

ADDENDUM NO. 1

TO THE PLANS AND SPECIFICATIONS FOR:

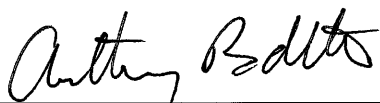
RB Renovate Dance Studios 270 & 278

Prepared by

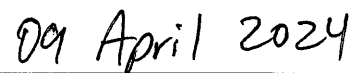
Brigham Young University
Planning & Construction Dept.
240 Brewster Physical Plant
Provo, Utah 84602
9 April 2024

This Addendum issued 9 April 2024 is for all persons preparing bids and as such shall be made a part of the contract documents. This Addendum consists of this cover sheet and 128 pages. In case of any conflict between the drawings, specifications, and this Addendum, this Addendum shall govern. All changes, corrections, deletions and/or additions to the initial bidding documents shall be included in the Bidder's proposal. Receipt of this Addendum shall be acknowledged on the Bid proposal forms.

Approved by:



Anthony R. Burdette, Director of Construction



Date

BRIGHAM YOUNG UNIVERSITY
RB - RENOVATE DANCE STUDIOS 270 & 278
Work Order No. M9372

ADDENDUM NO. 1
08 APRIL 2024

OWNER/ARCHITECT

Brigham Young University
Keith Martin, 240 BRWB, (801) 623-8894

CHANGES TO DRAWINGS

- 1. General:**
 - a. ADD Asbestos Surveys dated 30-Nov-2023 and 07-March-2024 (see attached). They are for reference only and are to be kept on sight by the general contractor and provided to any state or BYU inspector upon request. The general contractor is responsible for understanding the reports. The owner will remove any asbestos on the project. If the general contractor or any of its subcontractors encounter any suspicious or know asbestos during the project, they are to notify BYU immediately and BYU will have it removed. It will be removed by a qualified asbestos abatement contractor.
 - b. Please provide floor protection at adjacent large gym floor as follows: one layer of ram board where construction shoe traffic is expected; one layer of ram board & one layer of $\frac{3}{4}$ " plywood where lift is being used.
- 2. Original construction plans from 1983**
 - a. ADD for reference purposes only (A1-A9, S1-S2, M1-M3 & E1-E2)
- 3. Sheet A1.1:**
 - a. Reference Note 4 shall read as follows: "Remove existing audio speakers & cabling by Owner (NIC)."
- 4. Sheet A2.1:**
 - a. Reference Note 12 shall read as follows: "New audio speakers as per Owner (NIC)."
- 5. Sheet E1.1:**
 - a. ADD detail D1.0 (see attached).

CHANGES TO SPECIFICATIONS

- 1. Section 088300 - Mirrors**
 - a. 2.02.B: Size: DELETE "18" x 36"; Size as indicated on plans
- 2. Section 096429 – Wood Strip & Plank Flooring**
 - a. 2.03.A: DELETE extruded aluminum base, 4" high with a 4" toe. ADD Tarkett 4" vent cove, BLACK.
- 3. Section 102226 – Folding Partition**
 - a. ADD specification section 102226 (see attached).



**226 East 4800 South
Murray, Utah 84107
Phone 385-321-9701**

AN ASBESTOS SURVEY AND ASSESSMENT FOR



**Brigham Young University
Stephen L. Richards Building
15 Field House Drive
Provo, Utah 84604
7 March, 2024**

**Prepared by:
Scott Bainbridge #ASB-6822
Annabelle Mitchell #ASB-8012
Air Quality Consulting, LLC #603**

**385-321-9701
scott@airqualityconsult.com**

Executive Summary

Asbestos-containing material (ACM) was found in the vinyl tile and mastic under the carpet in multiple locations and the TSI and gaskets on the boiler, expansion tanks and mudded elbows attached to the boiler and expansion tanks of the Richards Building.

There is approximately over 10,000 square feet of vinyl tile that contains 5% Chrysotile asbestos or black mastic under carpet that contains 10% Chrysotile asbestos.

There is approximately 1,080 square feet of tank insulation on the expansion tanks that contains 3-6% Chrysotile and 8% Amosite asbestos. There are approximately 60 mudded elbows that contain 5% Chrysotile asbestos in the mechanical rooms and other inaccessible areas.

There is approximately 8 square feet of gray sink undercoat in Room 269C that contains 12% Chrysotile asbestos.

* - Denotes less than 1% asbestos which is regulated by OSHA, it is recommended to review their regulations before removal

