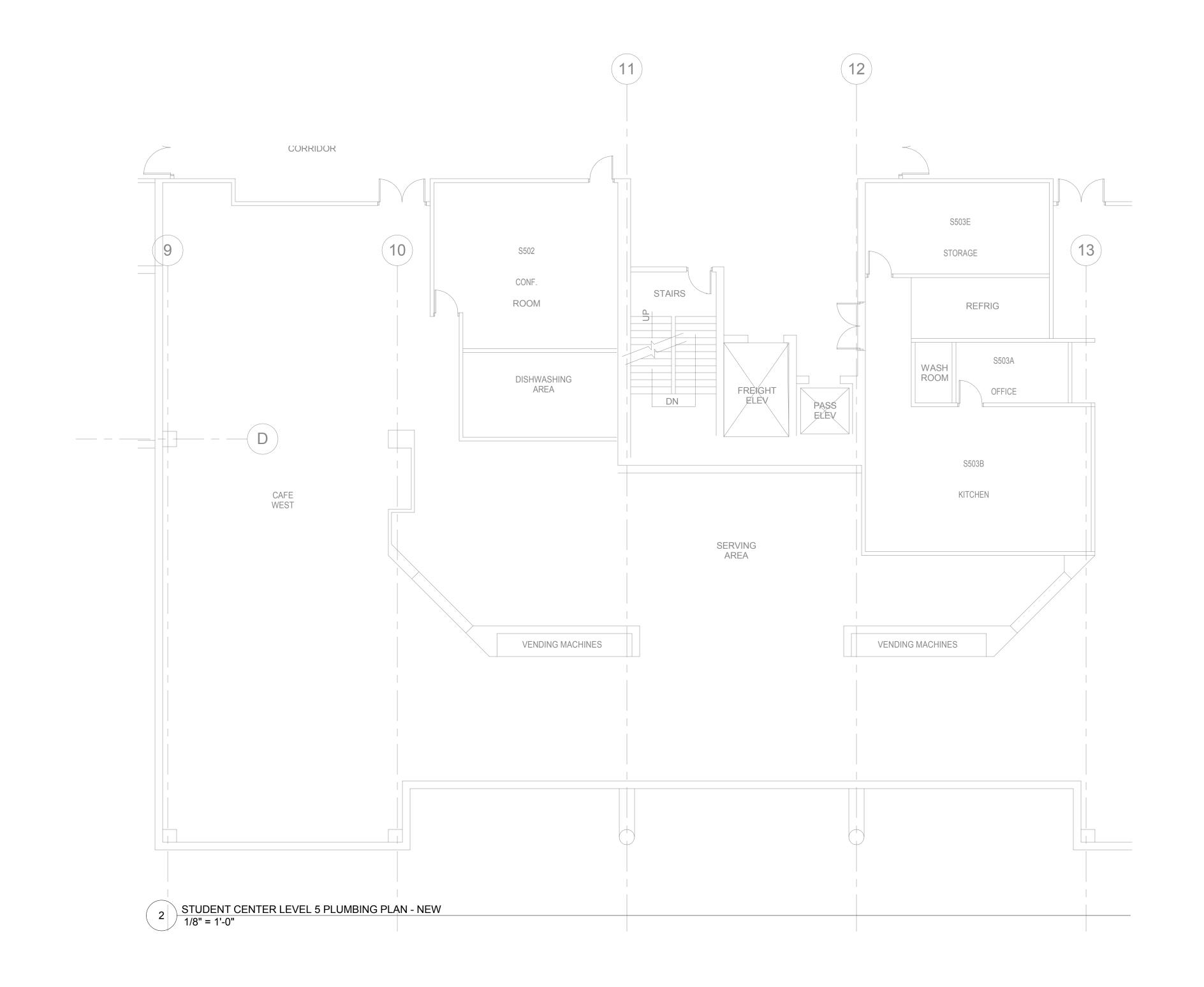
Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

Date of Course

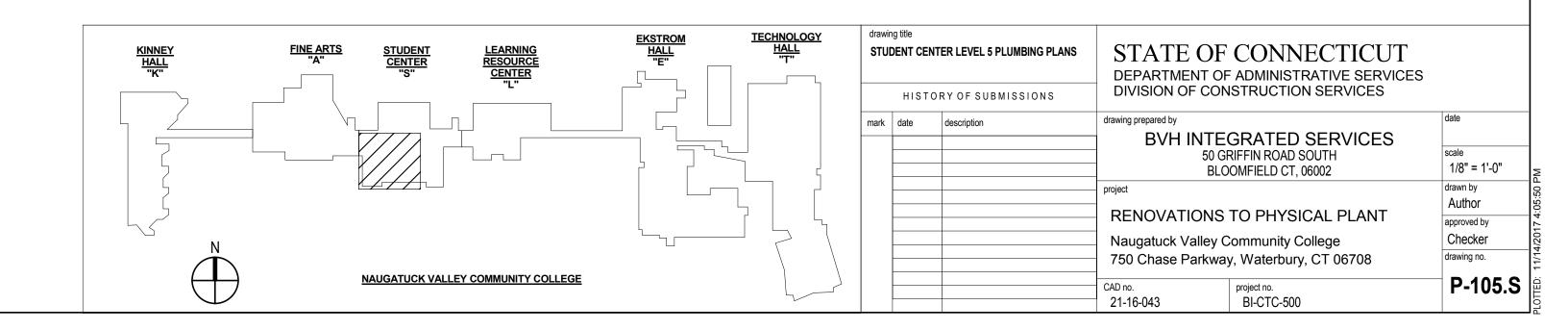
October 12, 2018
Expiration Date

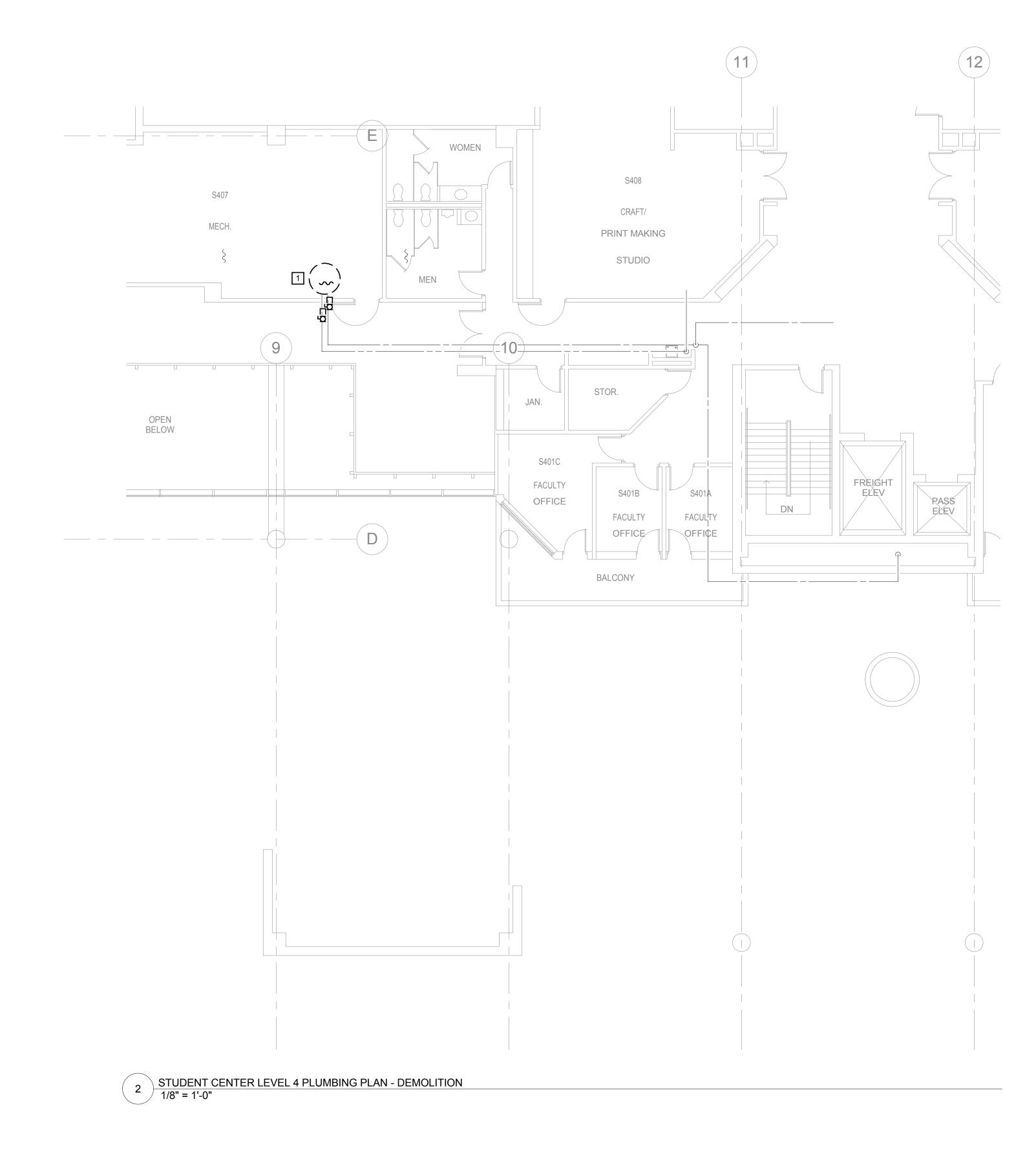






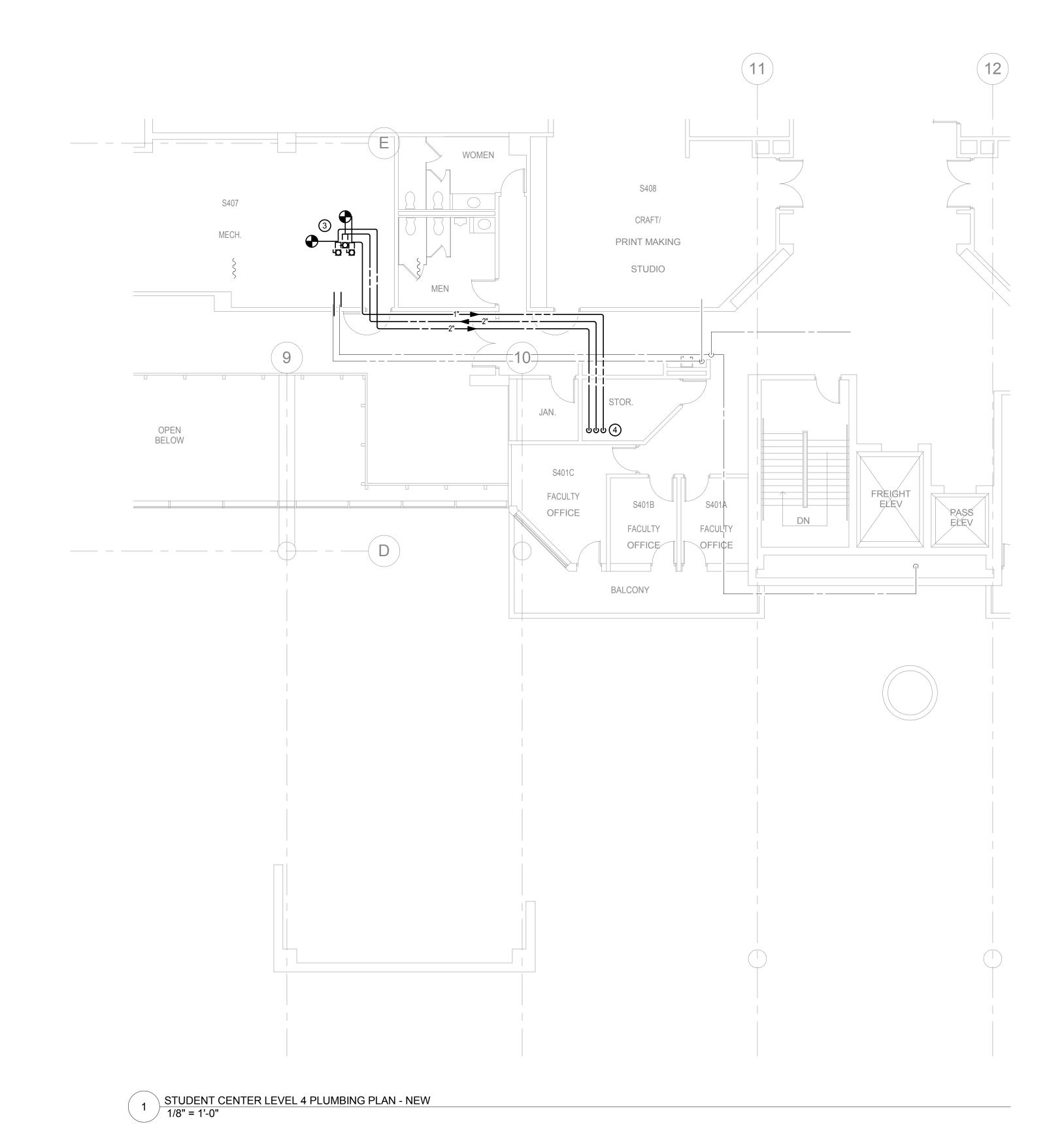
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION



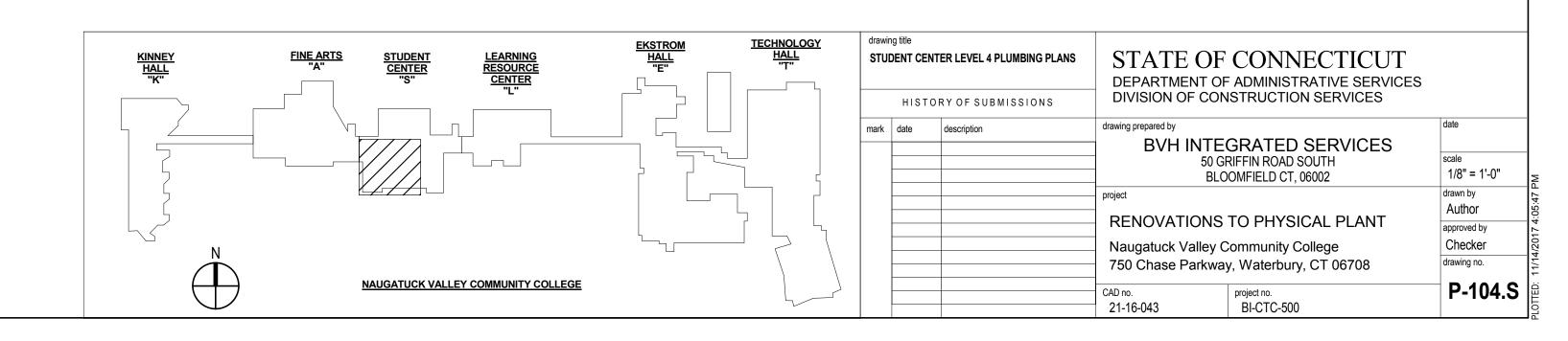


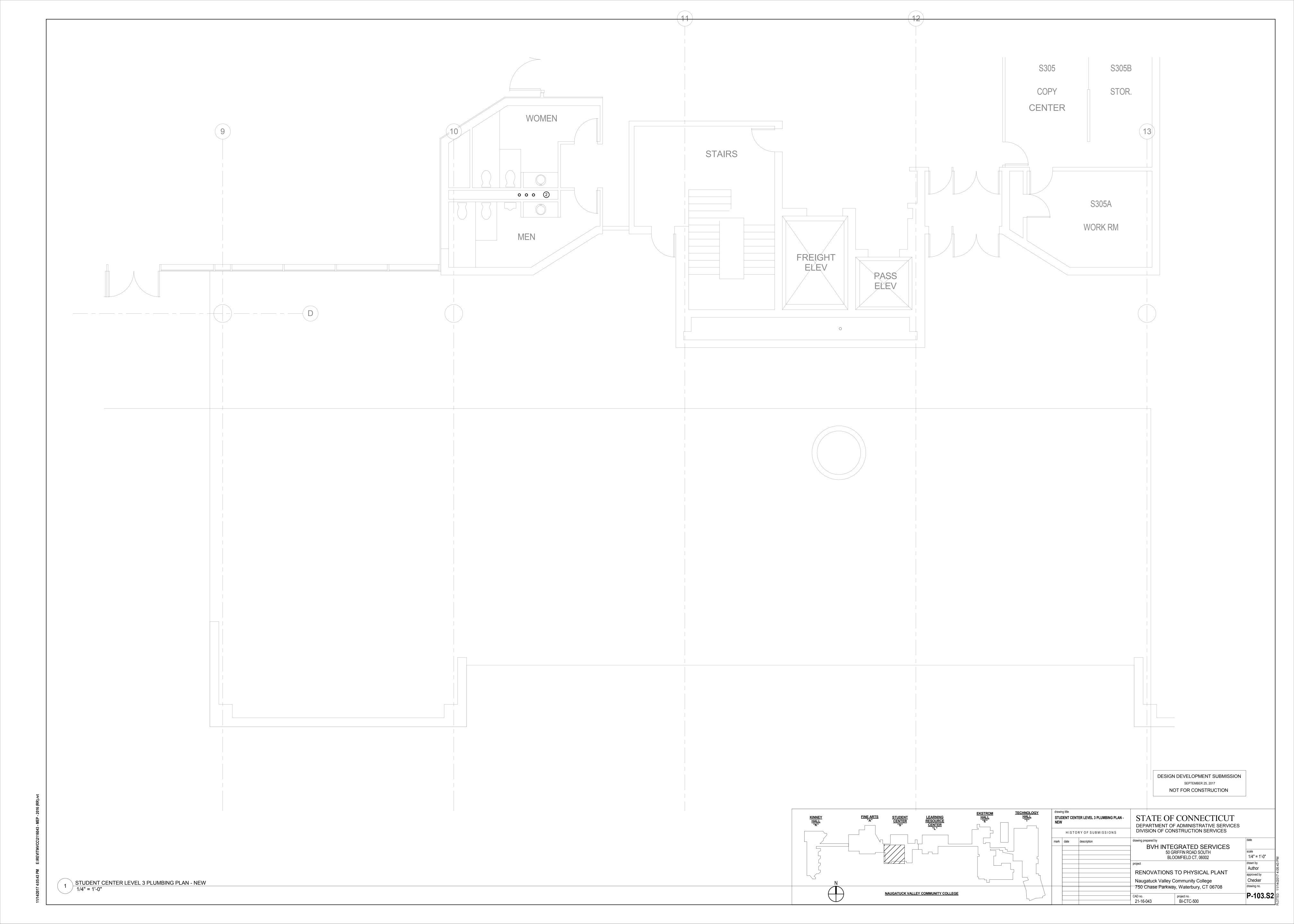
PLUMBING DEMOLITION DRAWING NOTES

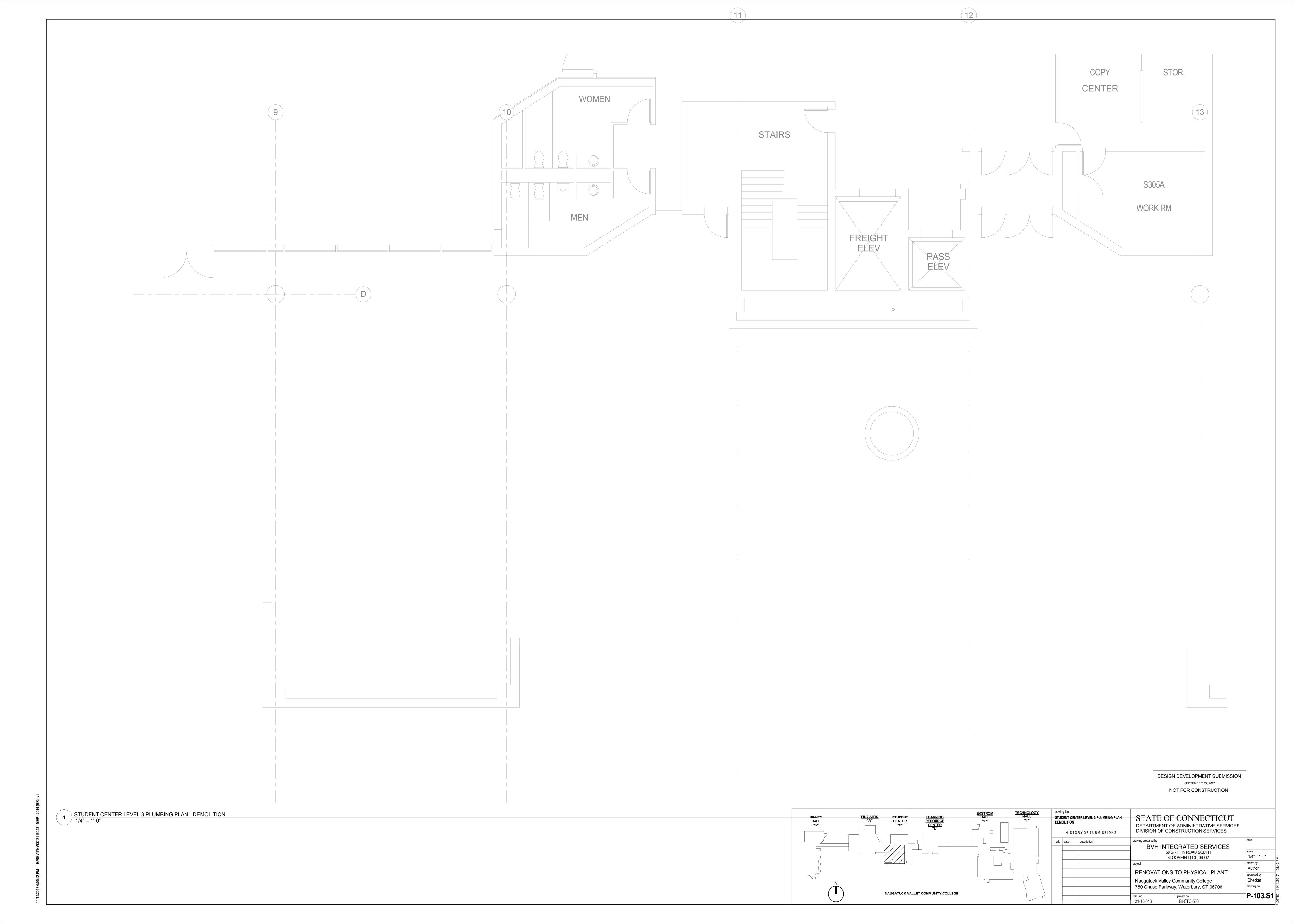
REMOVE EXISTING DOMESTIC WATER HEAT EXCHANGER AND ASSOCIATED EQUIPMENT. CUT, VALVE, AND CAP EXISTING DOMESTIC CW, HW, & HWR BACK TO OVERHEAD SPACE.

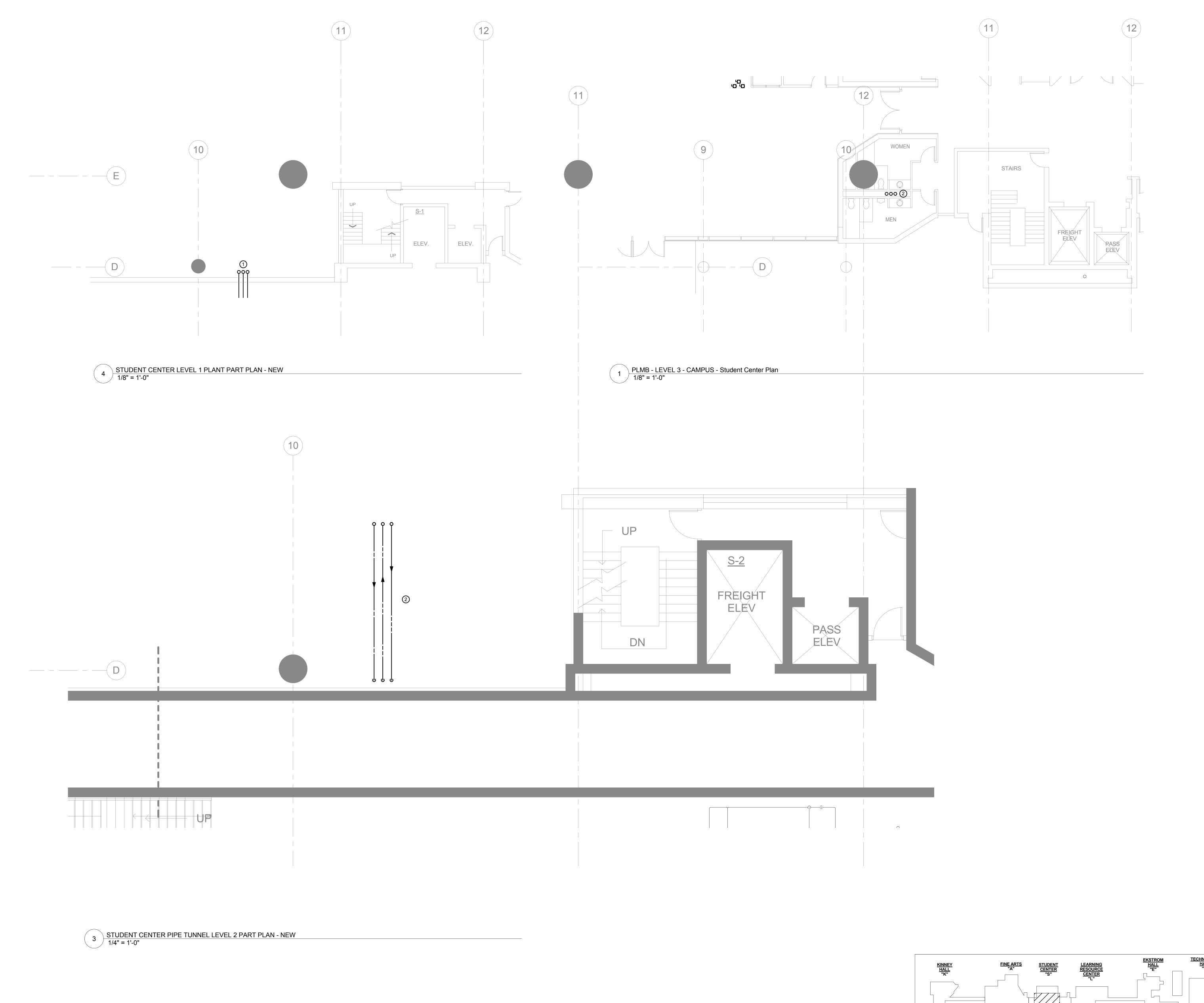


DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION









PLUMBING DRAWING NOTES

1) 2"H&CW, 1"HWR UP. REFER TO DWG #P-101.S2 FOR CONTNUATION OF PIPING.

2 2"CW, 2"HW, 2"HWR UP AND DN.

PROVIDE 2"CW, 2"HW, 1"HWR CONNECTIONS TO EXISTING. VERIFY EXACT LOCATION OF FLOOR MAINS IN FIELD.

4 2"CW, 2"HW, 1"HWR UP FROM BELOW.

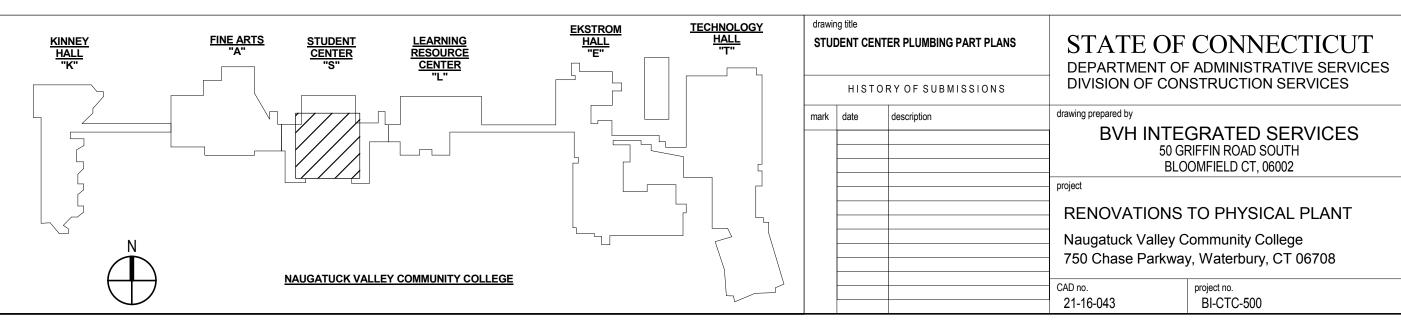
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

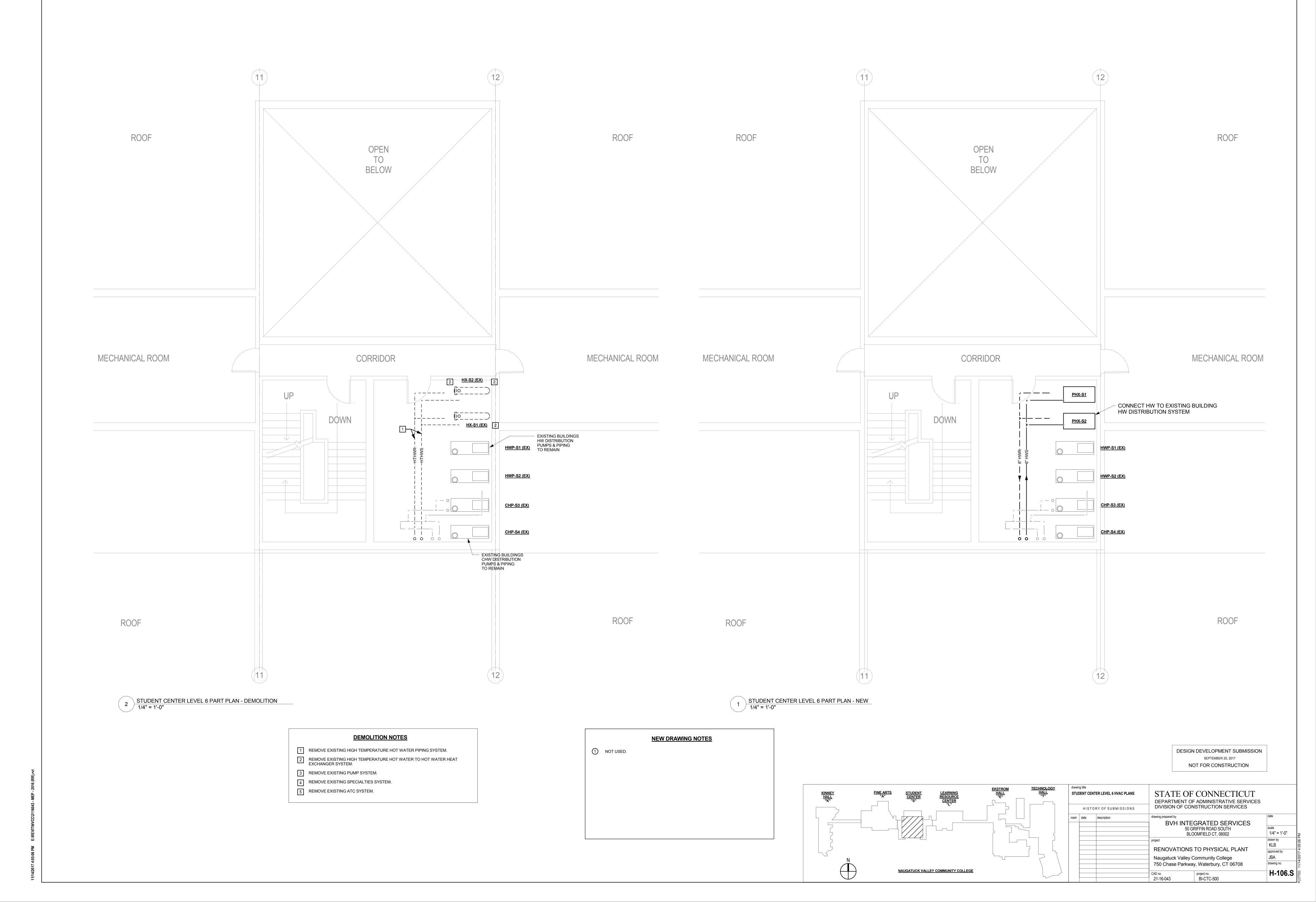
As indicated

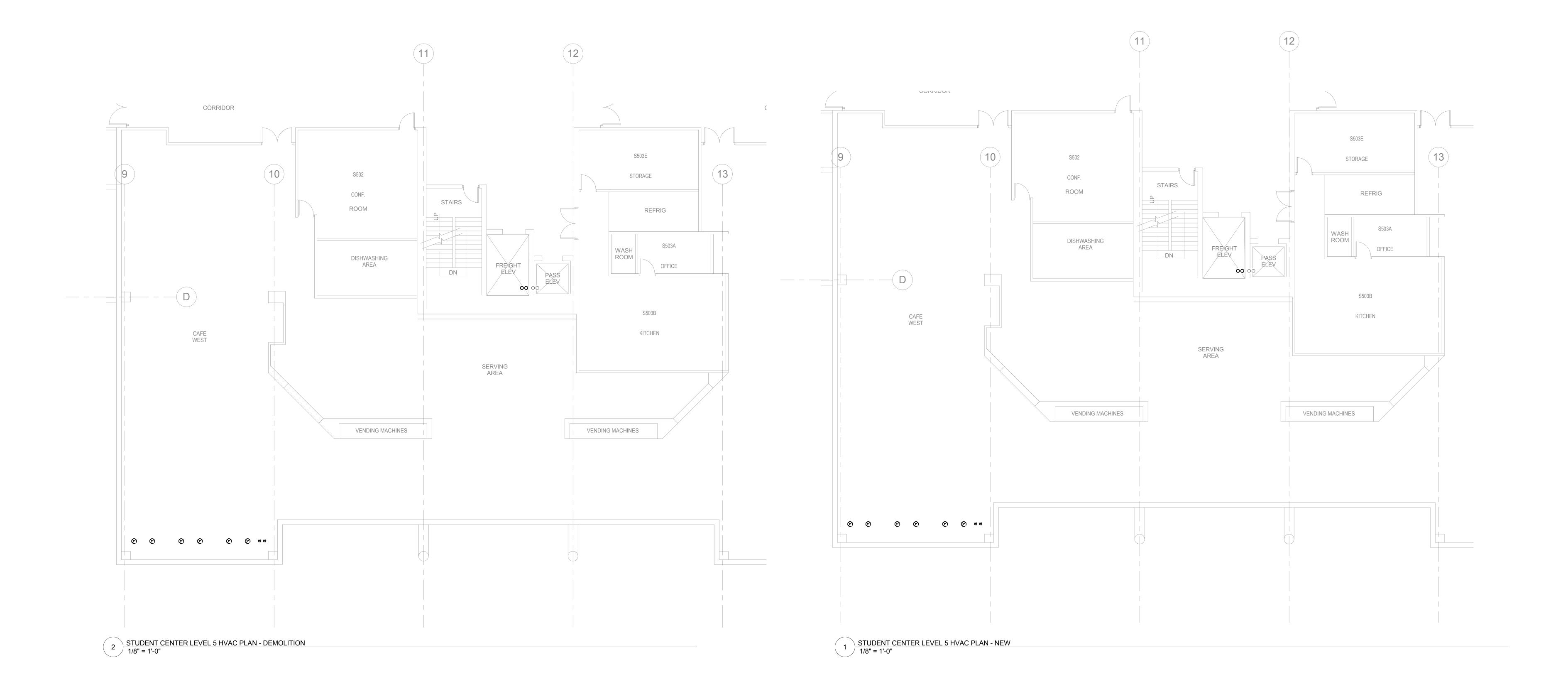
Author approved by

Checker

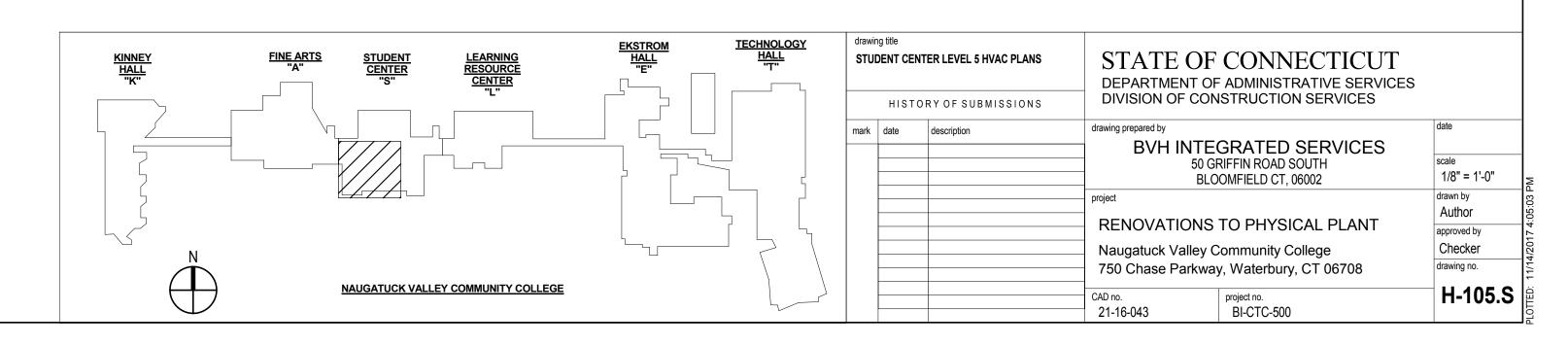
drawing no.