Building Description

Structure: Block, Concrete, Framed

Roof: Not Inspected

Siding: Brick

Foundation: Concrete


Insulation: Fiberglass

Walls: Drywall

Ceiling: Ceiling Panel

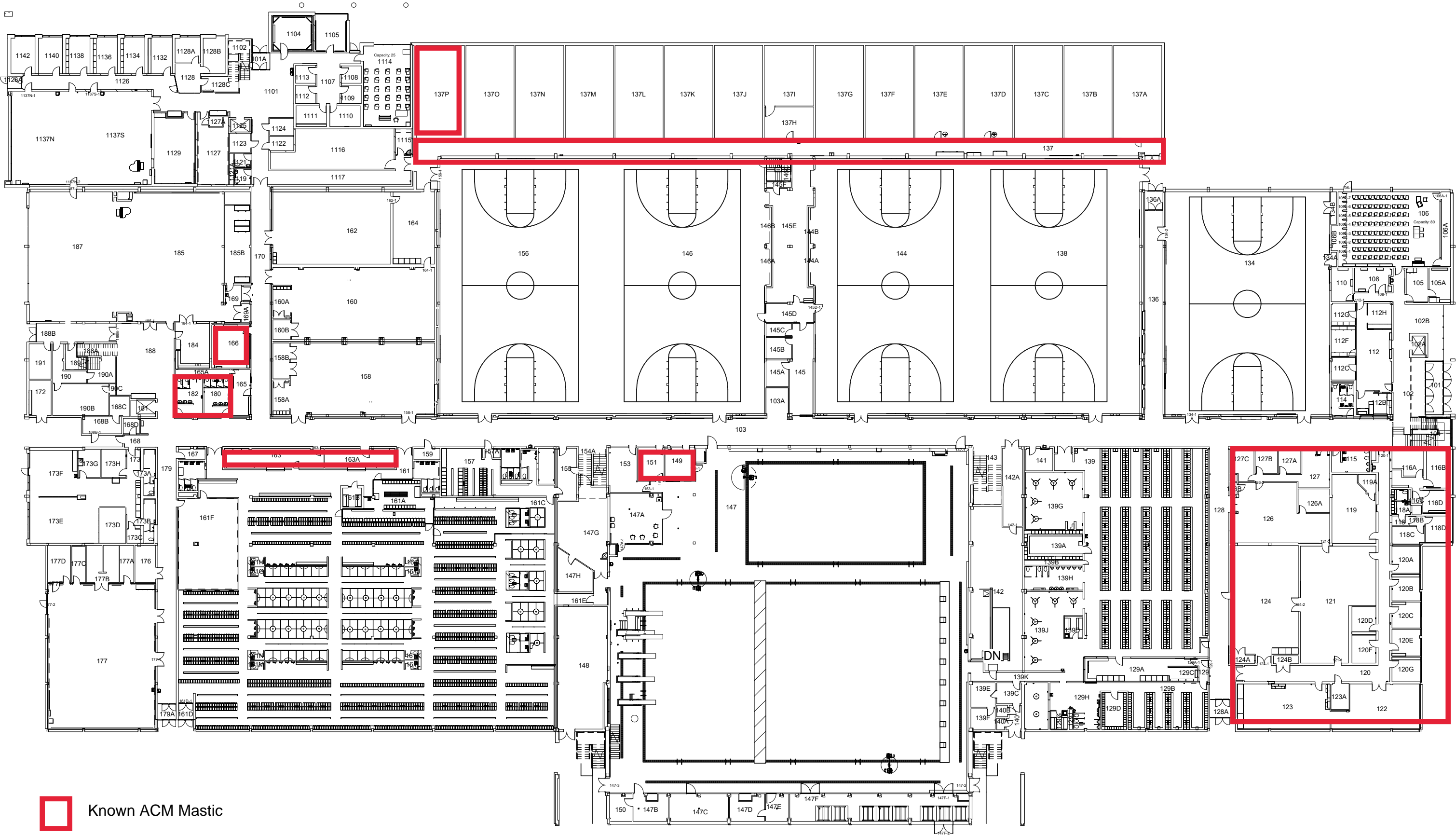
Flooring: Sheet Vinyl

ACM Results by Material

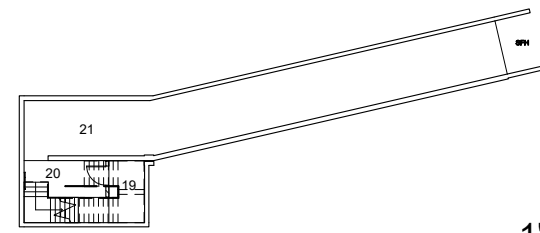
Sample Number	MaterialDescription/Lab Results	Amount	Homogeneous Area
Vinyl Tile and Mastic			
RB-22324-1	Vinyl Tile 5% Chrysotile and Mastic 10% Chrysotile	10,000+ SF	Most carpeted areas of the original building
RB-22324-2	Vinyl Tile 5% Chrysotile and Mastic 10% Chrysotile	10,000+ SF	Most carpeted areas of the original building
RB-22324-3	Vinyl Tile 5% Chrysotile and Mastic 10% Chrysotile	10,000+ SF	Most carpeted areas of the original building
			
TSI			
RBB-121820-1	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-2	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-3	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-8	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-9	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-14	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank

RBB-121820-15	Tank Insulation 3-6% Chrysotile/8% Amosite	1,080 SF	Tank 1, 2, Expansion Tank
RBB-121820-13	Mudded Elbow 5% Chrysotile	10 LF	Upper Expansion Tank
RB-3124-13	TSI Mudded Elbow 10% Chrysotile	60 LF	Mechanical Rooms
Sink Undercoat			
RB-3124-10	Gray Sink Undercoat 10% Chrysotile	8 SF	Room 269C

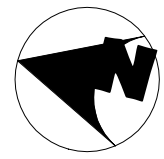


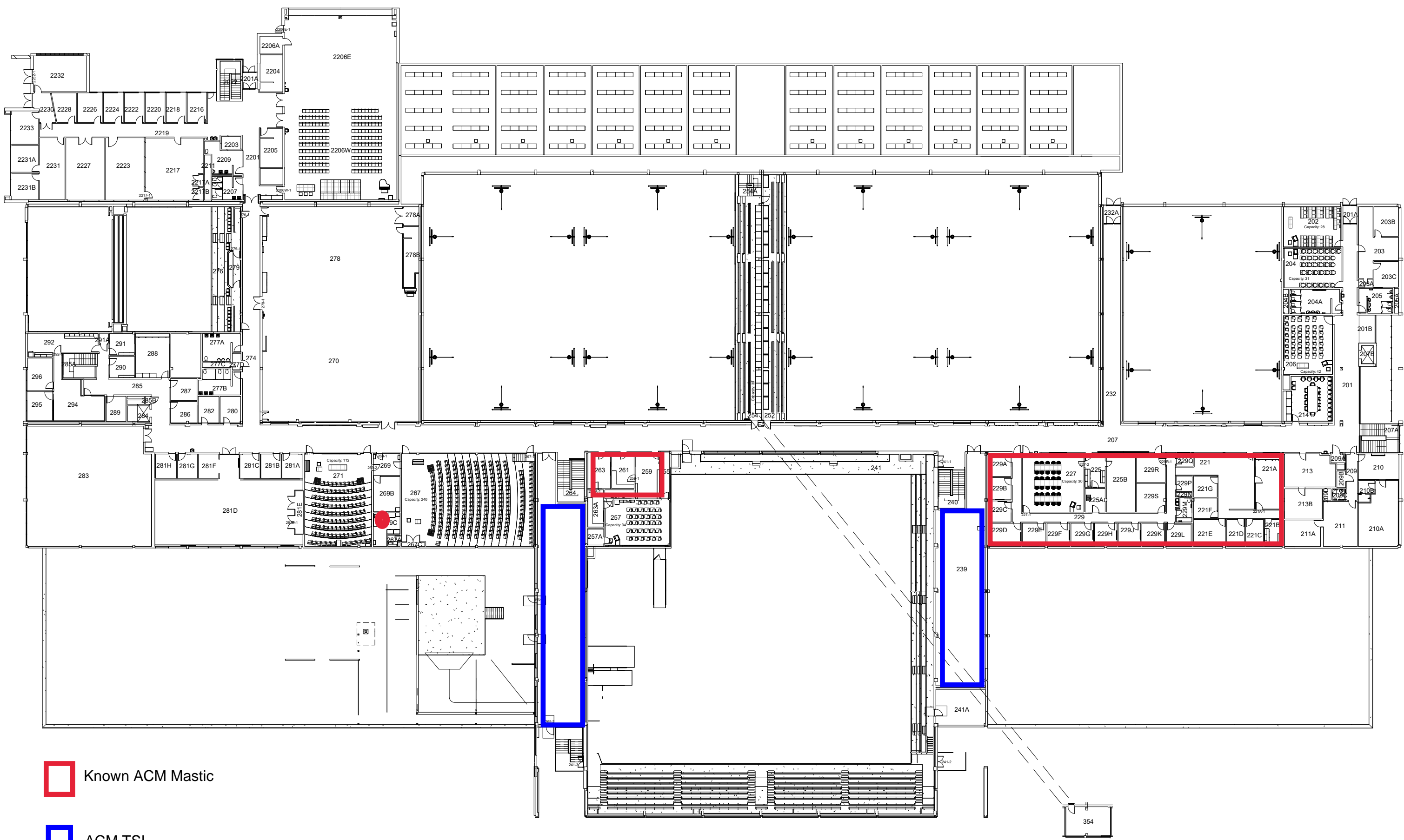



 Known ACM Mastic



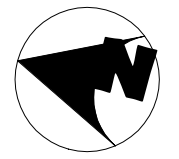
1" = 40'-0"







-  Known ACM Mastic
-  ACM TSI
-  ACM Sink Undercoat

1" = 40'-0"



Non-ACM Results by Material

Sample Number	Material Description/Lab Results	Amount	Homogeneous Area
Ceiling Panel and Tile			
RB-112823-1	2'x4' Ceiling Panel/None Detected	30,000 SF	Classrooms
RB-112823-2	2'x4' Ceiling Panel/None Detected	30,000 SF	Classrooms
RB-112823-3	2'x4' Ceiling Panel/None Detected	30,000 SF	Classrooms
RB-3124-14	2'x4' Ceiling Panel/None Detected	30,000 SF	Classrooms
			
BYUDS-51021-7	1'x1' Fissured Ceiling Tile/None Detected	7,000 SF	Dance Rooms
BYUDS-51021-8	1'x1' Fissured Ceiling Tile/None Detected	7,000 SF	Dance Rooms
BYUDS-51021-18	1'x1' Fissured Ceiling Tile/None Detected	7,000 SF	Dance Rooms
BYUDS-51021-20	1'x1' Fissured Ceiling Tile/None Detected	7,000 SF	Dance Rooms
			

BYUDS-51021-19	2'x2' Recessed Ceiling Panel/None Detected	30,000 SF	Throughout
RB-3124-1	2'x2' Recessed Ceiling Panel/None Detected	30,000 SF	Throughout
RB-3124-9	2'x2' Recessed Ceiling Panel/None Detected	30,000 SF	Throughout
RB-3124-12	2'x2' Recessed Ceiling Panel/None Detected	30,000 SF	Throughout

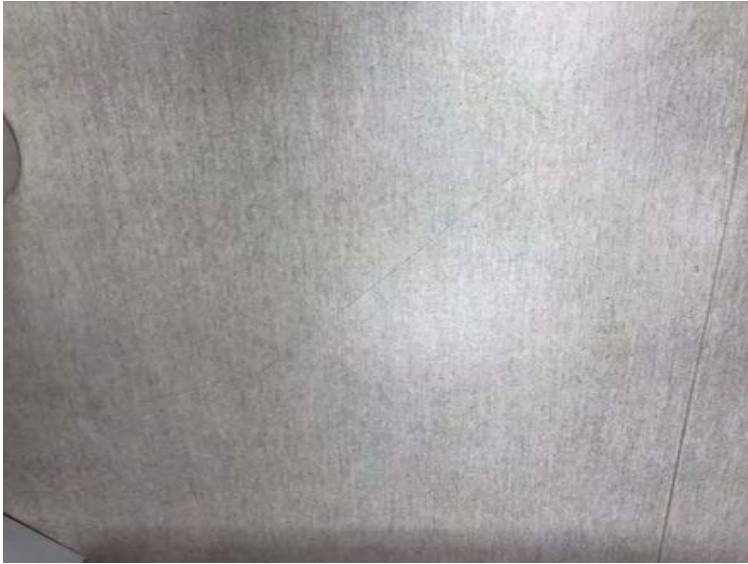


Drywall System

RB-112823-4	Drywall System/None Detected	45,000 SF	Throughout
RB-112823-5	Drywall System/None Detected	45,000 SF	Throughout
RB-112823-6	Drywall System/None Detected	45,000 SF	Throughout
RB-3124-4	Drywall System/None Detected	45,000 SF	Throughout
RB-3124-6	Drywall System/None Detected	45,000 SF	Throughout
RB-3124-18	Drywall System/None Detected	45,000 SF	Throughout
RB-3124-19	Drywall System/None Detected	45,000 SF	Throughout

Sheet Vinyl

RB-112823-7	Gray Sheet Vinyl/None Detected	800 sf	Room 123
RB-112823-8	Gray Sheet Vinyl/None Detected	800 sf	Room 123



Tile Backing

RBB-31022-1	Tile Backing/None Detected	3,200 SF	Ceramic Tile
RBB-31022-2	Tile Backing/None Detected	3,200 SF	Ceramic Tile
BYUDS-51021-9	Tile Backing/None Detected	3,200 SF	Ceramic Tile

TSI

RBB-121820-5	TSI/None Detected	9,000 LF	Throughout
RBB-121820-6	TSI/None Detected	9,000 LF	Throughout
RBB-121820-4	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
RBB-121820-7	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
RBB-121820-10	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
RBB-121820-11	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
RBB-121820-12	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
RBB-121820-16	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank

RBB-121820-17	Mudded Elbow/None Detected	300 LF	Throughout except upper expansion tank
Underlayment			
BYUDS-51021-1	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-2	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-3	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-10	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-11	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-12	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-15	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
BYUDS-51021-16	Wood Floor Underlayment/None Detected	40,000 SF	Wood Floors
Paint			
BYUDS-51021-4	Cream Block Paint/None Detected	60,000 SF	Throughout
BYUDS-51021-5	Cream Block Paint/None Detected	60,000 SF	Throughout
BYUDS-51021-6	Cream Block Paint/None Detected	60,000 SF	Throughout
BYUDS-51021-13	Cream Block Paint/None Detected	60,000 SF	Throughout
BYUDS-51021-14	Cream Block Paint/None Detected	60,000 SF	Throughout
BYUDS-51021-17	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-2	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-5	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-11	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-8	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-15	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-16	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-17	Cream Block Paint/None Detected	60,000 SF	Throughout
RB-3124-21	Cream Block Paint/None Detected	60,000 SF	Throughout



Cove Base and Mastic

RB-3124-3	4" Gray Cove Base and Mastic/None Detected	320 SF	New Section
RB-3124-20	4" Gray Cove Base and Mastic/None Detected	320 SF	New Section



RB-3124-7	4" Black Cove Base and Mastic/None Detected	230 SF	Storage Rooms
RB-3124-22	4" Black Cove Base and Mastic/None Detected	230 SF	Storage Rooms



Utah Asbestos Sampling Worksheet

Facility name, address: Richards Building Bathrooms, 15 Field House Dr, Provo, UT 84604

Scope: Test all suspect ACM for renovation


Anticipation of work: Collect samples of all homogenous, suspect materials

Suspect ACM	Quantity	Location	Sampled/ Assumed	RACM/ CAT 1/ CAT 2
RB-3124-1 Ceiling Panel	30,000 sf	Room 2231	Sampled	ND
RB-3124-2 Paint	90,000 sf	Room 2232	Sampled	ND
RB-3124-3 Cove Base and Mastic	320 sf	Room 2223	Sampled	ND
RB-3124-4 Drywall System	45,000 sf	Room 2223	Sampled	ND
RB-3124-5 Paint	90,000 sf	Room 278A	Sampled	ND
RB-3124-6 Drywall System	45,000 sf	Room 278	Sampled	ND
RB-3124-7 Cove Base and Mastic	230 sf	Room 281D	Sampled	ND
RB-3124-8 Paint	90,000 sf	Room 280	Sampled	ND
RB-3124-9 Ceiling Panel	30,000 sf	Room 292	Sampled	ND
RB-3124-10 Slnk Undercoat	8 sf	Room 269C	Sampled	CAT 2
RB-3124-11 Paint	90,000 sf	Room 269B	Sampled	ND
RB-3124-12 Ceiling Panel	30,000 sf	Room 267	Sampled	ND
RB-3124-13 TSI Mudded Elbow	90 lf	Room 265	Sampled	RACM
RB-3124-14 Ceiling Panel	30,000 sf	Room 263	Sampled	ND
RB-3124-15 Paint	90,000 sf	North Gym	Sampled	ND
RB-3124-16 Paint	90,000 sf	Room 214	Sampled	ND
RB-3124-17 Paint	90,000 sf	Room 1127	Sampled	ND
RB-3124-18 Drywall System	45,000 sf	Room 1127A	Sampled	ND
RB-3124-19 Drywall System	45,000 sf	Room 1124	Sampled	ND
RB-3124-20 Cove Base and Mastic	230 lf	Room 1122	Sampled	ND
RB-3124-21 Paint	90,000 sf	Room 137P	Sampled	ND
RB-3124-22 Cove Base and Mastic	230 lf	Room 1371	Sampled	ND