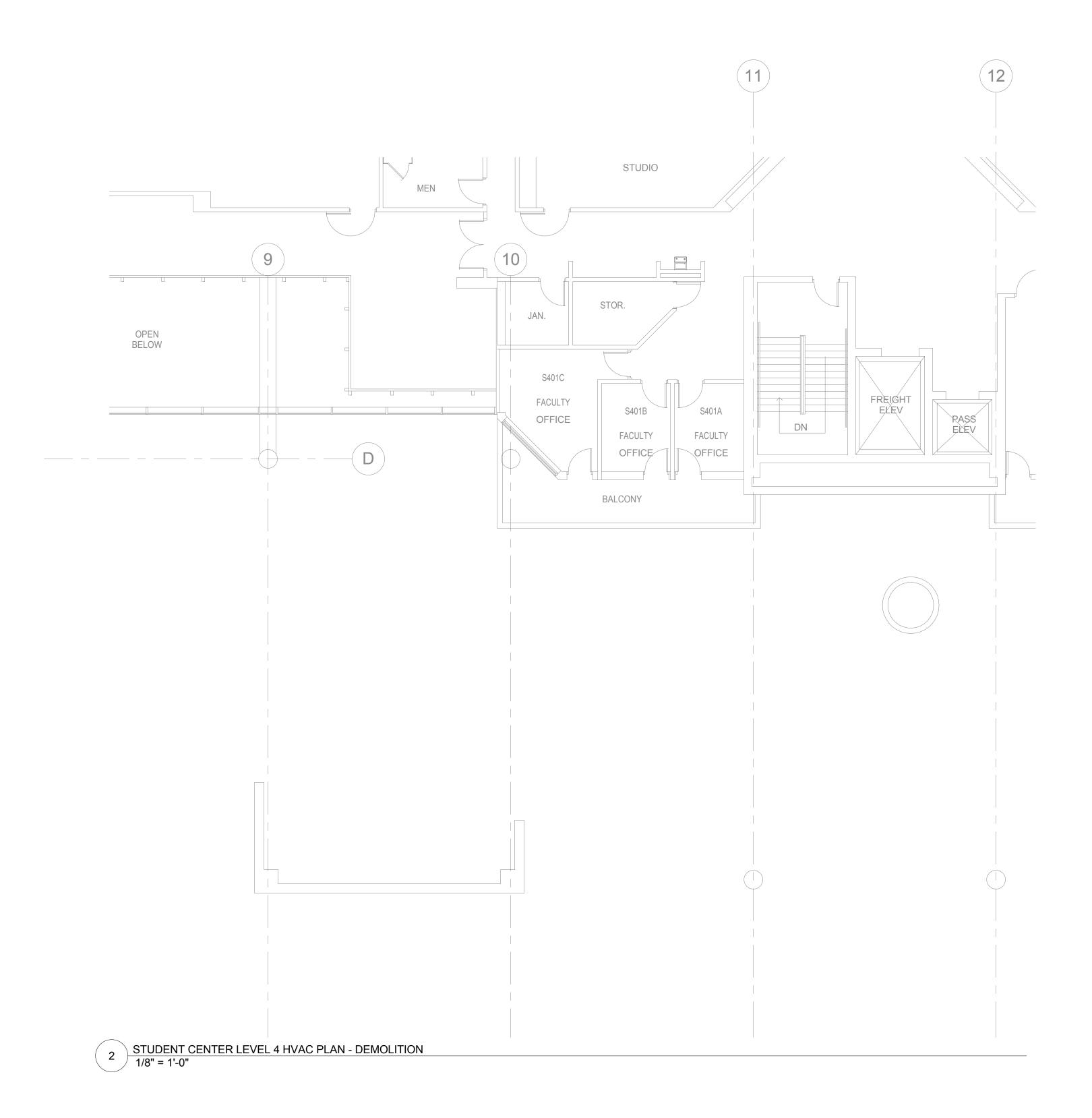


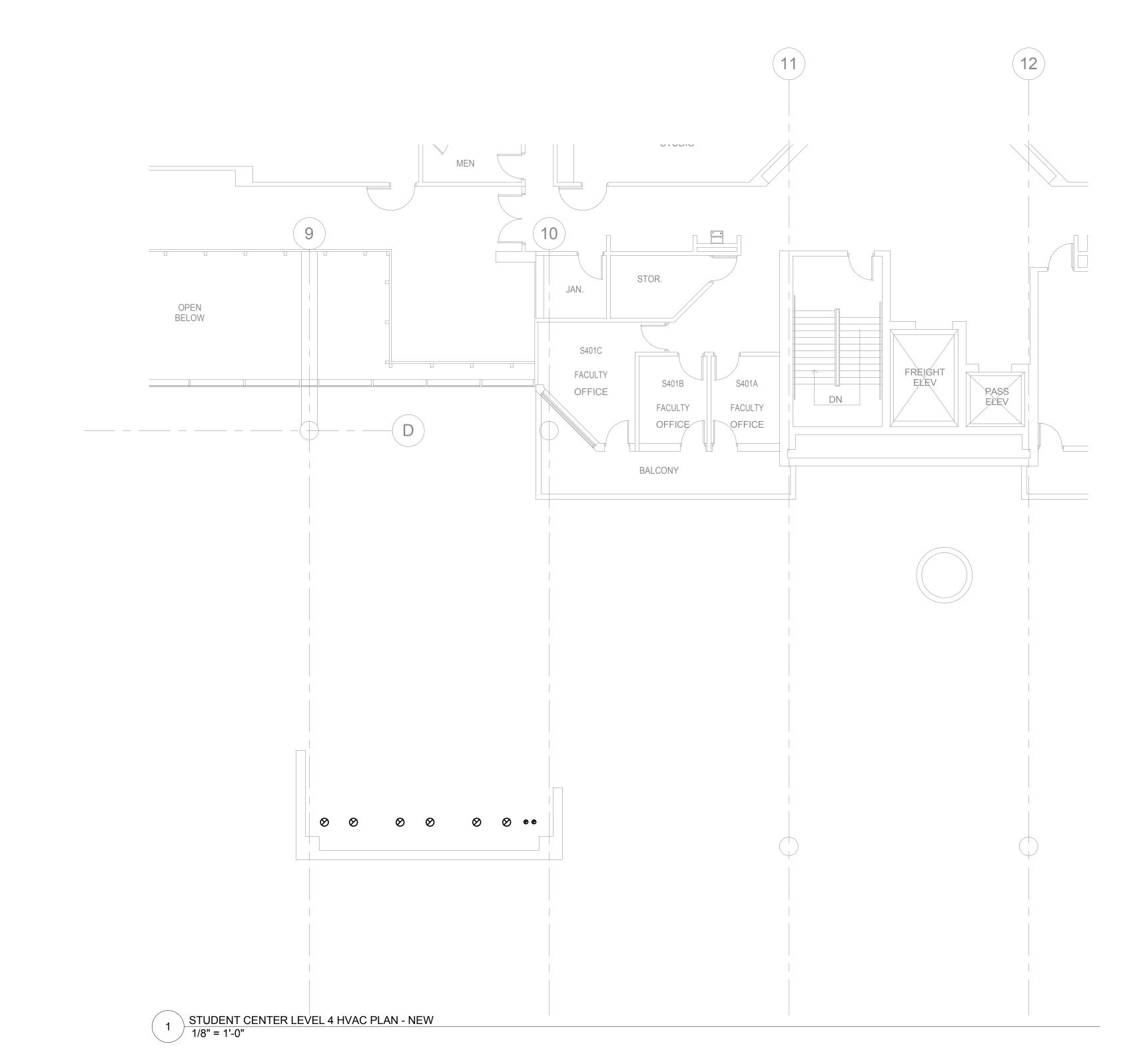




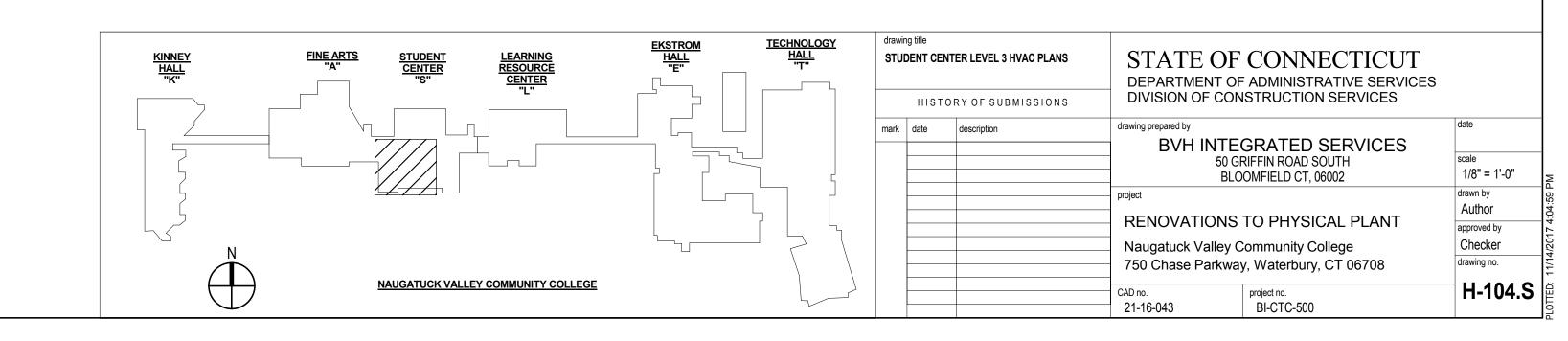
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