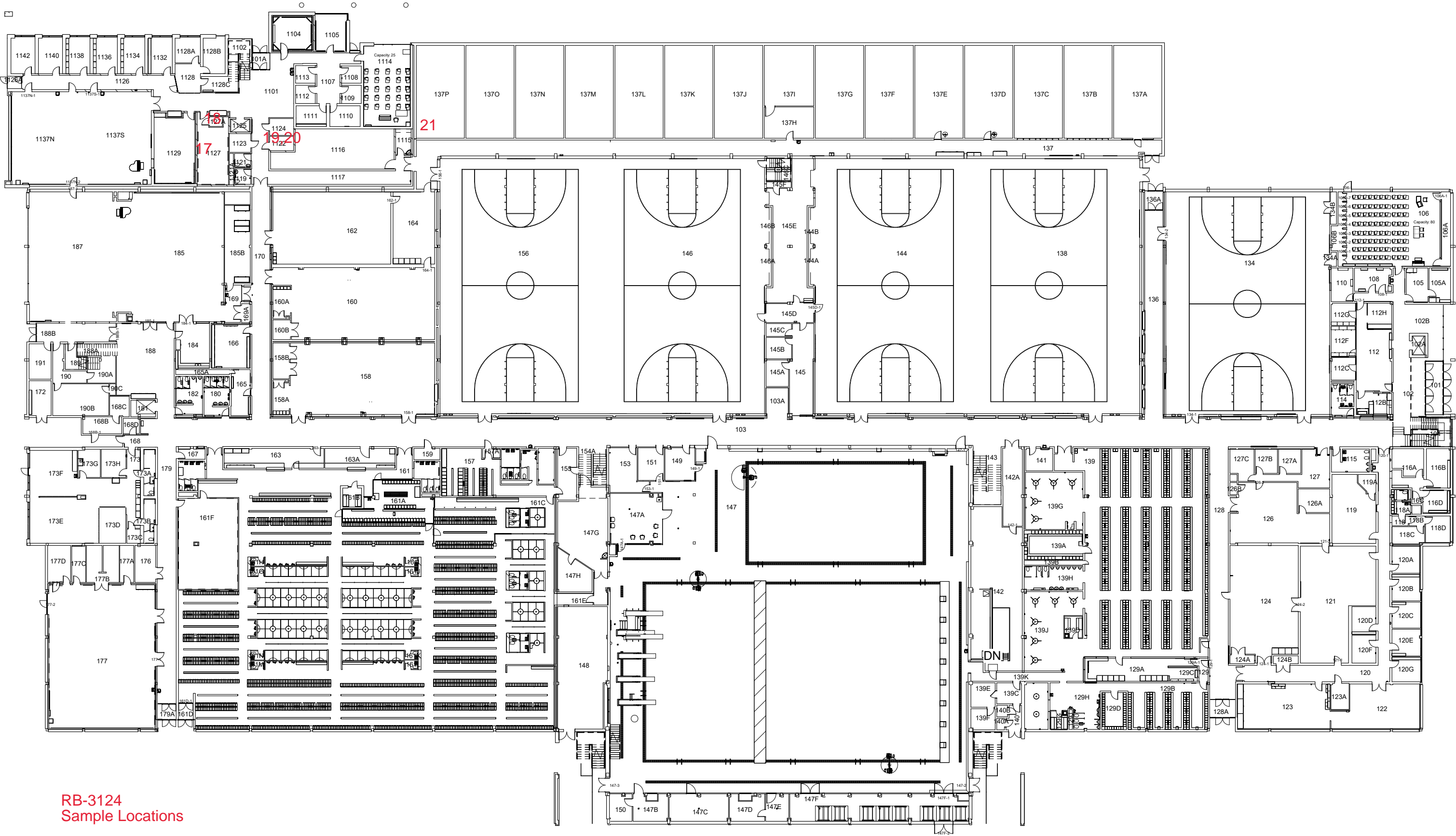
Laboratory Analysis PLM/PCM/TEM PLM

Inaccessible areas of suspect ACM Under concrete foundation, locker rooms, wall cavities

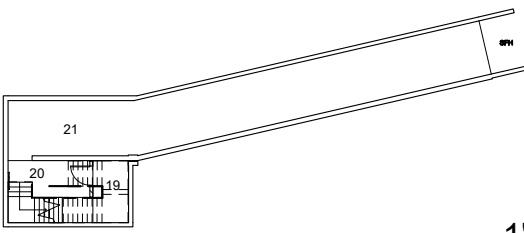
Scott Bainbridge Cert #ASB-6822

	5 Mar, 2024
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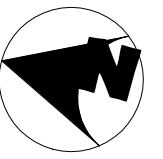
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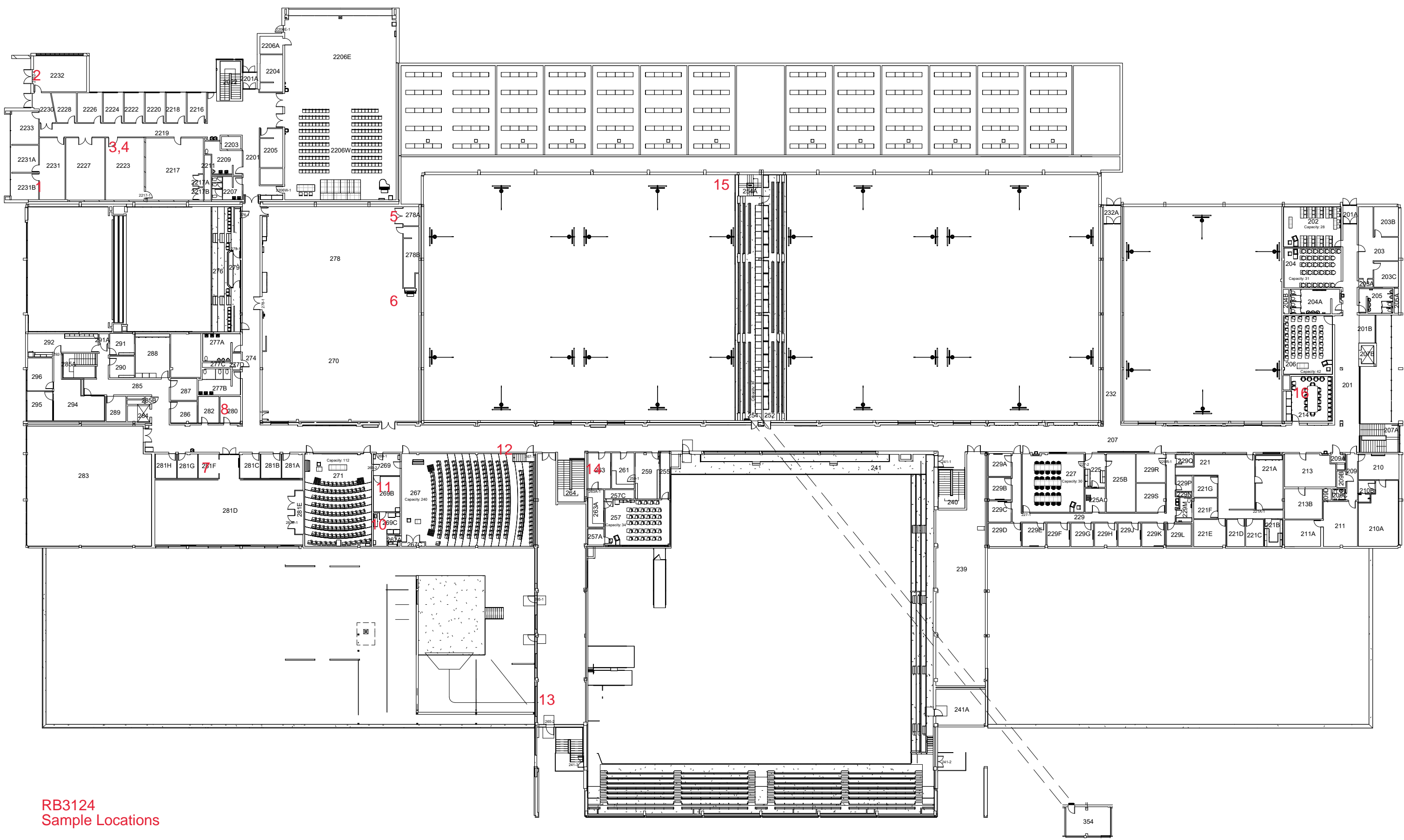


RB-3124
Sample Locations



1" = 40'-0"







**Built Environment Testing
Reservoirs**

March 06, 2024

Subcontractor Number:

Laboratory Report: RES 594768-1

Project #/P.O. #: RB-3124

Project Description: Richards Building

Scott Bainbridge
Air Quality Consulting, LLC
226 E 4800 S
Murray UT 84107

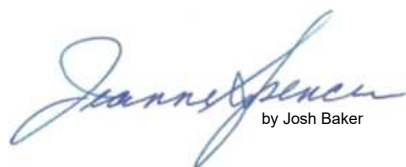
Dear Scott,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 594768-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received and with the information provided by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Josh Baker

Jeanne Spencer
President



EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 594768-1**
 Client: **Air Quality Consulting, LLC**
 Client Project/P.O.: **RB-3124**
 Client Project Description: **Richards Building**
 Date Samples Received: **March 06, 2024**
 Analysis Type: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Rush**
 Date Samples Analyzed: **March 06, 2024**

NA = Not Analyzed
 NR = Not Received
 ND = None Detected
 TR = Trace; <1 % Visual Estimate
 Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	L	A	Y	E	R	Physical Description	Sub Part	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
								Mineral	Visual Estimate (%)		
Client Sample Number							(%)		(%)		
594768 - 1-Ceiling Panel	A					White/yellow ceiling tile	100		ND	70	30
594768 - 2-Paint	A					Gray granular cementitious material	15		ND	0	100
	B					Tan granular cementitious material	20		ND	0	100
	C					White block filler w/ gray paint	65		ND	0	100
594768 - 3-Cove Base	A					Off white adhesive	4		ND	0	100
	B					Gray cove base	96		ND	0	100
594768 - 4-Drywall System	A					Gray/tan drywall w/ beige paint	100		ND	16	84
594768 - 5-Paint	A					White/multi-colored paint w/ gray/multi-colored granular debris	100		ND	0	100
594768 - 6-Drywall System	A					White compound w/ white paint	13		ND	0	100
	B					White/tan drywall	87		ND	17	83
594768 - 7-Cove Base	A					Tan adhesive	8		ND	0	100
	B					Black cove base	92		ND	0	100
594768 - 8-Paint	A					White caulk	15		ND	0	100
	B					Gray granular cementitious material w/ off white/multi-colored paint	85		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

EUROFINS RESERVOIRS ENVIRONMENTAL, INC

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 Date Samples Analyzed: **March 06, 2024**

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 Trem-Act = Tremolite-Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
594768 - 9-Ceiling Panel	A	White/gray ceiling tile	100		ND	65	35
594768 - 10-Sink Undercoat	A	Gray fibrous sink undercoating	100	Chrysotile	12	0	88
594768 - 11-Paint	A	Gray granular cementitious material w/ white/multi-colored paint	100		ND	0	100
594768 - 12-Ceiling Panel	A	White/gray ceiling tile	100		ND	65	35
594768 - 13-TSI Mudded Elbow	A	White fibrous woven material w/ gray paint	10		ND	75	25
	B	Off white fibrous plaster	90	Chrysotile	10	12	78
594768 - 14-Ceiling Panel	A	White/beige ceiling tile	100		ND	65	35
594768 - 15-Paint	A	Gray granular cementitious material w/ off white paint	100		ND	0	100
594768 - 16-Paint	A	White granular cementitious material w/ off white/cream paint	25		ND	0	100
	B	Gray granular cementitious material w/ off white/cream paint	75		ND	0	100
594768 - 17-Paint	A	Gray/multi-colored cinder block w/ light gray paint & white block filler	100		ND	0	100
594768 - 18-Drywall System	A	White compound w/ gray/white paint	9		ND	0	100
	B	White/tan drywall	91		ND	17	83

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

EUROFINS RESERVOIRS ENVIRONMENTAL, INC

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NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
594768 - 19-Drywall System	A	White compound w/ gray/white paint	11		ND	0	100
	B	White/tan drywall	89		ND	17	83
594768 - 20-Cove Base	A	Off white adhesive	TR		ND	0	100
	B	Gray cove base	100		ND	0	100
594768 - 21-Paint	A	Gray/multi-colored paint	100		ND	0	100
594768 - 22-Cove Base	A	Tan adhesive	6		ND	0	100
	B	Black cove base	94		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.



Josh Baker
Analyst

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES	
Company: Air Quality Consulting, LLC		Company: Air Quality Consulting, LLC		Contact: Scott Bainbridge		-1 PLM Rush *NO VERBALS*	
Address: 226 E 4800 S		Address: 226 E 4800 S		Phone: (385) 321-9701			
				Fax:			
Murray, UT 84107		Murray, UT 84107		Cell: (385) 321-9701			
Project Number and/or P.O. #: RB-3124				Final Data Deliverable Email Address:			
Project Description/Location: Richards Building				scott@airqualityconsult.com			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm		REQUESTED ANALYSIS				VALID MATRIX CODES		LAB NOTES	
PLM / PCM / TEM DTL RUSH PRIORITY STANDARD		PLM - PLM Short Report (EPA/600/R-93/116) TEM - AHERA (+/- or Quantified), Microvacc (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level III, ISO 10312, ISO 13794, Chatfield, Drinking Water, Waste Water, Bulk +/-, C18B, Modified Ahera PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware, Multi Metals (7303, 6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA, & Scan, Wetting, Fume Scan, Full Metals Scan ORGANICS - Methamphetamine, TSS VIABLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E.coli O157:H7, E.coli Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (w/o ID or w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C) MEDICAL - Biorburden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification	Air = A		Bulk = B				Laboratory Analysis Instructions
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm			Dust = D		Food = F				
Dust RUSH PRIORITY STANDARD			Paint = P		Soil = S				
Metals RUSH PRIORITY STANDARD			Surface = SU		Swab = SW				
*PRIOR NOTICE REQUIRED FOR SAME DAY TAT			Tape = T		Wipe = W				
Organics* SAME DAY RUSH PRIORITY STANDARD			Drinking Water = DW						
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm			Waste Water = WW						
Viable Analysis** PRIORITY STANDARD			**ASTM E1792 approved wipe media only**						
**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH			Sample Volume (L) / Area		Length (or Aliquots) x Width (or Area per Aliquot)				
Medical Device Analysis RUSH STANDARD			Matrix Code		# of Containers				
Mold Analysis RUSH PRIORITY STANDARD			Date Collected mm/dd/yy		Time Collected hh:mm				
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.									
Special Instructions:									
Client Sample ID Number (Sample ID's must be unique)		ASBESTOS		CHEMISTRY		MICROBIOLOGY		ICO	
1	1-Ceiling Panel	X						B	
2	2-Paint	X						B	
3	3-Cove Base	X						B	
4	4-Drywall System	X						B	
5	5-Paint	X						B	
6	6-Drywall System	X						B	
7	7-Cove Base	X						B	
8	8-Paint	X						B	
9	9-Ceiling Panel	X						B	
10	10-Sink Undercoat	X						B	
11	11-Paint	X						B	
12	12-Ceiling Panel	X						B	
13	13-TSI Mudded Elbow	X						B	

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.