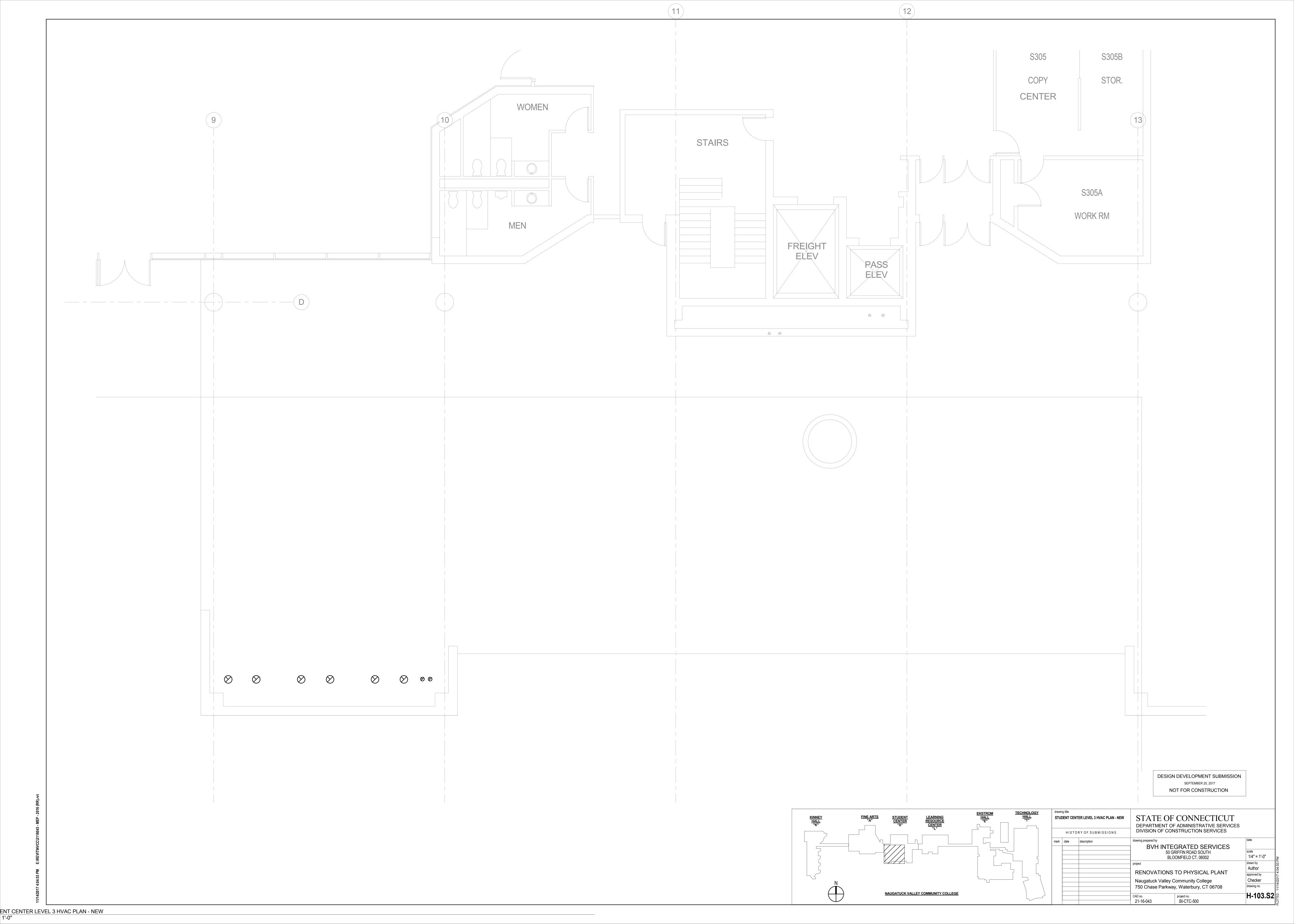


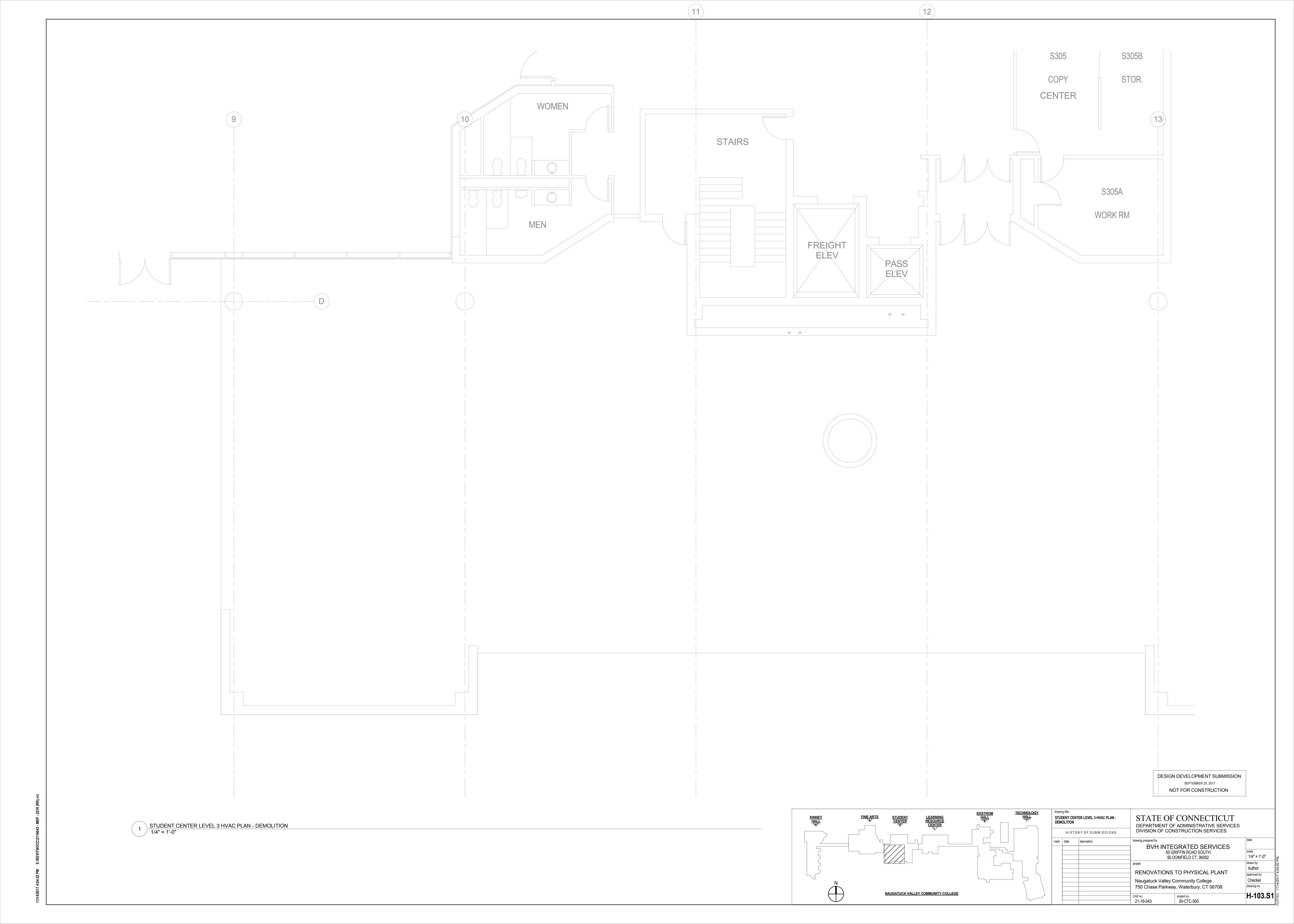


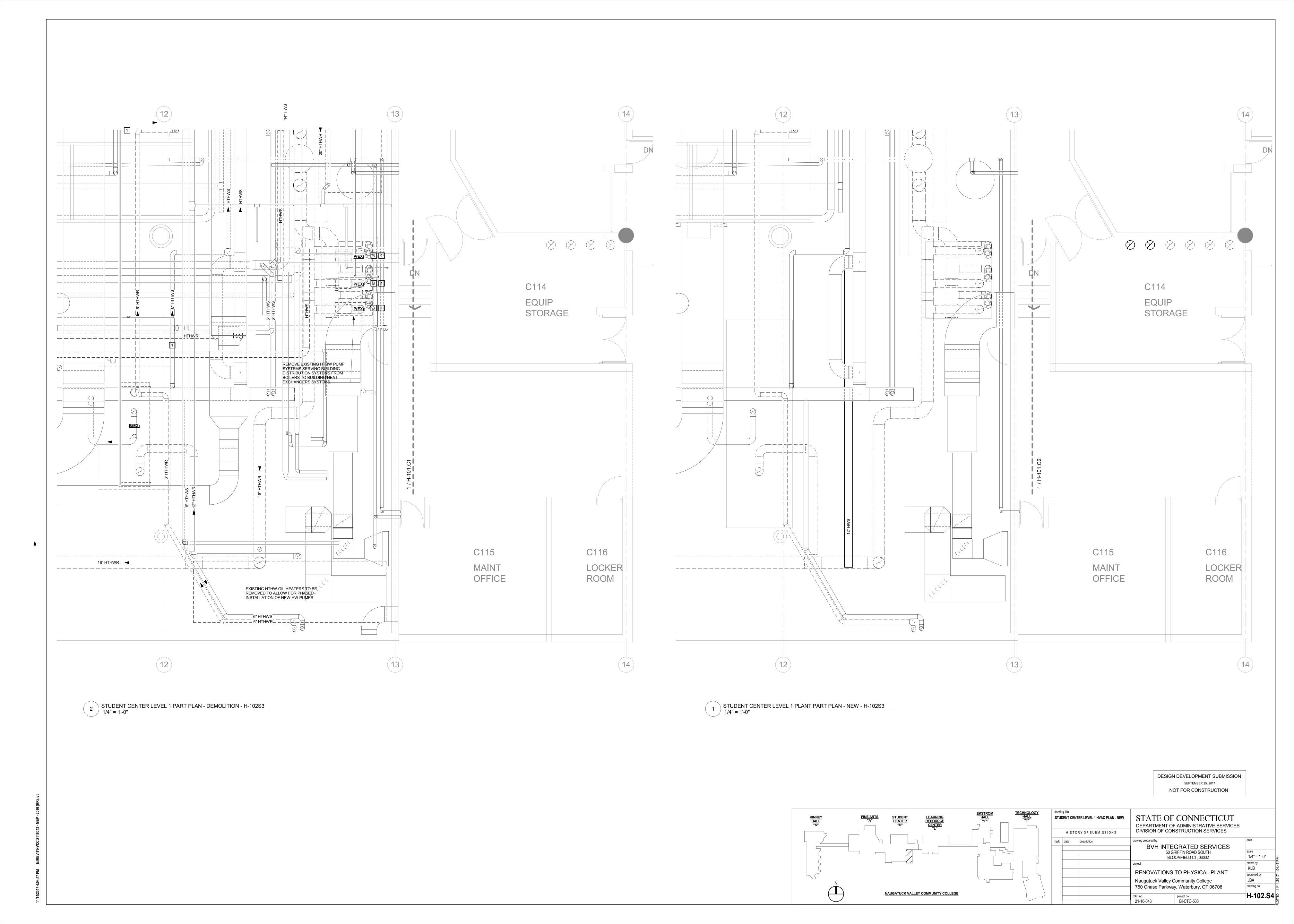


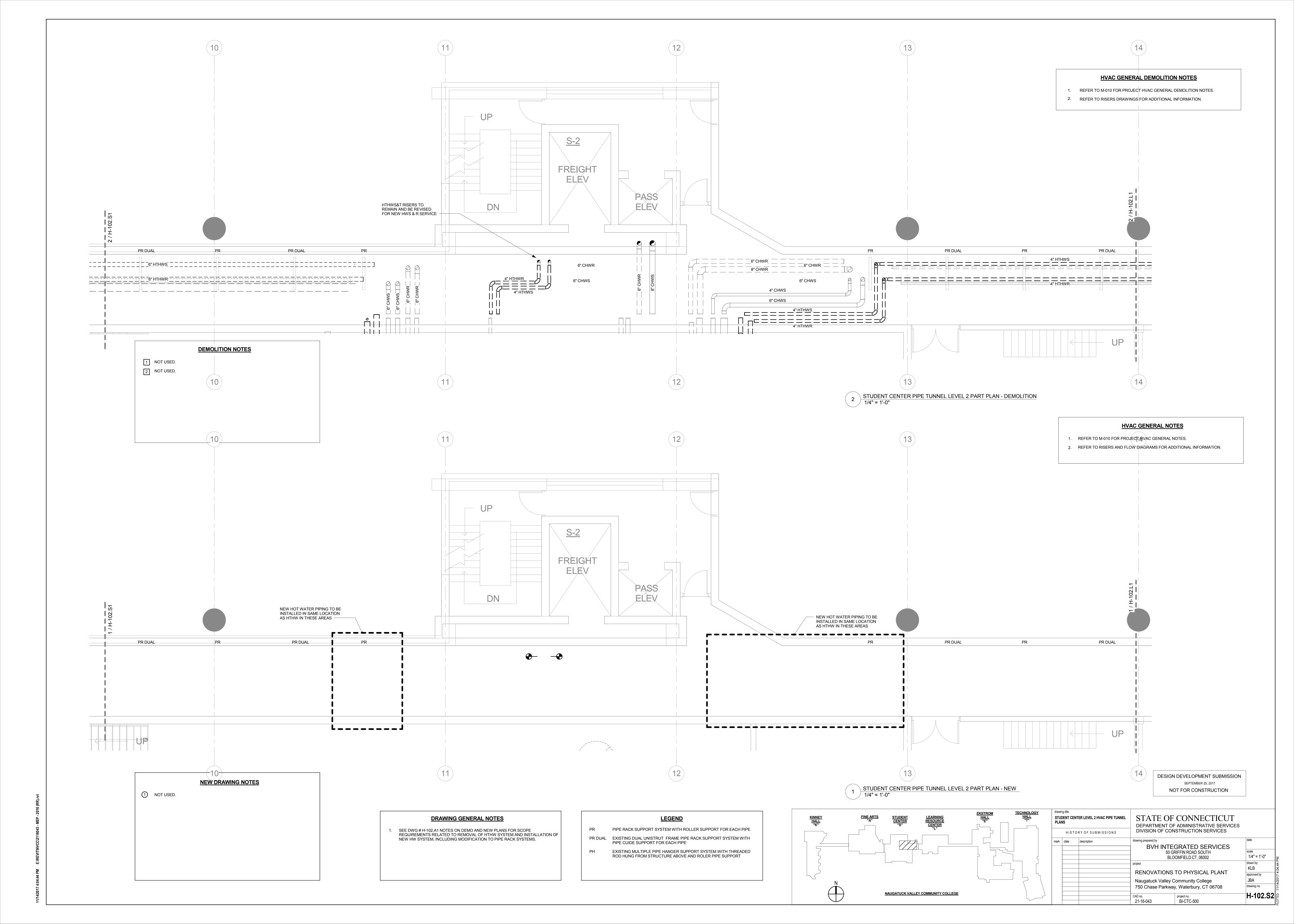
DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION

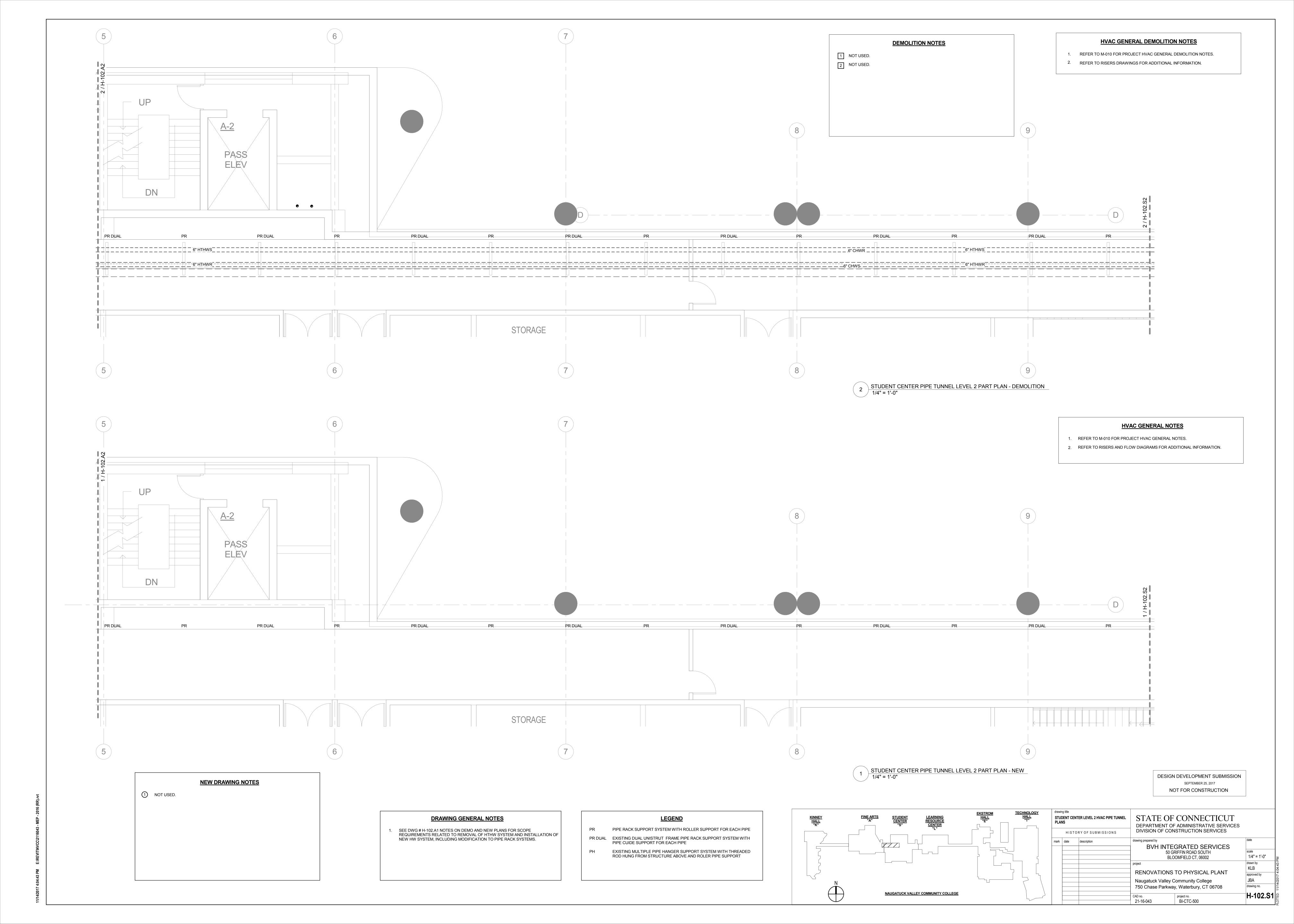














290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Kinney Hall

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 63378

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for Kinney Hall at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

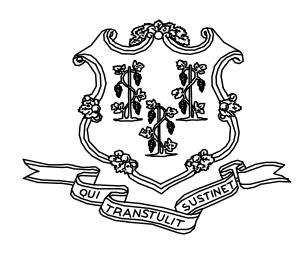
Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Kinney Hall NVCC

ASBESTOS INSPECTION REPORT

KINNEY HALL NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 63378 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 18, 2017

Table of Contents

SECTION

1.0	INTRODUCTION	

- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a prerenovation inspection at Kinney Hall located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 28, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included pipe fitting insulation, fiberglass pipe insulation paper/adhesive, spray-on fireproofing, gaskets, and end cap sealant. Suspect materials that are inaccessible and were not sampled include gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.
 - (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.

- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

None

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- Spray-On Fireproofing Brown
- Mudded End Cap Sealant
- Mudded Pipe Fitting Insulation (All Sizes, All Systems)
- Mudded Valve Insulation
- Mudded Tank Insulation
- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive

Spray-On Fireproofing – Brown and Mudded End Cap Sealant were identified to contain Vermiculite.

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE KINNEY HALL

Sample	Sample	Material	% Asbestos	Asbestos Type
Number	Location			J.F
112817-K-1A	Mechanical Room K411	Spray On Fire Proofing – Brown	ND	-
112817-K-1B	Mechanical Room K411	Spray On Fire Proofing – Brown	ND	-
112817-K-1C	Mechanical Room K411	Spray On Fire Proofing – Brown	ND	-
112817-K-2A	Mechanical Room K411	Mudded End Cap Sealant at CWP 1	ND	-
112817-K-2B	Mechanical Room K411	Mudded End Cap Sealant at CWP 2	ND	-
112817-K-2C	Mechanical Room K411	Mudded End Cap Sealant at Ramp	ND	-
112817-K-2D	Mechanical Room K411 – Tunnel	Mudded End Cap Sealant at CWS	ND	-
112817-K-2E	Mechanical Room K411 – Tunnel	Mudded End Cap Sealant at CWS by Ramp	ND	-
112817-K-2F	Mechanical Room K411 – Tunnel	Mudded End Cap Sealant Canvas at Valve	ND	-
112817-K-3A	Mechanical Room K411	Fiberglass Pipe Insulation Paper/Adhesive at HWP-4	ND	-
112817-K-3B	Mechanical Room K411	Fiberglass Pipe Insulation Paper/Adhesive at CWP-1	ND	-
112817-K-3C	Mechanical Room K411 – Tunnel	Fiberglass Pipe Insulation Paper at CW 6	ND	-
112817-K-4A	Mechanical Room K411	Mudded Insulation on Hot Water Tank	ND	-
112817-K-4B	Mechanical Room K411	Mudded Insulation on Hot Water Tank	ND	-
112817-K-4C	Mechanical Room K411	Mudded Insulation on Hot Water Tank	ND	-
112817-K-4D	Mechanical Room K411	Mudded Insulation on Hot Water Tank	ND	-
112817-K-5A	Mechanical Room K411	White End Cap Sealant	ND	-
112817-K-5B	Mechanical Room K411	White End Cap Sealant	ND	-

ND = None Detected HW = Hot Water

CW = Cold Water

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS						



Attention: Ed Fennell

EMSL Analytical, Inc.