EREI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Scott Bainbridge	Date/Time: 03/05/2024 15:03:47	Sample Condition: Acceptable
Received By:		Jessica Shapiro	Date/Time: 03/06/2024 10:10:47	Carrier: Fed-Ex



Built Environment Testing Reservoirs

RES Job #: **594768**

Submitted By: **Air Quality Consulting, LLC**

Client Sample ID Number <small>(Sample ID's must be unique)</small>	REQUESTED ANALYSIS					VALID MATRIX CODES					LAB NOTES
	ASBESTOS	CHEMISTRY	MICROBIOLOGY	ICO		Sample Volume (L) / Area Length (or Aliquots) x Width (or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
14 14-Ceiling Panel	X						B				
15 15-Paint	X						B				
16 16-Paint	X						B				
17 17-Paint	X						B				
18 18-Drywall System	X						B				
19 19-Drywall System	X						B				
20 20-Cove Base	X						B				
21 21-Paint	X						B				
22 22-Cove Base	X						B				



**Built Environment Testing
Reservoirs**

February 26, 2024

Subcontractor Number:

Laboratory Report: RES 593861-1

Project #/P.O. #: RB-22324

Project Description: Richards Building

Scott Bainbridge
Air Quality Consulting, LLC
226 E 4800 S
Murray UT 84107

Dear Scott,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 593861-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received and with the information provided by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Andrew Roberts

Jeanne Spencer
President



EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 593861-1**
 Client: **Air Quality Consulting, LLC**
 Client Project/P.O.: **RB-22324**
 Client Project Description: **Richards Building**
 Date Samples Received: **February 26, 2024**
 Analysis Type: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Rush**
 Date Samples Analyzed: **February 26, 2024**

NA = Not Analyzed
NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
593861 - 1-Vinyl Tile (Sample not Labeled)	A	Black mastic	1	Chrysotile	10	0	90
	B	Blue adhesive	7		ND	0	100
	C	Gray tile	92	Chrysotile	5	0	95
593861 - 2-Vinyl Tile (Sample not Labeled)	A	Black mastic	1	Chrysotile	10	0	90
	B	Blue adhesive	5		ND	0	100
	C	Gray tile	94	Chrysotile	5	0	95
593861 - 3-Vinyl Tile (Sample not Labeled)	A	Black mastic	2	Chrysotile	10	0	90
	B	Blue adhesive	5		ND	0	100
	C	Gray tile	93	Chrysotile	5	0	95

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.


Andrew Roberts
Analyst

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES	
Company: Air Quality Consulting, LLC		Company: Air Quality Consulting, LLC		Contact: Scott Bainbridge		-1 PLM Rush *NO VERBALS*	
Address: 226 E 4800 S		Address: 226 E 4800 S		Phone: (385) 321-9701			
Murray, UT 84107		Murray, UT 84107		Fax:			
Project Number and/or P.O. #: RB-22324				Cell: (385) 321-9701			
Project Description/Location: Richards Building				Final Data Deliverable Email Address: scott@airqualityconsult.com (+ 2 ADDNL. CONTACTS)			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm		REQUESTED ANALYSIS				VALID MATRIX CODES		LAB NOTES		
PLM / PCM / TEM	DTL RUSH PRIORITY STANDARD	PLM - PLM Short Report (EPA/600/R-93/116) TEM - AHERA (+/- or Quantified), Microvac (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level III, ISO 10312, ISO 13794, Chatfield, Drinking Water, Waste Water, Bulk +/-, CARB, Modified Abras PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metals (7303, 6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA, & Scan, Welding Fume Scan, Full Metals Scan ORGANICS - Methamphetamine, TSS VIBLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E.coli O157:H7, E.coli Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (w/o/D or w/D), Enterococcus (+/- or Quantification), Legionella (P, NP, C) MEDICAL - Bioburden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification	Air = A		Bulk = B		Laboratory Analysis Instructions			
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm			Dust = D		Food = F					
Dust	RUSH PRIORITY STANDARD		Paint = P		Soil = S					
Metals	RUSH PRIORITY STANDARD <small>*PRIOR NOTICE REQUIRED FOR SAME DAY TAT</small>		Surface = SU		Swab = SW					
Organics*	SAME DAY RUSH PRIORITY STANDARD		Tape = T		Wipe = W					
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm			Drinking Water = DW							
Viability Analysis**	PRIORITY STANDARD <small>**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH</small>		Waste Water = WW							
Medical Device Analysis	RUSH STANDARD		**ASTM E1792 approved wipe media only**							
Mold Analysis	RUSH PRIORITY STANDARD		Sample Volume (L) / Area	Length (or Aliquots) x Width (or Area per Aliquot)	Matrix Code	# of Containers			Date Collected mm/dd/yy	Time Collected hh:mm
Special Instructions:			**Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.**							
Client Sample ID Number (Sample ID's must be unique)		ASBESTOS	CHEMISTRY	MICROBIOLOGY	ICO					
1	1-Vinyl Tile	X				B				
2	2-Vinyl Tile	X				B				
3	3-Vinyl Tile	X				B				

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.

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Relinquished By:		Scott Bainbridge	Date/Time: 02/26/2024 11:56:17	Sample Condition: Acceptable
Received By:		Jessica Shapiro	Date/Time: 02/26/2024 12:09:20	Carrier: Fed-Ex

List of NESHAP Regulated Materials Tested and Found in Surveys

1. Friable asbestos material (>1% asbestos and can be crumbled, pulverized or reduced to powder by hand pressure)

Tested	Materials	Positive
<u> X </u>	Thermal System Insulation (TSI)	<u> X </u>
<u> </u>	Textured Ceiling Materials (TCM)	<u> </u>
<u> </u>	Spray-on Insulation or Fireproofing	<u> </u>
<u> </u>	Blown-in Insulation	<u> </u>
<u> </u>	Ceiling Tiles/Panels	<u> </u>
<u> </u>	Plaster, Gypsum Board, Joint Compound	<u> </u>
<u> </u>	Cloth Materials	<u> </u>
<u> </u>	Paper Materials	<u> </u>
<u> </u>	Electrical Wiring Insulation	<u> </u>
<u> </u>	Sink Undercoating (loose)	<u> </u>
<u> </u>	Other _____	<u> </u>

2. Category I ACM which has become friable

Tested	Materials	Positive
<u> </u>	Packings	<u> </u>
<u> </u>	Gaskets	<u> </u>
<u> </u>	Vinyl Floor Tile and Sheet Vinyl Flooring	<u> </u>
<u> </u>	Asphalt Roofing Products	<u> </u>

3. Category I ACM that will be or has been subjected to sanding, grinding, cutting or abrading

Tested	Materials	Positive
<u> </u>	Packings	<u> </u>
<u> </u>	Gaskets	<u> </u>
<u> </u>	Vinyl Floor Tile and Sheet Vinyl Flooring	<u> </u>
<u> </u>	Asphalt Roofing Products	<u> </u>

4. Category II ACM that has a high probability of becoming or has become friable in the course of demolition or renovation operations

Tested	Materials	Positive
<u> </u>	Asbestos Cement Materials (transite)	<u> </u>
<u> </u>	Asphalt, tar and rubber base ACM products other than roofing	<u> </u>
<u> </u>	Non-asphalt and Non-paper Roofing Products	<u> </u>
<u> </u>	Paint	<u> </u>
<u> </u>	Fire Brick and/or Mortar	<u> </u>
<u> </u>	Stainless Steel Sink Undercoating (solid)	<u> </u>
<u> </u>	Encapsulated TCM	<u> </u>
<u> </u>	Encapsulated TSI	<u> </u>
<u> </u>	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	<u> </u>

List of NESHAP Non-Regulated Materials Tested and Found in Survey

1. $\geq 1\%$ Asbestos
2. Category I Non-Friable (cannot be crumbled, pulverized or reduced to powder by hand pressure) ACM with $>1\%$ asbestos by new PLM procedure

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
<u> X </u>	Vinyl Floor Tile and Sheet Vinyl Flooring	<u> X </u>
_____	Asphalt Roofing Products	_____

3. Category II Non-Friable ACM with $>1\%$ asbestos by new PLM procedure (category includes items meeting Category I definition but not specifically listed in that category)

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
<u> X </u>	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	<u> X </u>
_____	Other <u> Fume Hood Base </u>	_____

Notes

1. All materials and conditions are interpreted by Air Quality Consulting LLC
2. The Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) asbestos revision as outlined in 40 CFR, Part 61, became effective November 20, 1990. The asbestos classification system outlined in the revision and included in this section is dynamic in nature. Asbestos materials classified as “Non-Regulated” at the time of the survey may become “Regulated” due to ongoing or planned maintenance, renovation or demolition actions which can transform a material containing greater than 1% asbestos from a “non-friable” and “Non-Regulated” to a “friable” and “Regulated” condition. Classification of ACM in this section and in the executive summary of this report is, therefore, based on the observations of the surveyor at the time of the survey and may or may not be appropriate at later dates.
3. Maintenance, renovation, demolition, weathering, normal wear, water or other damage can alter the “Non-Regulated” status of materials, and necessitate precautions required for handling them as “Regulated” asbestos-materials.
4. Details on testing locations, methods and results can be found on remaining report.