ATC Group Services LLC

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com **EMSL Order:** 241705221 **Customer ID:** ATCE54 **Customer PO:** 17-10133-0001

Project ID:

Phone: (860) 282-9924

Fax: (860) 282-9826

 290 Roberts Street
 Received Date:
 12/08/2017 2:35 PM

 Suite 301
 Analysis Date:
 12/12/2017 - 12/13/2017

East Hartford, CT 06108 Collected Date: 11/30/2017

Project: 2257317033/NYCC-KINNEY HALL, 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos .	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-K-1A 241705221-0001	K411 mechanical rm - spray on fire proofing, brown	Brown Non-Fibrous Homogeneous		20% Vermiculite 80% Non-fibrous (Other)	None Detected
112817-K-1B	K411 mechanical rm - spray on fire proofing,	Brown Non-Fibrous		15% Vermiculite 85% Non-fibrous (Other)	None Detected
241705221-0002	brown	Homogeneous			
112817-K-1C	K411 mechanical rm - spray on fire proofing,	Tan Non-Fibrous		10% Vermiculite 90% Non-fibrous (Other)	None Detected
241705221-0003	brown	Homogeneous			
112817-K-2A 241705221-0004	K411 mechanical rm - mudded end cap sealant, at CWP1	Gray Fibrous Homogeneous	50% Min. Wool	50% Non-fibrous (Other)	None Detected
112817-K-2B	K411 mechanical rm - mudded end cap	Gray/White Fibrous	10% Cellulose 50% Min. Wool	40% Non-fibrous (Other)	None Detected
241705221-0005	sealant, at CWP2	Homogeneous			
112817-K-2C 241705221-0006	K411 mechanical rm - mudded end cap sealant, at ramp	Brown Fibrous Homogeneous	30% Cellulose	10% Vermiculite 60% Non-fibrous (Other)	None Detected
112817-K-2D	K411 tunnel - mudded end cap sealant, at	Gray Fibrous	20% Cellulose 30% Min. Wool	50% Non-fibrous (Other)	None Detected
241705221-0007	CWS	Homogeneous			
112817-K-2E	K411 tunnel - mudded end cap sealant, at	Tan Fibrous	20% Cellulose	10% Vermiculite 70% Non-fibrous (Other)	None Detected
241705221-0008	CWS @ ramp	Homogeneous			
112817-K-2F 241705221-0009	K411 tunnel - mudded end cap sealant, canvas valve	Tan Fibrous Homogeneous	35% Cellulose	10% Vermiculite 55% Non-fibrous (Other)	None Detected
			700/ 0 - 11 - 1	400/ Nov. Shares (Others)	None Detected
112817-K-3A 241705221-0010	K411 mechanical rm - fiberglass pipe insulation paper at HWP-4	Tan/Silver Fibrous Homogeneous	70% Cellulose 20% Glass	10% Non-fibrous (Other)	None Detected
112817-K-3B 241705221-0011	K411 mechanical rm - fiberglass pipe insulation paper at CWP-1	Tan/Silver Fibrous Homogeneous	70% Cellulose 25% Glass	5% Non-fibrous (Other)	None Detected
112817-K-3C	K411 tunnel - fiberglass pipe	Tan/Silver Fibrous	70% Cellulose 20% Glass	10% Non-fibrous (Other)	None Detected
241705221-0012	insulation paper at CWP-6	Homogeneous	20 /0 Ola33		
112817-K-4A	K411 mechanical rm - mudded insulation on	Gray/Tan/White Fibrous	30% Cellulose 20% Min. Wool	50% Non-fibrous (Other)	None Detected
241705221-0013	hot water tank	Homogeneous			
112817-K-4B	K411 mechanical rm - mudded insulation on	White Fibrous	50% Cellulose 10% Glass	40% Non-fibrous (Other)	None Detected
241705221-0014	hot water tank	Homogeneous			
112817-K-4C	K411 mechanical rm - mudded insulation on	White Fibrous	50% Cellulose 10% Glass	40% Non-fibrous (Other)	None Detected
241705221-0015	hot water tank	Homogeneous			

Initial report from: 12/13/2017 13:40:35



EMSL Order: 241705221

Customer ID: ATCE54

Customer PO: 17-10133-0001

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112817-K-4D	K411 mechanical rm - mudded insulation on	Gray/Tan/White Fibrous	50% Cellulose 20% Glass	30% Non-fibrous (Other)	None Detected
241705221-0016	hot water tank (near wall)	Homogeneous			
112817-K-5A	K411 mechanical rm - white end cap sealant	White/Yellow Fibrous	20% Glass	80% Non-fibrous (Other)	None Detected
241705221-0017	•	Homogeneous			
112817-K-5B	K411 mechanical rm - white end cap sealant	Tan/Yellow Fibrous	45% Cellulose 25% Glass	30% Non-fibrous (Other)	None Detected
241705221-0018	·	Homogeneous			

Analyst(s)

Lauren Buffone (12) Quetcy Castro Romero (6) m Rr

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/13/2017 13:40:35





BULK SAMPLE LOG

Page 1 of 3

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax:

ATC Inspector: Scott Johnson	7,05	Client Name:	ie: c7bcs	CS			
Accreditation No.: 000297		Project No	./Task No.:	Project No./Task No.: 2257317033	.3		
Survey Date: 11/30/17		Project Ma	nager:	Project Manager: Ed Fennell			
Signature:		Requested	Requested Completion Date:	Date:			
Lab Name:	Requested turnaround time (circle)	3 HR 6 HR	24 HR	48 HR (3 DY) 5 DY	No. Samples Collected 18	llected 18
Building: NYCC - Kinney	Hall Address:	No Char B	Selen.	Waterbro	12	CK708	
Location	Ø Material Description	Type E	Estimated Quantity	Friable Y/N	Condition (SD D NE	Sample_of_ (homogeneous material)	Field Number
K411 Mechanical Rm Spray on Fire Proofing, Brown K411 Mechanical Rm	on Fire Proding, Brown	S		5-		~ c	112817-K-14
Kyll mechanical am Spray or	Spray on Fire Drooting, Brown	S		5—		3 3	7 1-16
Kyll Mcchanical Am Mudden Kyll Mcchanical Am Muddan	Mudden End Cap Scalant, at CWPAL Mudden End cap Scalant, at cwpA	TSI		>		٠ د د	112817:4-2A
1411 Methanical Ron Mueleber 6	Mudda End cap Scalast, at Ramp	TSI		>) &	77-1
K411 Tunnel Muchaell K411 Tunnel	Mudded Env ent Scalant, at CWS Mudbod End Cap Scalant at cws Oramp	T-5-T		2-		9 5	7
	practice and Cap Scalant, convos value	151		5 -		9	V V 521
K411 McChanical for Fiber glas	Fiberglass pipe insulation paper at Hump-4 Fiber glass pipe insulation paper at coup-1	ZZ		2		1 3	112817-K-34
Kyll Tunnel Fibre glus	Fibre gluss pipe insulation paper at cut 6	٤		2		2	-36

Notes Damage Factors: Comments:

Ventilation (yes-no; if yes, type)

Physical (sig dmg-dmg-no dmg) Proximity (<1ft- 1-6ft->6ft)

Disturbance Factors:

Received By/Date: Received By/Date: 12/1/17

Air movement (high-moderate-low)

Air conduits (air plenum - air shaft - elevator shaft - duct)!

Barriers (perm airtight-enclosed-encapsulated) Friability (yes-no; hard-mod-soft surface) Vibration (gym-music rm-auditorium-mechanical rm-elevator-other)

Deterioration (heavy-moderate-light-none)

Water (extensive-moderate-slightnone)
Accessibility (within reach-barely reachable-not reachable)

Texture (roug

Relinquished By/Date: Relinquished By/Date:

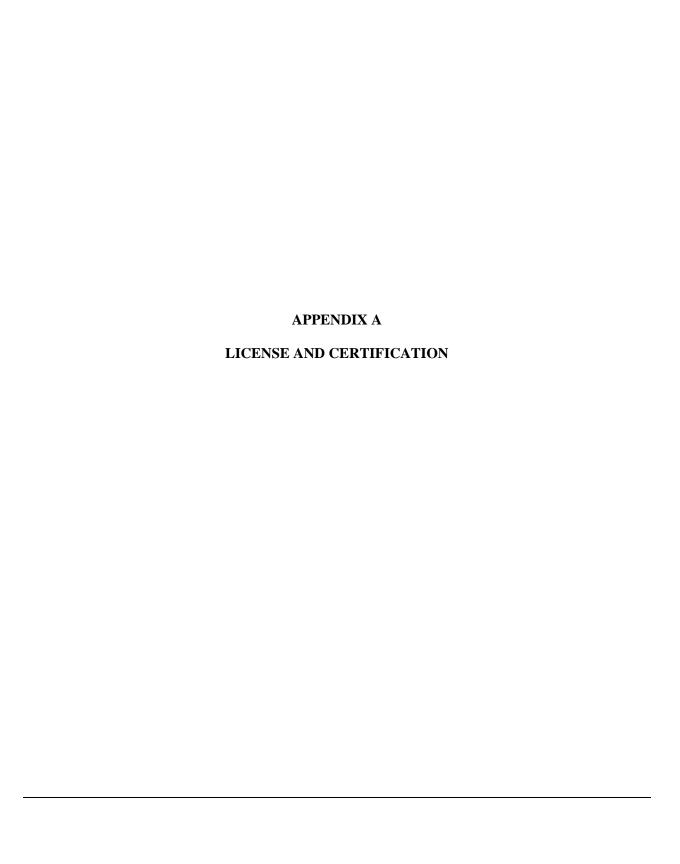
ENVIRONMENTAL · GEOTECHNICAL BUILDING SCIENCES · MATERIALS TESTING

BULK SAMPLE LOG

Page 2 of 2

Fax: (860) 282-9826 290 Roberts Street, Suite 301 East Hartford, CT 06108 (860) 282-9924 Fax: (

		8	X4170522	10/			(860) 282-9924	-9924 Fax: (860) 282-9826
ATC Inspector: JC977 JGHWSON	JOHNSON		Client Name:	Jame: cTbcs				
Accreditation No.: 000297	47		Project	Project No./Task No.: 2257317033	225731703	3		
Survey Date: 11/30/17	7		Project	Project Manager:	Fenell			
Signature:			Reques	Requested Completion Date:	Date:			
Lab Name:		Requested turnaround time (circle)	3 HR	6 HR 24 HR	48 HR (3 DY) 5 DY	No. Samples Collected	collected 18
Building: NYCC -	Kinney Hall	Address: 7	No Char	Bekur.	Waterby	25	16708	
Location			Type S TSI MISC	Estimated Quantity	Friable Y/N	lion N	Sample Lof _ (homogeneous material)	s Field Number
K411 Mechanical Rm +	Hot Mudder insulation	on that water tank.	757		>			112817 - K-"4A
K411 Mechanical Rm	tad insulation		()		_		7	1 43
kyll Mcchanical An	madea insulation o	or not wate tunk	TST				3	7h *
CHI Mechanical AM	insulation	or Hot water teath from well		٠			7	() A
Kyll McChanical RM	While and cap Scalant		٤		N		α -	112817-K- 5A
K411 Mechanical Rm 1	white end cap Scal	Scalant			2		u	يد
								53
	*							
		*						1
	*							
		3 4						
		NS 2					BEINE	
					-	Commission of the Commission o	DEC 08 2017	
Comments:	la la Plan						14.	
Notes	abject by the					4	-	,
je Factors:	Physical (sig dmg-dmg-no dmg)	Water (extensive-moderate-slight-none)		Deterioration (heavy-moderate-light-none)	ht-none)		Friability (yes-no; hard-mod-soft surface)	-mod-soft surface)
Disturbance Factors: P. P. V.	Proximity (<1ft-1-6ft->6ft) Ventilation (yes-no; if yes, type)	Accessibility (within reach-barely reachable-not reachable) Air conduits (air plenum - air shaft		<u>Vibration</u> (gym-music rm-auditorium-mechanical rm-elevator-other) Air movement (high-moderate-low)	ım-mechanical rm-ele)	vator-other)	Barriers (perm airtight-enclosed-encapsulated) Texture (rough-pitted-moderate-smooth)	anclosed-encapsulated)
Relinquished By/Date:	Gr.	elevator shaft - duct)	111	Received By/Date:	3y/Date:			•
Relinguished By/Date:	0		1	Received By/Date:	3v/Date:			



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BECOW IS CERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

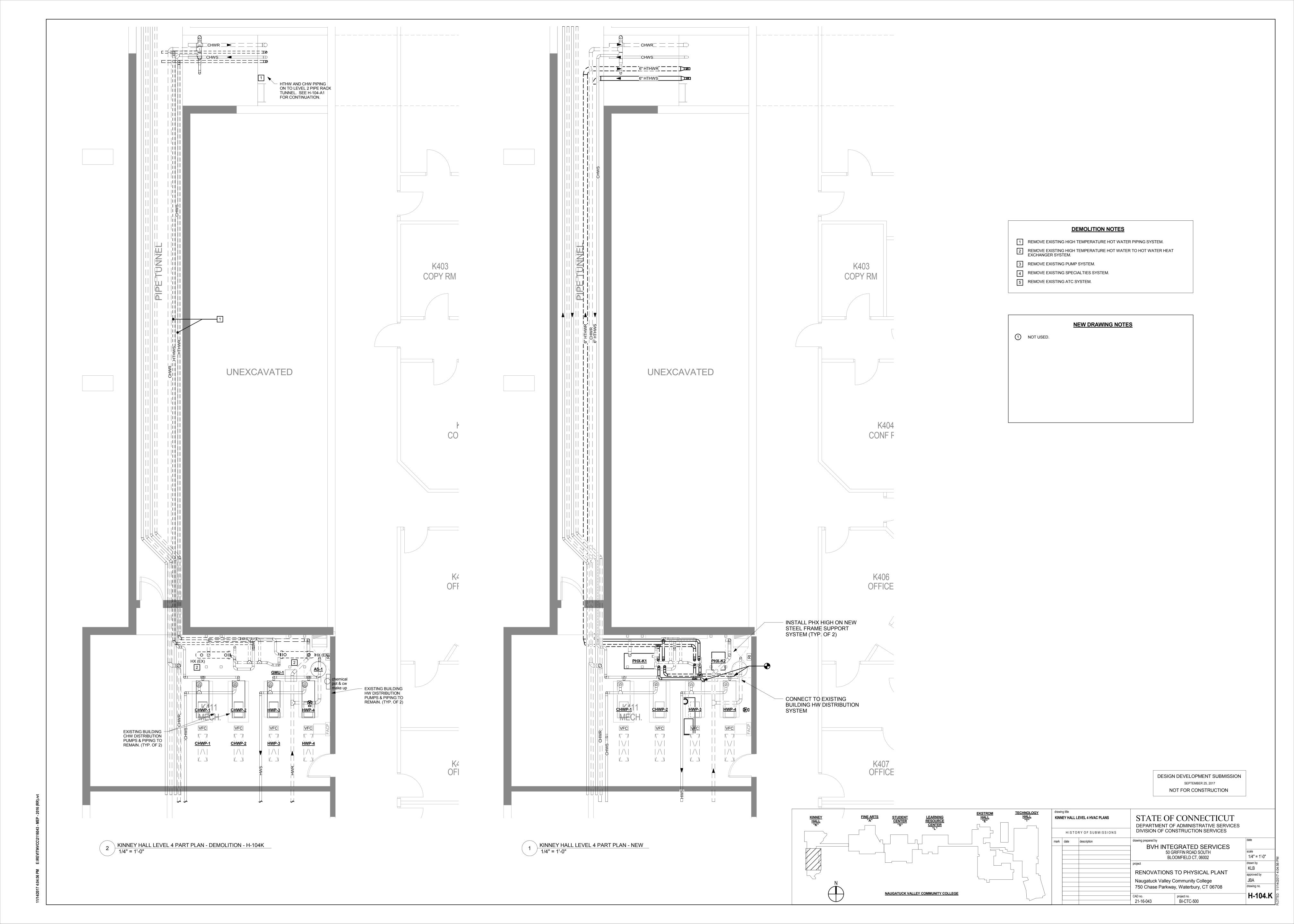
October 12, 2017 Examination Date

Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

Date of Course

October 12, 2018 Expiration Date







290 Roberts Street, Suite 301 East Hartford, CT 06108 Telephone 860-282-9924 Fax 860-282-9826 www.atcgroupservices.com

December 28, 2017

Mr. Joel Baranowski State of Connecticut Department of Administrative Services Division of Construction Services 450 Columbus Boulevard Hartford, CT 06103

Re: Asbestos Inspection

Technology Hall

Naugatuck Valley Community College

Waterbury, Connecticut Project BI-CTC-500 Building 97250

ATC Project 2257317033

Dear Mr. Baranowski:

Please find enclosed the Asbestos Inspection Report for Technology Hall at Naugatuck Valley Community College, Waterbury, Connecticut.

Should you have any questions concerning this report, do not hesitate to contact me at 860 282-9924 ext. 1123.

Sincerely,

ATC Group Services LLC

Edward P. Fennell Jr., P.E.

Division Manager

ATC Group Services LLC

Direct Line +1 860 282 9924 x1123

Email: edward.fennell@atcassociates.com

Encl: Asbestos Inspection Report Technology Hall NVCC

ASBESTOS INSPECTION REPORT

TECHNOLOGY HALL NAUGATUCK VALLEY COMMUNITY COLLEGE WATERBURY, CONNECTICUT BUILDING 97250 PROJECT BI-CTC-500



STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES

Prepared by:

ATC GROUP SERVICES LLC 290 ROBERTS STREET - SUITE 301 EAST HARTFORD, CT 06108

ATC PROJECT 2257317033

DECEMBER 19, 2017

Table of Contents

SECTION

1.0	INTRODUCTION

- 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY
- 3.0 ASBESTOS-CONTAINING MATERIALS
- 4.0 DISCUSSION AND RECOMMENDATIONS
- 5.0 LIMITATIONS
- 6.0 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS
- 7.0 BULK SAMPLE RESULTS/CHAIN-OF-CUSTODY FORMS

APPENDIX A LICENSE AND CERTIFICATION

APPENDIX B DRAWINGS

1.0 INTRODUCTION

ATC Group Services LLC (ATC) of East Hartford, Connecticut was retained by the State of Connecticut, Department of Administrative Services, Division of Construction Services (CTDCS) to conduct a pre-renovation inspection at Technology Hall located at Naugatuck Valley Community College in Waterbury, Connecticut. The scope of the asbestos inspection included: surveying, sampling, and testing of suspect building materials.

The asbestos inspection was conducted by Mr. Scott Johnson on November 30, 2017. Mr. Johnson is a State of Connecticut, Department of Public Health (CTDPH) licensed asbestos inspector (CTDPH license number 000297). The survey was performed as a walk-through visual inspection, combined with the collection and analysis of bulk samples.

2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

Materials which were considered suspect ACM included fiberglass pipe insulation paper/adhesive, end cap sealant, duct sealant, fire stop caulk. Suspect materials that are inaccessible and were not sampled include spray-on fireproofing, gaskets.

2.1 ASBESTOS BULK SAMPLE COLLECTION/ANALYSIS PROCEDURE

Building materials considered suspect ACM were inspected and assessed using the methods presented in the United States Environmental Protection Agency AHERA regulations (40 CFR Part 763) and NESHAP regulations (40 CFR Part 61).

ATC collected bulk samples of building materials utilizing a sampling strategy that correlated with 40 CFR 763.86 as follows:

- (a) Surfacing materials. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
 - (1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less, except as provided in 40 CFR Part 763.87(c)(2).
 - (2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
 - (3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft², except as provided in 40 CFR Part 763.87(c)(2).
- (b) Thermal system insulation.
 - (1) Except as provided in paragraphs (b)(2) through (4) of this section and 40 CFR Part 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.
 - (2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.