**Asbestos Survey and Assessment Performed at
Stephen L. Richards Building
15 Field House Drive
Provo, Utah 84604
30 November, 2023**

Scope of Work

We were hired by Brigham Young University to survey the Richards Building for a pending renovation. Samples were taken by Scott Bainbridge and tested at Reservoirs Environmental in Denver, Colorado. Past sampling and materials were verified and used to update the report. The results are included in this report.

Methods and Materials

A survey of the areas outlined in the floorplan sections was conducted to observe, identify, locate and sample any materials suspected of containing asbestos according to NESHAP categories. All accessible areas were identified and documented.

Bulk samples were collected using approved methods and microscopically analyzed for asbestos content by Reservoirs Environmental, Inc. in Denver, Colorado. Reservoirs participates in the National Institute for Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP).

Asbestos percentages were estimated utilizing the polarized light microscope (PLM) and dispersion staining methods as prescribed by NIOSH.

Scott Bainbridge

7 March, 2024

Scott Bainbridge
State of Utah Inspector #ASB-6822 exp. 1/6/24

Date

Annabelle Mitchell

7 March, 2024

Annabelle Mitchell
State of Utah Inspector #ASB-8012 exp. 2/10/24

Date

May 3, 2021

Brigham Young University
Risk Management and Safety
795 North 500 East
Provo, UT 84602-0100

Attn: Jeff Throckmorton

Ref: Batch # 181104, Lab # BY3017 - BY3031
Received April 29, 2021
Test report, Page 1 of 4
BYU - Richards BLDG
Sampled by Throckmorton

Dear Mr. Throckmorton

Samples BY3017 through BY3031 have been analyzed by visual estimation based on EPA-600/M4-82-020 December 1982 optical microscopy test method, with guidance from the EPA/600/R-93/116 July 1993 and OSHA ID 191 methods. Appendix "A" contains statements which an accredited laboratory must make to meet the requirements of accrediting agencies. It also contains additional information about the method of analysis. Appendix "A" must be included as an essential part of this test report. This analysis is accredited under NVLAP Lab Code: 101012-0. It does not contain data or calibrations for tests performed under the AIHA program under lab code 101579.

This report may be reproduced but all reproduction must be in full unless written approval is received from the laboratory for partial reproduction. The results of analysis are as follows:

Lab BY3017, Field 297-CT Ceiling Tile In 297

This is a light gray sample with perlite, 20% plant fiber, and 25% mineral wool in resin binder with a white coating on one side. **Asbestos is none detected.**

The white coating is 1% of the sample.

Lab BY3018, Field 297-CT Ceiling Tile In 297

This is a light gray sample with perlite, 20% plant fiber, and 25% mineral wool in resin binder with a white coating on one side. **Asbestos is none detected.**

The white coating is 1% of the sample.

Batch # 181104
Lab # BY3017 - BY3031
Page 2 of 4

Lab BY3019, Field 297-CT Ceiling Tile In 297

This is a light gray sample with perlite, 20% plant fiber, and 25% mineral wool in resin binder with a white coating on one side. **Asbestos is none detected.**

The white coating is 1% of the sample.

Lab BY3020, Field 293-CT Ceiling Tile In 293

This is 60% mineral wool in white resin binder. **Asbestos is none detected.**

Lab BY3021, Field 293-CT Ceiling Tile In 293

This is 60% mineral wool in white resin binder. **Asbestos is none detected.**

Lab BY3022, Field 293-CT Ceiling Tile In 293

This is 60% mineral wool in white resin binder. **Asbestos is none detected.**

Lab BY3023, Field 295-CT Ceiling Tile In 295

This sample contains three types of material: The first type is white coating; the second type is 60% mineral wool in white resin binder; the third type is white plant fiber paper. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 1% of the sample. The second type is 95% of the sample. The third type is 4% of the sample.

Lab BY3024, Field 296-CT Ceiling Tile In 296

This sample contains three types of material: The first type is white coating; the second type is 60% mineral wool in white resin binder; the third type is white plant fiber paper. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 1% of the sample. The second type is 95% of the sample. The third type is 4% of the sample.

Lab BY3025, Field 294-INS Ceiling Insulation 294

This is gray organic fiber insulation with a trace of debris. **Asbestos is none detected.**

Lab BY3026, Field 297-INS Ceiling Insulation 297

This is gray organic fiber insulation with a trace of debris. **Asbestos is none detected.**

Lab BY3027, Field 11 Ceiling Insulation In 294

This is gray organic fiber insulation with a trace of debris. **Asbestos is none detected.**

Batch # 181104
Lab # BY3017 - BY3031
Page 3 of 4

Lab BY3028, Field 12 Wall In 297

This sample contains two types of material: The first type is white paint; the second type is gray sandy cement with cinders. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 5% of the sample. The second type is 95% of the sample.

Lab BY3029, Field 13 Wall In 297

This sample contains three types of material: The first type is white paint; the second type is tan plant fiber paper; and the third type is white gypsum plaster with 1% fiberglass. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 1% of the sample. The second type is 3% of the sample. The third type is 96% of the sample.

Lab BY3030, Field 14 Wall In 293

This sample contains two types of material: The first type is white paint; the second type is gray sandy cement with cinders. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 5% of the sample. The second type is 95% of the sample.

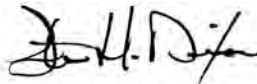
Lab BY3031, Field 15 Ceiling Tile In 294

This sample contains three types of material: The first type is white coating; the second type is 60% mineral wool in white resin binder; the third type is white plant fiber paper. This sample is non-homogeneous. **Asbestos is none detected.**

The first type is 3% of the sample. The second type is 95% of the sample. The third type is 2% of the sample.

In order to be sure reagents and tools used for analysis are not contaminated with asbestos, blanks are tested. Asbestos was none detected in the blanks tested with this bulk sample set.

Very truly yours,



Steve H. Dixon, President

Analyzed by Alex Kachel on April 30, 2021

APPENDIX "A"

"This report relates only to the items tested. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST, AIHA-LAP LLC, or any agency of the US government."

NVLAP and AIHA-LAP LLC require laboratories to state the condition of the samples received for testing. The condition of these samples is acceptable for analysis unless there is a characteristic indicating otherwise. If a test item is not acceptable, requires a modification to the standard method, or has cause for analysis sensitivity, it will be identified by a note for that particular test item under the laboratory number on the final report. If the samples are non homogenous, a statement will be included with the sample result. Each component or sub-sample is analyzed separately. The reported results and percentages of each material type are based on the sample received by the laboratory and may not be representative of the parent material. Orientation of top and bottom may not be specified due to uncertainty of orientation.

METHODS OF ANALYSIS AND LIMIT OF DETECTION

For air count analysis, the results may be biased when interferences are noted.