- (3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under 40 CFR Part 763.87(c)(2).
- (4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM.
- (c) *Miscellaneous materials*. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable or non-friable miscellaneous material that is not assumed to be ACM.

The bulk samples collected during the survey were analyzed by EMSL Analytical, Inc. (NVLAP #200700-0) located in Wallingford, Connecticut. The bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining via EPA 600/R-93/116 Method. Utilizing PLM, the microscopist is able to identify and distinguish between asbestos group minerals and other fibrous materials such as cellulose, mineral wool, fiberglass, or synthetic fibers. The quantities of each of these substances is estimated based on the procedures defined in the above-cited reference and are reported as a percentage.

The EPA recognizes the following as asbestos: Chrysotile, Crocidolite, Amosite, Tremolite, Actinolite, and Anthophyllite. To be classified as ACM, the material must be determined to contain greater than one percent (1%) asbestos. In order to consider a material to be non-ACM, all samples of a homogeneous type of material that are collected must be analyzed and all results must indicate the material to contain less than 1% asbestos by weight.

3.0 ASBESTOS-CONTAINING MATERIALS

The results of PLM laboratory analysis indicated that the following materials are asbestos-containing material (ACM). ACM are those materials that contain greater than 1% asbestos, and are as follows:

None

The remaining materials which were sampled and tested were found to contain no detectable amounts of asbestos. Specifically, the following materials were determined to be non-ACM:

- White End Cap Sealant
- Fiberglass Pipe Insulation Paper/Adhesive
- Red Fire Stop Sealant
- Gray Duct Sealant
- Miscellaneous Gasket

Refer to Section 6.0, Bulk Sample Summary of Suspect Materials, for all suspect materials that were identified and sampled.

4.0 DISCUSSION AND RECOMMENDATIONS

EPA regulations require the removal of Regulated Asbestos-Containing Materials (RACM) prior to renovation or demolition activities. RACM is defined as (a) Friable ACM, (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 activities. The CTDPH defines "asbestos abatement" as removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of ACM but does not include activities which are related to (A) the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in section 25-32a, or (B) the removal of non-friable ACM found exterior to a building or structure other than material defined as RACM in 40 CFR 61, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Based upon these definitions, ACM identified in the building requires removal prior to renovation, demolition, or disturbance. The State of Connecticut Department of Environmental Protection (CTDEP) regulations require the proper disposal of all ACM, regardless of categorization.

5.0 LIMITATIONS

As with all such assessments, the results of the sampling represent conditions found on the date of the survey and may not represent conditions found at other times. Additionally, this assessment was limited with respect to the specific parameters indicated above and should not be construed to be a comprehensive evaluation or a definitive representation of conditions within the facility. The information presented in this report is intended to be used as a guide to evaluate the need for further investigation or the need for modifications to the processes or procedures surveyed.

6.0	BULK SAMPLE SUMMARY OF SUSPECT MATERIALS

TABLE 6-1 BULK SAMPLE SUMMARY OF SUSPECT MATERIALS NAUGATUCK VALLEY COMMUNITY COLLEGE TECHNOLOGY HALL

Sample Number	Sample Location	Material	% Asbestos	Asbestos Type
113017-T-1A	Room T520	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
113017-T-1B	Room MSN	Fiberglass Pipe Insulation Paper/Adhesive	ND	-
113017-T-2A	Room T520	White End Cap Sealant	ND	-
113017-T-2B	Room MSN	White End Cap Sealant	ND	-
113017-T-3A	Room T520	Red Fire Stop Caulk	ND	-
113017-T-3B	Room MSN	Red Fire Stop Caulk	ND	-
113017-T-4A	Room MSN	Gray Duct Seam Sealant	ND	-
113017-T-4B	Room MSN	Gray Duct Seam Sealant	ND	-
113017-T-5A	Room MSN	Miscellaneous Gasket	ND	-
113017-T-5B	Room MSN	Miscellaneous Gasket	ND	-

ND = None Detected

7.0	BULK SAMPLE RESULTS/CHAIN - OF - CUSTODY FORMS



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978 http://www.EMSL.com / wallingfordlab@emsl.com **EMSL Order:** 241705180 **Customer ID:** ATCE54 **Customer PO:** 2257317033

Project ID:

 Attention:
 Scott Johnson
 Phone:
 (860) 282-9924

 ATC Group Services LLC
 Fax:
 (860) 282-9826

290 Roberts Street Received Date: 12/06/2017 4:35 PM
East Hartford, CT 06108 Analysis Date: 12/07/2017 - 12/09/2017

Collected Date:

Project: 2257317033 / NYCC- TECHNOLOGY BUILDING / 750 CHASE PARKWAY WATERBURY, CT 06708

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
113017-T-1A 241705180-0001	T520 - FIBERGLASS PIPE INSULATION PAPER/ADHESIVE	White/Silver/Yellow Fibrous Homogeneous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
113017-T-1B 241705180-0002	ROOM M5N - FIBERGLASS PIPE INSULATION PAPER/ADHESIVE	Tan/Silver Fibrous Homogeneous	60% Cellulose 30% Glass	10% Non-fibrous (Other)	None Detected
113017-T-2A 241705180-0003	T520 - WHITE END CAP SEALANT	White/Yellow Fibrous Homogeneous	25% Glass	75% Non-fibrous (Other)	None Detected
113017-T-2B 241705180-0004	ROOM M5N - WHITE END CAP SEALANT	White/Yellow Fibrous Homogeneous	30% Glass	70% Non-fibrous (Other)	None Detected
113017-T-3A 241705180-0005	T520 - RED FIRE STOP CAULK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
113017-T-3B 241705180-0006	ROOM M5N - RED FIRE STOP CAULK	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
113017-T-4A 241705180-0007	ROOM M5N - GRAY DUCT SEAM SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
113017-T-4B 241705180-0008	ROOM M5N - GRAY DUCT SEAM SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
113017-T-5A 241705180-0009	ROOM M5N - MISC. GASKET	Gray Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
113017-T-5B 241705180-0010	ROOM M5N - MISC. GASKET	Gray Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected

Analy	/st/	S

Lauren Buffone (5)
Quetcy Castro Romero (5)

m hm

Lauren Brennan, Asbestos Lab Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 12/09/2017 15:29:45

OrderID: 241705180

241705180

BULK SAMPLE LOG

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

Page / of /

290 Roberts Street, Suite 301
East Hartford, CT 06108
(860) 282-9924 Fax: (860) 282-9826

Project No. Task No. 2357379233 Project Manager: Ed Fanell Requested turnaround time (circle) 3 HR 6 HR 24 HR 48 HR (3 DY) 51 Sulfunction Address: 750 Char Return Varehous Cool Sulfunction Type Start Luntan Rege Address C Start Luntan Rege Addre	ATC Inspector: Jean Jakes	Client	Client Name: c7bcs	200				
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e: Fine Requested turnaround time (circle) 3 HR 6 HR 24 HR 48 HR (3 DY) 51 NYCC - Technology Guildus Address: 772 Chalc Belianted Con Type Stimated Friable Con Material Description TSI MISC Quantity Y/N (SD MSCN) While Ending		Redu	ested Completio	n Date:				
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				7				
				31				

Comments: Analyze

Physical (sig drag-drag-no drag)
Proximity (<1ft- 1-6ft- >6ft)

Disturbance Factors:

Ventilation (yes-no; if yes, type)

Relinquished By/Date: Relinquished By/Date:

Accessibility (within reach-barely VIE reachable-not reachable)
Air conduits (air plenum - air shaft - Air elevator shaft - duct)

Air movement (high-moderate-low)

Received By/Date:
Received By/Date:

Deterioration (heavy-moderate-light-none)

Water (extensive-moderate-slight-

Vator-other)

Barriers (perm airt

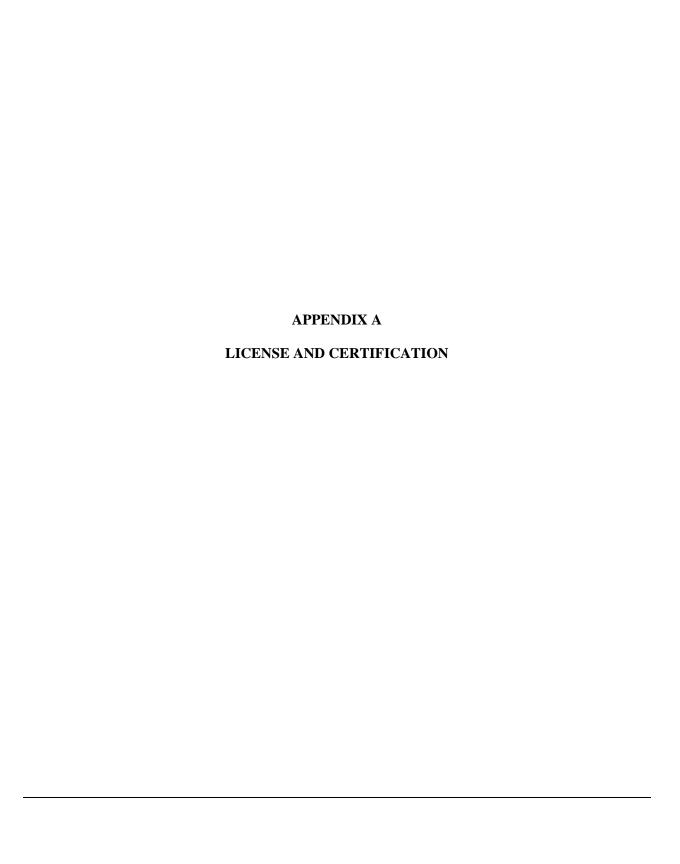
Texture (rough-pit

Eriability (yes-no; hard-mod-soft surface)

Barriers (perm airtight-enclosed-encapsulated)

Texture (rough-pitted-moderate-smooth)

S:\BldgSci\Admin\Templates and Forms\Asbestos\Asbestos Bulk Sample Form.doc



Dear SCOTT J JOHNSON,

Attached you will find your validated certificate for the coming year. Should you have any questions about your certificate renewal, please do not hesitate to write or call:

Department of Public Health Hartford, CT 06134-0308 P.O. Box 340308 M.S.#12MQA

(860) 509-7603 oplc.dph@ct.gov www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, COMMISSIONER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTIOUT

THE INDIVIDUAL NAMED BECOW IS CERTIFIED BY THIS DEPARTMENT AS A:

CERTIFICATE NO.

000297

SCOTT J JOHNSON

ASBESTOS CONSULTANT-INSP/MGMT PLANNER

03-615244 CURRENT THROUGH VALIDATION NO. 09/30/18

09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH SCOTT J JOHNSON CERTIFICATI NO. PROFESSION EMPLOYER'S COP 000297 NAME 03-615244

INSTRUCTIONS:

- 3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet Detach and sign cach of the cards on this form
 Display the large card in a prominent place in your office or place of business.
- in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can The employer's copy is for persons who must demonstrate current licensure/certification card, place it in a secure place.

CERTIFICATÉNO. ... CURRENT THROUGH 09/30/18 ASBESTOS CONSULTANT-INSP/MGMT PLANNER DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT SCOTT. JOHNSON. PROFESSION 000297 WALLET CARD NAME 03-615244

CERTIFICATE OF ACHIEVEMENT

This certifies that

Scott Johnson

Asbestos Accreditation Under TSCA Title II Asbestos Site Inspector Refresher Training has successfully completed the 40 CFR Part 763

conducted by

West Springfield, MA 01089 (413) 781-0070 73 William Franks Drive ATC Group Services LLC

Dregong Morred Regional Training Manager: Gregory Morsch SIAR - 5858

Certificate Number

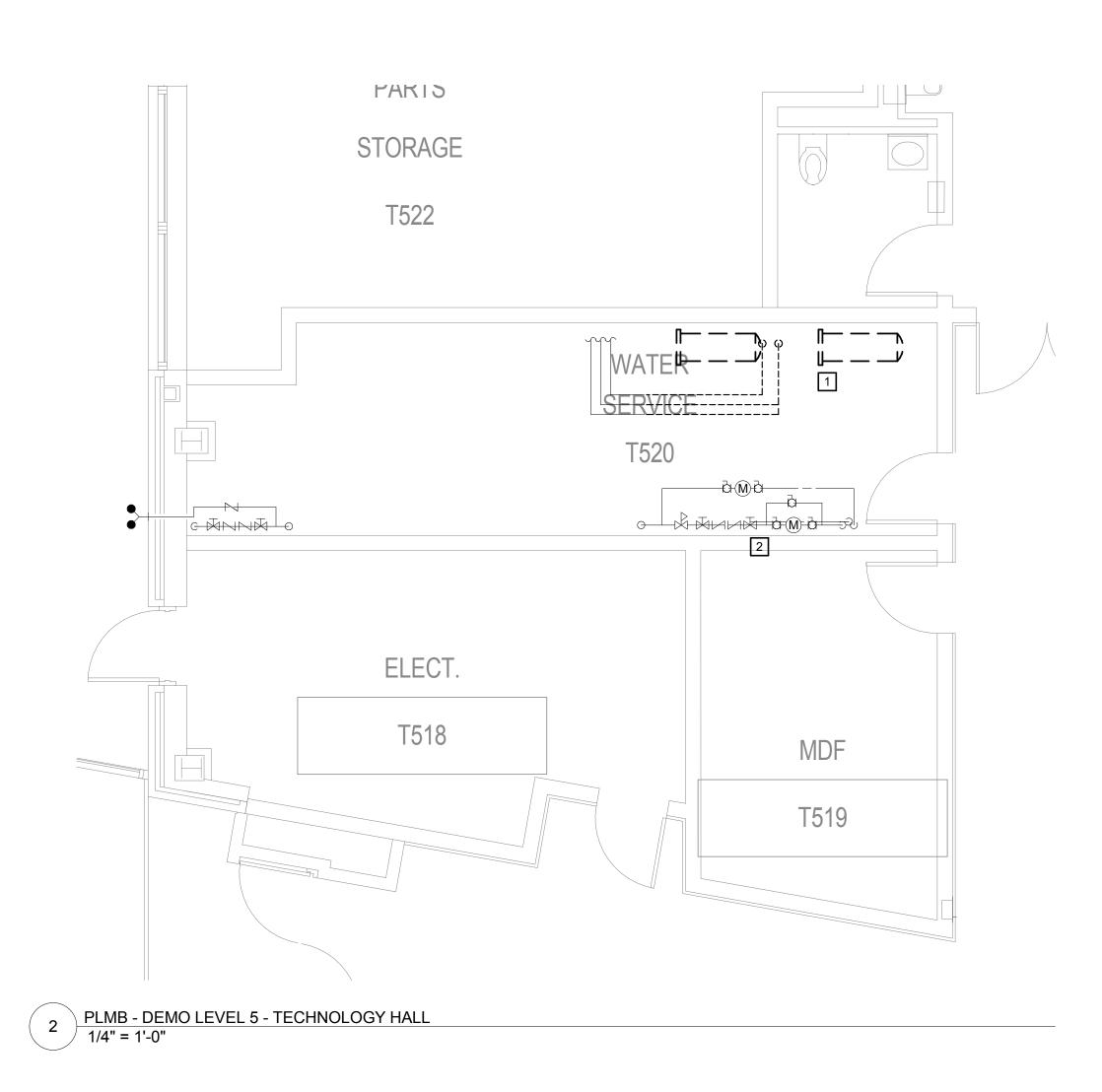
October 12, 2017 Examination Date

Dregoy March Principal Instructor: Gregory Morsch October 12, 2017

Date of Course

October 12, 2018 Expiration Date

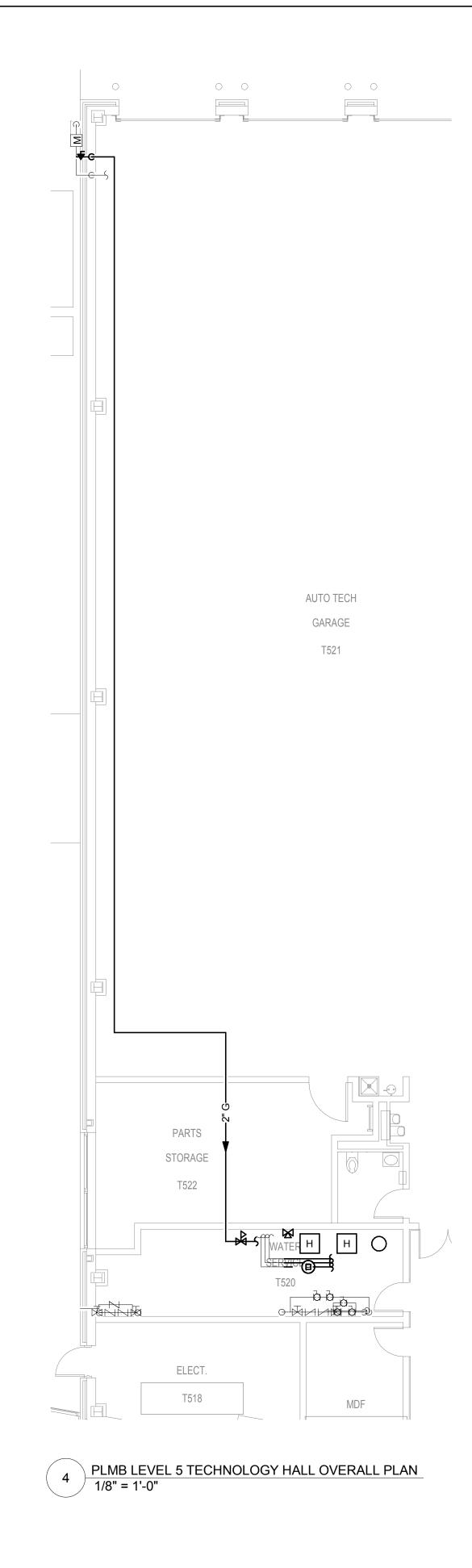


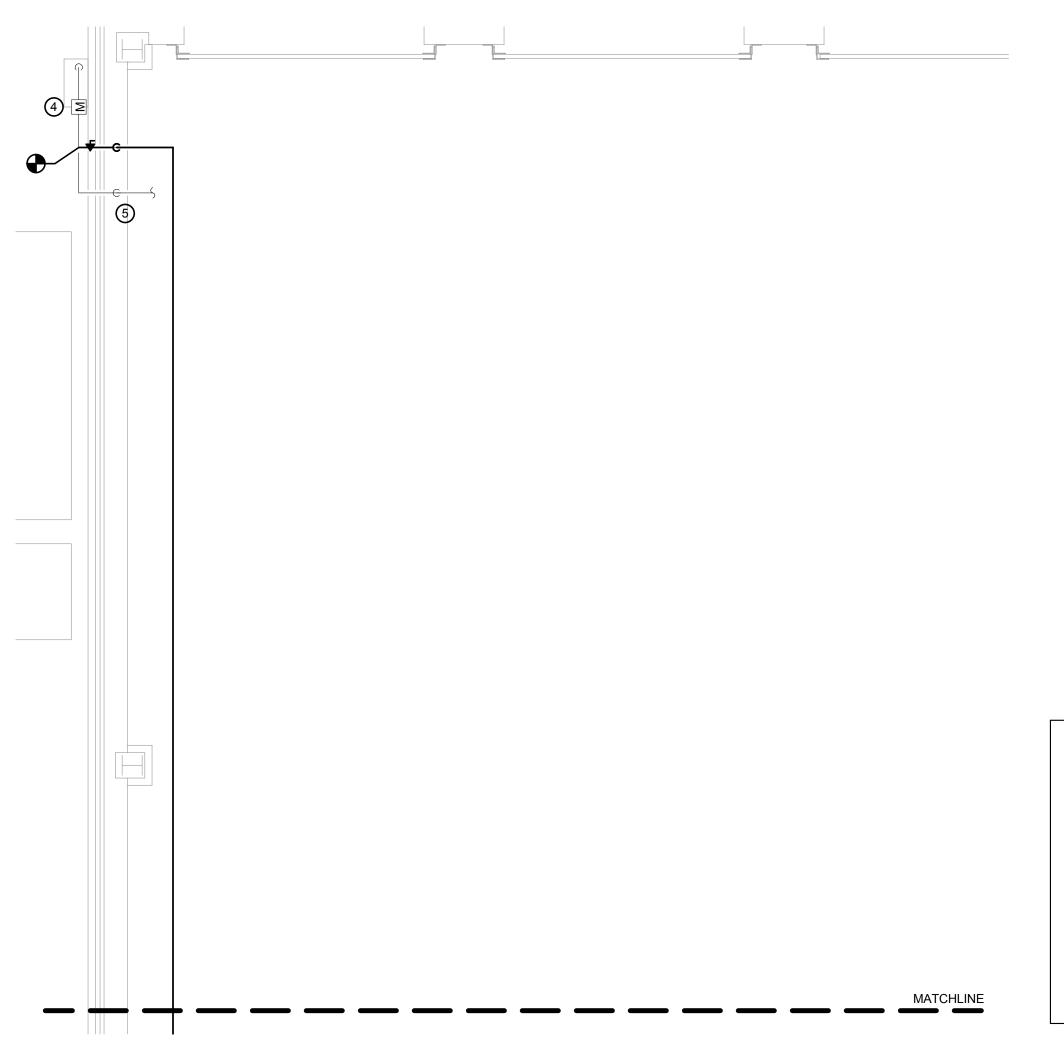


PLUMBING DEMOLITION DRAWING NOTES

REMOVE EXISTING DOMESTIC WATER HEAT EXCHANGERS AND ASSOCIATED EQUIPMENT. CUT, VALVE, AND CAP EXISTING DOMESTIC CW, HW, & HWR BACK TO OVERHEAD SPACE FOR FUTURE CONNECTION TO NEW DOMESTIC WATER HEATERS.

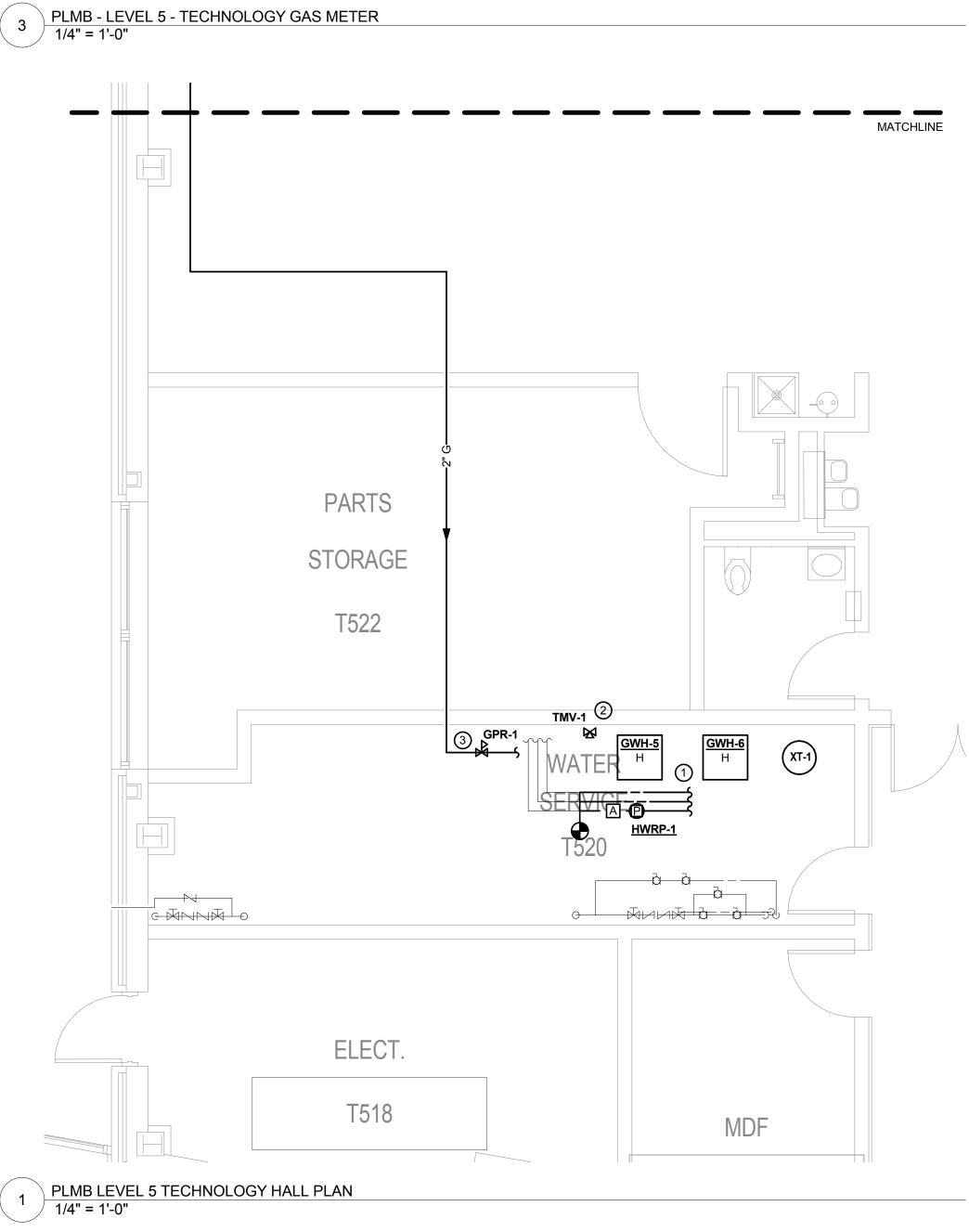
2 EXISTING DOMESTIC WATER METER ASSEMBLIES AND PRESSURE REDUCING VALVE SHALL REMAIN.



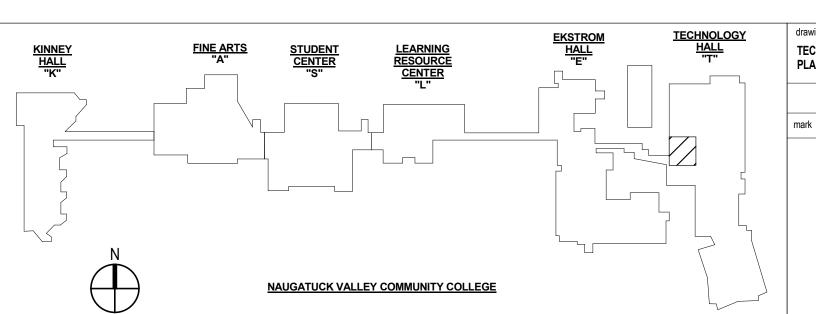


PLUMBING DRAWING NOTES

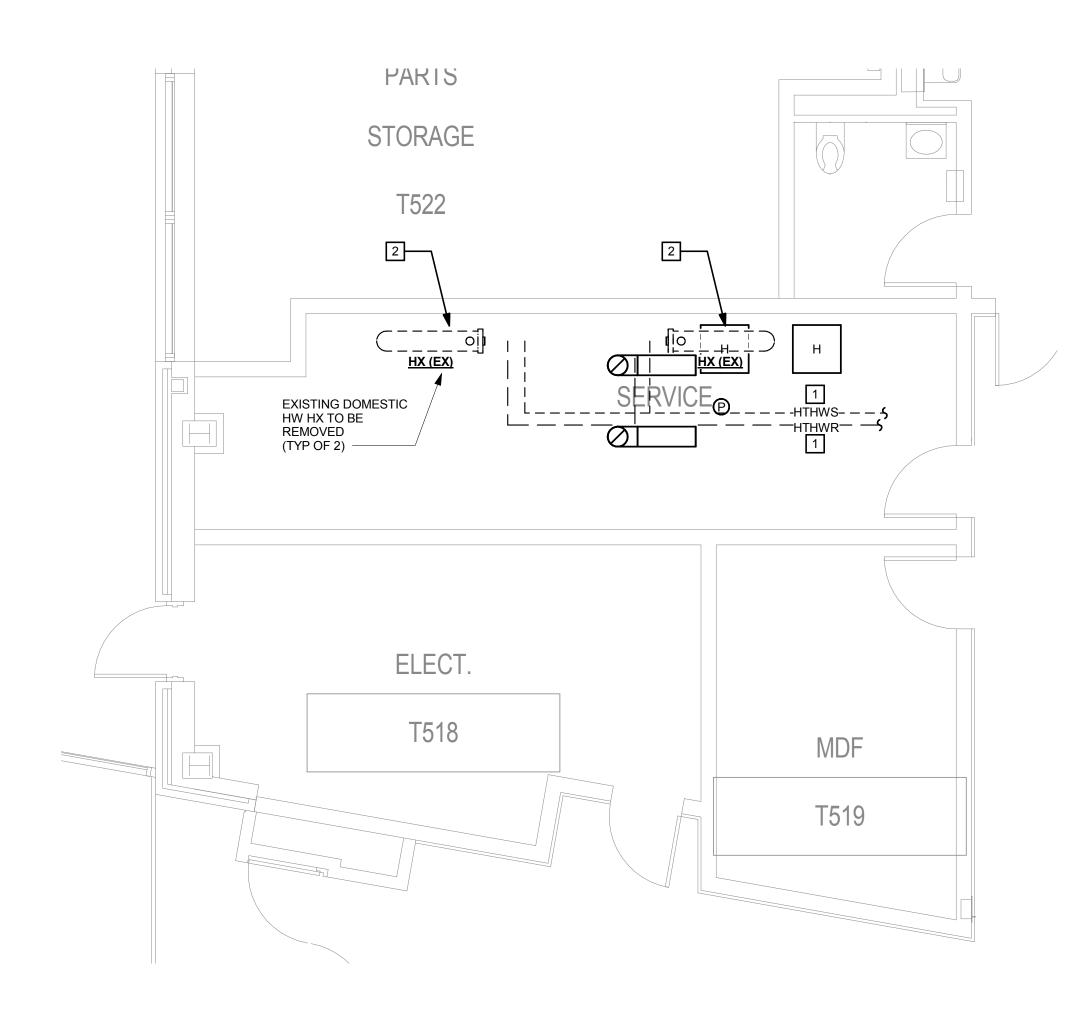
- GAS FIRED WATER HEATERS. PROVIDE 2" H&CW, 1" HWR, 2" GAS CONNECTIONS SEE DETAIL FOR PIPING INFORMATION.
- (2) MASTER TMV. PROVIDE 2" H&CW CONNECTIONS. SEE DETAIL FOR PIPING INFORMATION.
- GAS PRESSURE REGULATOR FOR WATER HEATERS. SET AT 12" W.C. OUTLET PRESSURE. PROVIDE 1" VENT UP THROUGH ROOF. TERMINATE WITH GOOSENECK & INSECT SCREEN.
- 4 NEW 2 PSI GAS MAIN. CONNECT TO EXISTING GAS SERVICE MAIN UPSTREAM OF EXISTING PRESSURE REGULATOR.
- 5 EXISTING GAS TO REMAIN.



DESIGN DEVELOPMENT SUBMISSION
SEPTEMBER 25, 2017
NOT FOR CONSTRUCTION



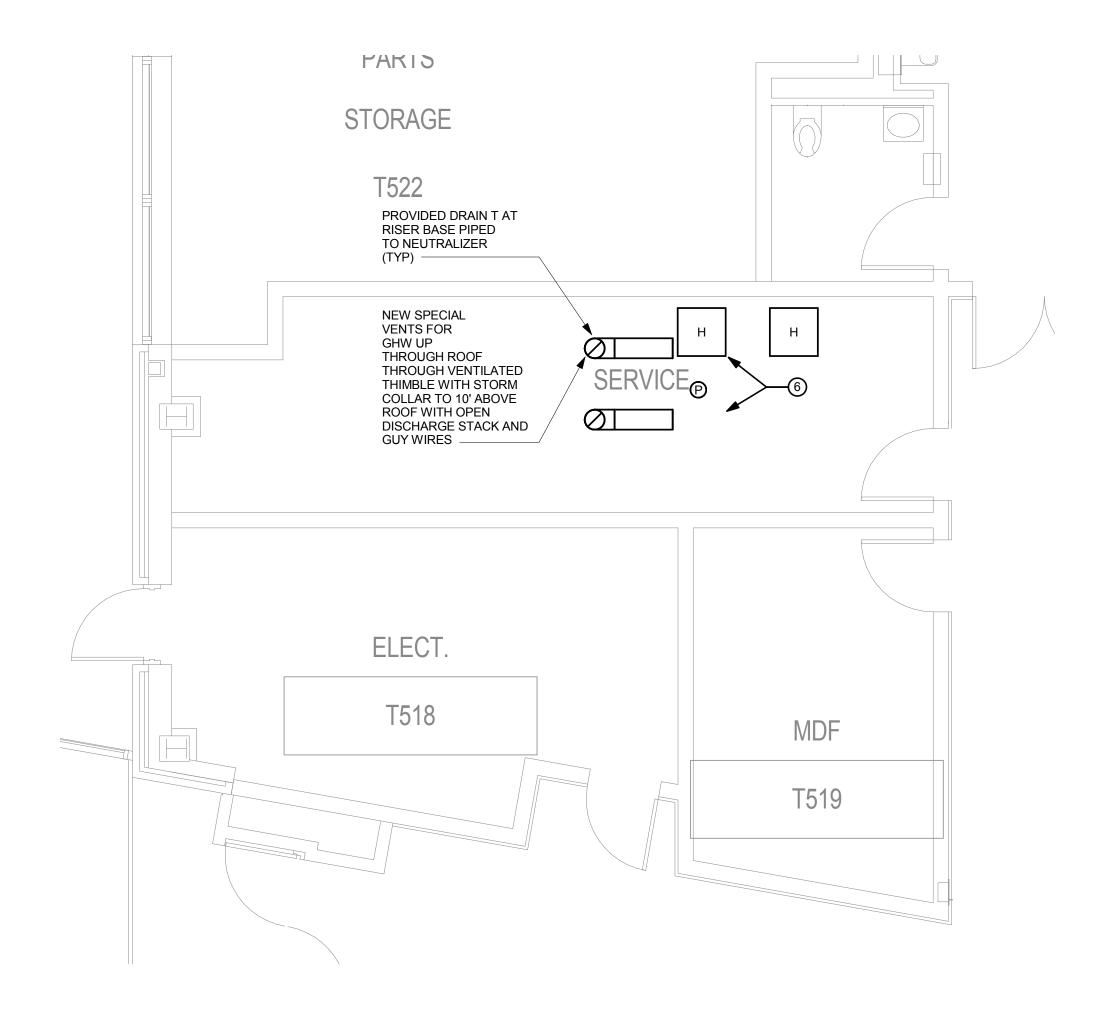
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	OF CONNECTICUT	Y HALL LEVEL 5 PLUMBING		TECH PLAN
3	IT OF ADMINISTRATIVE SERVICES		13	PLAN
	CONSTRUCTION SERVICES	ORY OF SUBMISSIONS	HISTC	
date		description	date	mark
	NTEGRATED SERVICES			
scale	50 GRIFFIN ROAD SOUTH			
As indicated	BLOOMFIELD CT, 06002			
drawn by				
JJM	ONIO TO DUIVOIONI DI ANIT			
approved by	ONS TO PHYSICAL PLANT			
JBA	lley Community College			
drawing no.	rkway, Waterbury, CT 06708			



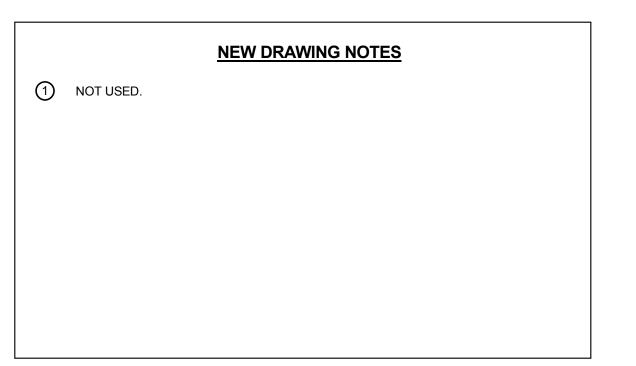
1 TECHNOLOGY HALL LEVEL 5 PART PLAN - DEMOLITION 1/4" = 1'-0"

DEMOLITION NOTES

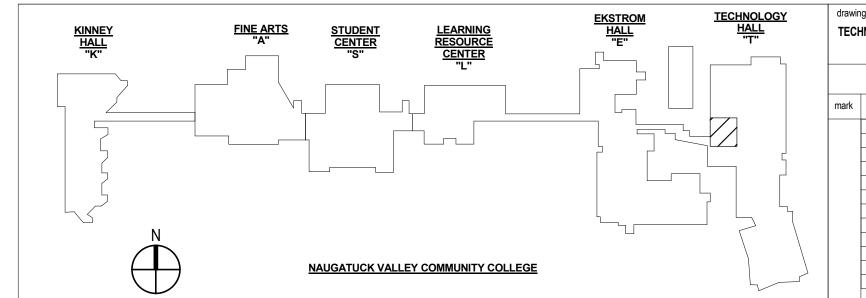
- 1 REMOVE EXISTING HIGH TEMPERATURE HOT WATER PIPING SYSTEM.
- REMOVE EXISTING HIGH TEMPERATURE HOT WATER TO HOT WATER HEAT EXCHANGER SYSTEM.
- 3 REMOVE EXISTING PUMP SYSTEM.
- 4 REMOVE EXISTING SPECIALTIES SYSTEM.
- 5 REMOVE EXISTING ATC SYSTEM.



3 TECHNOLOGY HALL LEVEL 5 PART PLAN - NEW 1/4" = 1'-0"



DESIGN DEVELOPMENT SUBMISSION SEPTEMBER 25, 2017 NOT FOR CONSTRUCTION



ing title		~		_	
HNOL	OGY HALL LEVEL 5 HVAC PLANS	STATE	OF CONNECTICUT	[
			T OF ADMINISTRATIVE SERVI	CES	
HI	STORY OF SUBMISSIONS	DIVISION OF	CONSTRUCTION SERVICES		
date	description	drawing prepared by		date	
	·	BVH IN	ITEGRATED SERVICES		
			50 GRIFFIN ROAD SOUTH	scale	
			1/4" = 1'-0"		
		project	drawn by		
			KLB		
		RENOVATIO	NS TO PHYSICAL PLANT	approved by	
		Naugatuck Val	JBA		
		750 Chase Pa	750 Chase Parkway, Waterbury, CT 06708		
		048	· · · · · · · · · · · · · · · · · · ·	U 405 T	
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Section 50 40 00 Subsurface Geotechnical Report (Not Used)

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Section 50 50 00 Elevator Agreement (Not Used)

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Section 50 60 00 FM Global Checklist for Roofing Systems

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CHECKLIST FOR ROOFING SYSTEM

F	M	lobal
/ /		

CONTACT IN	FORMATION:				INDEX NUMBE	ER:		
ROOFING CON	TRACTOR (NAME & ADDRES	S)			TELEPHONE NO.:		FAX:	
				-	E-MAIL ADDRESS	<u> </u>	CONTACT:	
CLIENT (NAME	& ADDRESS)				TELEPHONE NO.:		FAX:	
					E-MAIL ADDRESS		CONTACT:	
						•		
OVERVIEW O	F WORK: (Submit 1 form	per roof area)						
	ne & Number:	. po. 100. a.oay						
	ensions: Length:	ft/m;	Width:		ft/m.;	Height		ft/m.
Roof Slope:	J	,	1		,			
	ht ,max (in./m):		Parapet He	eight ,min	(in /m):			
Type of Work		on 🔲 Rec			xisting Roofing	System)		
	Reroof (New co	ver/remove exis	sting roofing s	system to	deck) 🗌 Other	<u>r </u>		
FM Approv	ed RoofNav Assemb	oly Numbers:						
ROOF SURFA	ACING:							
None								
Coating						(Tra	de Name/App	
Granules								lication Rate
Gravel/Sla	<u> </u>							lication Rate
☐ Ballast:	☐ Stone Size	☐ Pavers	(or square edge)	; \square Other	:	
Ballast Weigl	nt (psf): Field:	Perimeter:		Corne	rs:			
Please provio ☐ Panel:	le ALL applicable details Through Fastened Standing Seam me Fiber Reinforced F Other:	l Metal etal	name, type,	number o	of plies, thicknes	ss, reinforced,	adhesive)	
☐ Single Ply		☐ Adh	ered		☐ Fastened		□Ballas	sted
☐ Built Up R	Roofing (BUR)							
☐ Modified E	Bitumen	Lap	Width	in/mm	Lap Adhes	sion Type		
☐ Spray App	olied							
Other:								
BASE SHEET Please includ	: le Trade Name, Type, ar	nd Width)						
Trade Name:				Width:	☐ 36 In.	1 meter (39	In.)	
Fastened				☐ Adł	nered	·		
☐ Secured p	oer RoofNav		OR	☐ Per	FM Global Los	s Prevention [Data Sheet 1-2	29
Comments:								
Lap Width	in/mm			Lap	Adhesion Type	9		
Air Retard	ler			☐ Vap	oor Retarder			
NSULATION								
Layer	Trade Name				Thickness	Fastened	Adhered	Tapered
1. Top					(ln.)			
2. Next						 	 	
3. Next						 	 	╅
4. Next						+	 	
	<u>l</u>				<u> </u>			
☐ Glass Fib	er/Mineral Wool/Batt			☐ Fac	er Type/Vapor I	Barrier		
☐ Thermal E					71			

CHECKLIST FOR ROOFING SYSTEM



Other:								
None								
DECK:								
(Please include manufacturer, type, yield strength, thic	kness/g	age, etc.)						
☐ Steel:								
☐ LWIC (Form Deck):			☐ Cementitious Wood Fiber:					
☐ Concrete: ☐ Pre-cast panels or ☐ Cast in Plac	е							
□ Wood								
☐ Fiber Reinforced Cement	☐ Fiber Reinforced Plastic							
Gypsum: Plank			Poured					
Other:								
Comments:								
ROOF STRUCTURE (Include Size, Gage, Etc.):								
☐ Purlins ☐ "C" OR ☐ "Z"								
☐ Joists ☐ Wood OR ☐ Steel								
☐ Beams ☐ Wood OR ☐ Steel								
Other:								
Spacing: Field: Per	imeter:			С	orners:			
Comments:				•				
FASTENERS USED IN ROOF ASSEMBLY:								
Roof Cover Fasteners: Trade Name:				Length:		I	Diameter:	
Stress Plate/Batten:								
Spacing: Field: X Per	rimeter:	X		С	orners:	X		
Insulation Fasteners: Trade Name:		Type:						
Size:		Stress Pla	ite:					
Spacing: Field: Per	imeter:				Corners:			
Deck Or Roof Panels Fasteners:				•				
Trade Name:		Type:						
Length:		Size Wash	her:					
If Weld: Size:	Wel	d:			Was	her:		
Deck Side Lap Fasteners: Field: X	Peri	meter:	X		Corn	ers:	X	
Spacing: Field: X	Peri	meter:	X		Corn	ers:	X	
Base Sheet Fasteners					•			
Trade Name:		Type:						
Head Diameter:		Length:						
Spacing: (Attached Sketches as necessary)								
Spacing Along Laps: Field:		Perimeter				Corne	rs:	
No. Intermediate Rows: Field:		Perimeter:			Corners:			
Spacing Along Intermediate Rows: Field:		Perimeter:			Corners:			
PERIMETER FLASHING:								
(Attach a detailed sketch of metal fascia, gravel stop, r	nailer, co							
☐ FM Approved Flashing			Manufacturer/Trade Name:					
Other:			Flashing Max Wind Rating:					
Nailer Size / Securement Per FM Global Data Sheet	1-49? 🛚] Yes 🗌 N	0					
Comments:								
DRAINAGE:								
For new construction: Has roof drainage been design and the local building code? Yes No (Attach do		Qualified E	ngineer	per FM (odal Los	s Preve	ention Data Sheet 1-54	
For re-roofing and recovering: will the roof drainage by		and from th	a origina	design	for even	la: drai	n incarte draine	
covered or removed, new expansion joints, blocked o						n c . uidi	ii iiiotiio, uidiiio	
If yes, were the changes reviewed by a Qualified Eng								
Is secondary (emergency) roof drainage provided per						Attach o	details)	
, <u> </u>	,				<u> </u>		,	

CHECKLIST FOR ROOFING SYSTEM



FM Global OFFICE REVIEW (Please leave blank for FM Global Office Review)

WIND:	
Design Wind Speed: (mph)	Ground Terrain: B C D
Uplift Pressure in field: (psf)	Uplift Rating Required:
Adequate Uplift Rating Provided:	Adequate? Yes No
FIRE:	
Internal Assembly Rating:	Non-Combustible
External Fire Rating:	Class C None
Concealed Spaces? Yes No	Sprinklers below Roof?
Adequate?	
HAIL:	
Hail Zone ☐ VSH ☐ SH ☐ MH	Hail Rating Provided □VSH □ SH □ MH
	FM 4473 Specification Class (if provided): 2 3 4
Adequate?	
COLLAPSE:	
If standing seam, has collapse been reviewed?	□ No

COMMENTS:

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Section 50 60 01 FM Global Checklist for Boiler Installer

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INSTALLER'S CHECKLIST FOR AUTOMATIC-LIGHTED BOILER SAFETY COMBUSTION CONTROL SYSTEM



NOTE: This checklist does not apply to pressure parts of the boiler, steam and water piping, valves, etc., and does not supersede any statutory regulations of any city, county, state or province. User should contact his boiler inspector.

PART A – PLANS:									
INSTALLER'S NAME & ADDRESS		CONTRACT OR JOB NUM	BER DATE PART "A" SEN	DATE PART "A" SENT TO FM					
			GLOBAL:						
CUSTOMER (OWNER) NAME & ADDRESS		DATE CONTRACT SI	GNED BY	OPERATIONS CTR.					
			CUSTOMER:						
BOILER LOCATION: (BUILDING NAME/NUMBER)	☐ BASEMENT ☐ GROUND FLOOR	FLOOR NUMBER	TOTA	L NO. OF FLOORS					
BOILER MAKE/MODEL NUMBER		BOILER MAXIMUM FUEL I	BOILER MAXIMUM FUEL BTU/HOUR INPUT:						
		GAS:	OIL:						
FUELS MAIN BURNER:			GAS						
□ NATURAL GAS □ LP GAS □ FUEL OIL NO.	HEATE		OIL NO.	SPARK					
MAIN & PILOT BURNER(S): MAKE & MODEL NUMBER(S)		E & MODEL NO. IF HIGH EN		USED FOR	DIRECT				
FLAME CAFFOLIADDO & FLAME CENCINO ELEMENTO MAN		TION OF MAIN OIL BURNER		OFD\/ATION	LDODTO				
FLAME SAFEGUARDS & FLAME SENSING ELEMENTS – MAK	LE & MODEL OF EA	СН	BURNER OB ☐ YES	SERVATION ☐ NO	IPORIS?				
	I DII C	T BURNER FLAME ESTABL							
TRIAL-FOR IGNITION GAS: SEC.	GAS		SEC.						
MAIN BURNER OIL: SEC.		. SEC. OIL.							
HIGH & LOW GAS PRESS. INTERLOCKS MAKE/MODEL OF E	ACH		LOW OIL PRESSURE						
MAIN BURNER GAS SAFETY SHUT-OFF VALVE (S) (MBGSSC	DV) MAKE/MODEL 1	NO(S): MAIN BURNER OIL S	SAFETY SHUT-OFF VALVE(S	S) (MBOSSO	V) MAKE/MODEL NO(S				
PILOT BURNER GAS SAFETY SHUT-OFF VALVE - MAKE/MOI	DEL NO(S):	PILOT BURNER OIL	PILOT BURNER OIL SAFETY SHUT-OFF VALVE(S) (MBOSSOV) MAKE/MODEL NO(S						
MBGSSOV PROVED CLOSED BEFORE & DURING PRE-IGNIT	MBOSSOV PROVED	MBOSSOV PROVED CLOSED BEFORE & DURING PRE-IGNITION PURGE*							
LEAK TEST MEANS PROVIDED FOR MAIN GAS SAFETY SHL	JT-OFF VALVE(S):	STRAINERS, DRIPP VALVE(S):	OTS, TRAPS, ETC. UPSTRE	AM MAIN FU	EL SAFETY SHUT-OFF				
BOILER AIR CHANGES IN PURGE PURGE AIR RA	TE AT LEAST 50% A	AVERAGE OF MAXIMUM	COMB. AIR FAILURE INTE	RLOCK(S): N	MAKE/MODEL NO(S)				
□ 4 □ 5 □ 6 □ 7 □ 8 □ FIRING RATE		% MAX.	COMB. AUX TAULONE HATE	(C). 1	W (1 (L/WODEL 1 (O)).				
LOW FIRE START? LOW OIL TEMPERTAURE INTERLO									
LOW ATOMIZING AIR INTERLOCK – MAKE/MODEL NO.		LOW DIFFERENTIAL	OIL/ATOMIZING MEDIA INT	ERLOCK - N	MAKE/MODEL NO.				
☐ YES ☐ NO	□YES □NO	□ YES □ NO							
ACCESSIBLE EMERGENCY BOILER FUEL SUPPLY(S) MANU VALVE(S) PROVIDED? ☐ YES ☐ NO	AL SHUT-OFF	☐ YES ☐ NO	FUSIBLE LINKS FUEL SHUT-OFF VALVE(S) PROVIDED IN BOILER OIL SUPPLY?						
LOW WATER LEVEL FUEL CUTOFF(S) (LWFC)?			ERATURE FUEL TRIP?		「EAM PRESS. FUEL TR □ NO				
LWFC(S) – MAKE/MODEL NO(S).	☐ YES ☐ NO NUMBER PROVIDED ☐ ONE ☐ TWO			☐ YES ☐ NO LOW WATER ALARM? AUTO.					
		AUDIBLE VISUAL		□NO					
OTHER DATA/COMMENTS:									
PART B – INSTALLER'S INSPECTION & TESTALLER'S	s adjusted for sm ee. vhere it will relial alled, identified. o boiler room.	nooth lighting off and sta			ЕМ:				
SIGNED: INSTALLER'S FIELD REPRESENTATIVE TEST W	/ITNESSED FOR C	USTOMER (BY)	DATE:						
PART C – FM GLOBAL FIELD EXAMINATIO	N OF COMPL	ETED SAFETY CON	IBUSTION CONTRO	L SYSTI	EM:				
☐ Plans Checked ☐ Installer's Inspecti	on & Test of Com	pleted Safety Combustion	Control System Checked						

☐ Safety Controls Tested Date: ___

INSTALLER'S CHECKLIST FOR AUTOMATIC-LIGHTED BOILER SAFETY COMBUSTION CONTROL SYSTEM



The liability to FM Global is limited to that covered by its insurance policies. No other liability is assumed by reason of this report.

INSTRUCTIONS TO INSTALLER:

- 1. Fill out Part A and submit copy to the nearest FM Global Operations Center.
- 2. Fill out Part B at customer location and leave with customer.
 - Valves which permit supervision of closed portion (valve seal over-travels to actuate an interlock) are shown by a double dagger with a
 valve make and model number in the listings in the Factory Mutual Research Approval Guide and are highly recommended with a gas
 boiler or an oil boiler having fuel BTU per hour rating 12,500,000 or over for proving valve is closed before and throughout re-ignition
 purge.
 - ** Generally two (2) low water cutoffs are required for automatically fired steam boilers, low water cutoffs should be Factory Mutual Research approved, separately piped, connected electrically in series, and preferably uses two different operating principles (e.g. float type or probe type).

GLOSSARY:

An automatic-lighted boiler is one where fuel to the main burner is turned on automatically by means of automatic pressure – or temperature controlled devices.

Prior to turning on the fuel to the main burner, the control arrangement automatically provides either an electric ignition source of electric-ignited pilot flame, or the main burner has a continuous-burning manually lighted pilot.

The term combustion (flame) safeguard to control a device which senses the presence of flame and will cause fuel shut-off in the event of flame failure by causing the safety shut-off valve to close. It may sound an alarm and be of the programming type.

A supervised flame is a flame whose presence or absence is detected by a combustion safeguard.

A proved pilot is a pilot flame supervised by a combustion safeguard which senses the presence of the pilot flame prior to permitting the main burner fuel safety shut-off valve to open.

A programming combustion safeguard on lighting off, turns on the ignition system, determines the length of time it is on and when the pilot and main fuel valves open. On failing to sense the flame, all fuel is hut off and locked out.

The trial-for-ignition period is defined as that period of time the programming combustion safeguard permits the main burned fuel valve to be open before the main flame sensing device is required to detect the main flame. If the main flame is not detected, all fuel is shut off and locked out immediately and there is no further ignition attempt.

A continuous pilot can only be lighted by the fireman and burns without turndown throughout the entire time the boiler is in service, whether the main burner is firing or not.

An interrupted pilot is electrically ignited automatically each time there is a call for heat. The pilot fuel is usually cut off automatically for programming combustion safeguard at the end of the trial-for-ignition period of the main burner, so that the main flame supervision must begin.

An intermittent pilot is electrically ignited automatically each time there is a call for heat. It burns during the entire time the main burner fires and is shut off with the main burner at the end of the call for heat.

Safe-start component check is a checking circuit, usually built into the combustion safeguard, which prevents lighting off if the combustion safeguard is in an unsafe condition.