The accuracy of asbestos analysis in bulk samples increases with increasing concentration of asbestos. Pigments, binders, small sample size, and multiple layers may affect the analysis sensitivity.

There are two methods for analysis of asbestos in a bulk test sample: *Visual Estimation* and *Point Count*. Visual estimation with gravimetry is the most sensitive method. If an analyst makes a patient search, 0.1% or less asbestos can be detected in a bulk sample. Point count analysis is a method with a statistical approach.

Government agencies regulate asbestos containing materials (ACM) whenever the ACM is more than 1%. EPA will not accept visual estimation to verify that trace amounts of asbestos are less than 1%. EPA requires point count to verify less than 1% asbestos content. OSHA requirements apply on samples containing any amount of asbestos.

Due to higher charge for a point count analysis, Dixon Information Inc. does not perform a point count unless authorized to do so by the customer. If a sample is point counted, when possible, various chemical and/or physical means may be used to concentrate the asbestos in the sample. This is permitted by the EPA method and it increases the accuracy of the analysis.

Asbestos RUSH Analytical Request Form

Dixon Information Inc.
e-mail: info@dixoninformation.com

78 West 2400 South
South Salt Lake, Utah 84115
Phone: (801) 486-0800

Turnaround Time - Check one

- Priority Rush** (Before 8am next business day \$35.00 per sample)
- Next Day Rush** (Before midnight next day \$25.00 per sample)
- Non-rush** (1 week \$17.00 per sample)
- Expedited Point Count** (Next Day Rush \$70.00 per sample)
- Non-rush Point Count** (\$45.00 per sample)
- Emergency A.S.A.P.** (upon availability, emailed report a.s.a.p. \$100.00 per sample.)
- Next Day Rush Vermiculite by Weight** (\$75.00 per sample)
- Non-rush Vermiculite by Weight** (\$50.00 per sample)
- After Hours** (\$50.00 base charge up to 5 samples. \$10.00 per additional sample. Priority Rush price per sample also applies. Holidays and from midnight to 0800 double fee.)

Batch # B 181104

Name of location sample was taken at: BYU - RICHARDS BLDG Project/ Job #:

Street address sample was taken at: Work Order #:

Sampled by: THROCKMORTON Date: 4/28/21 Purchase Order #:

Were these samples exposed to category 3 flooding or any hazardous chemicals? Yes No If yes, please explain:

A contact number is required on this form to receive preliminary results. You may mark preferred contact method. Report will only be sent to persons/company listed on this form. Customer information and report content is confidential.

Report to be Sent to: <u>THROCKMORTON</u>	Billing to be sent to: <u>SALES</u>
Company: <u>BYU</u> <input type="checkbox"/> Text #:	Company:
Address: <u>795 N 500 E</u> <input type="checkbox"/> Telephone #: <u>(801) 205-7900</u>	Address:
City/State/Zip: <u>PROVO UTAH 84602</u>	City/State/Zip:
Email: <u>JEFF_THROCKMORTON@BYU.EDU</u>	Telephone #:

Field #	Date	Description:	Lab#
297 CT	4/29	CEILING TILE IN 297	3017
2 297 CT	4/28	" " " "	3018
3 297 CT	4/29	" " " "	3019
4 293 CT	4/29	CEILING TILE IN 293	3020
5 293 CT	4/28	" " " "	3021
6 293 CT	4/28	" " " "	3022
7 295 CT	"	CEILING TILE IN 295	3023
8 296 CT	"	CEILING TILE IN 296	3024
9 294 INS	"	CEILING INSULATION 294	3025
10 297 INS	"	CEILING INSULATION 297	3024

Additional Notes:

Chain of Custody: serves as Dixon Information Inc.'s official work contract. Receiving samples signifies the Lab's capabilities to analyze the samples. Submission of asbestos for analysis and/or signing a Chain of Custody is the equivalent of submission of a purchase order and constitutes an agreement to pay for services provided at Dixon Information Inc. standard schedule of fees for services. Dixon Information reserves the right to charge interest of 1.5% per month on unpaid invoices. Any change must be approved by laboratory and customer. Turnaround Time is subject to sample load.

Submitted by:	Date:	Time:
Received by Lab: <u>GW</u>	Date: <u>4-29-21</u>	Time: <u>1405</u>
Received by Analyst: <u>[Signature]</u>	Date: <u>4-30-21</u>	Time: <u>1830</u>
Returned by Lab:	Date:	Time:

0106 2/2

Bulk Asbestos Analytical Request Form

Dixon Information Inc.
e-mail: info@dixoninformation.com

78 West 2400 South
South Salt Lake, Utah 84115
Phone: (801) 486-0800

Turnaround Time - Check one

- Priority Rush** (Before 8am next business day \$35.00 per sample)
- Next Day Rush** (Before midnight next day \$25.00 per sample)
- Non-rush** (1 week \$17.00 per sample)
- Expedited Point Count** (Next Day Rush \$70.00 per sample)
- Non-rush Point Count** (\$45.00 per sample)
- Emergency A.S.A.P.** (upon availability, emailed report a.s.a.p. \$100.00 per sample.)
- Next Day Rush Vermiculite by Weight** (\$75.00 per sample)
- Non-rush Vermiculite by Weight** (\$50.00 per sample)
- After Hours** (\$50.00 base charge up to 5 samples. \$10.00 per additional sample. Priority Rush price per sample also applies. Holidays and from midnight to 0800 double fee.)

Batch # _____

Name of location sample was taken at:	Project/ Job #:
Street address sample was taken at:	Work Order #:
Sampled by:	Date: Purchase Order #:

Were these samples exposed to category 3 flooding or any hazardous chemicals? Yes No If yes, please explain:

A contact number is required on this form to receive preliminary results. You may mark preferred contact method. Report will only be sent to persons/company listed on this form. Customer information and report content is confidential.

Report to be Sent to:	Billing to be sent to:
Company: <input type="checkbox"/> Text #:	Company:
Address: <input type="checkbox"/> Telephone #:	Address:
City/State/Zip:	City/State/Zip:
Email:	Telephone #:

Field #	Date	Description:	Lab#
11	4/28	CEILING INSULATION IN 294	3027
12	4/28	WALL IN 297	3028
13	4/28	WALL IN 297	3029
14	4/28	WALL IN 293	3030
15	4/28	CEILING TILE IN 294	3031

Additional Notes:

Chain of Custody: serves as Dixon Information Inc.'s official work contract. Receiving samples signifies the Lab's capabilities to analyze the samples. Submission of asbestos for analysis and/or signing a Chain of Custody is the equivalent of submission of a purchase order and constitutes an agreement to pay for services provided at Dixon Information Inc. standard schedule of fees for services. Dixon Information reserves the right to charge interest of 1.5% per month on unpaid invoices. Any change must be approved by laboratory and customer. Turnaround Time is subject to sample load.

Submitted by: <i>[Signature]</i>	Date: 4/28/01	Time:
Received by Lab: <i>[Signature]</i>	Date: 4-29-01	Time: 1405
Received by Analyst: <i>[Signature]</i>	Date: 4-30-01	Time: 1830
Returned by Lab:	Date:	Time:

Dixon Information, Inc.

78 W 2400 S
South Salt Lake, UT 84115

Invoice

Date	Invoice #
4/29/2021	181104

Phone #	Fax #	E-mail	Web Site
(801) 486 - 0800	(801) 486 - 0849	Info@DixonInformation.com	www.DixonInformation.com

Project	Bill To	
	Brigham Young University Risk Management & Safety 240 BRWB Provo Utah 84602	
Site/Location	Payment Method	P.O. No.
BYU - Richards BLDG		

Item	Quantity	Description	Rate	Amount
BULK - NEXT DAY	15	Bulk Asbestos Sample Analysis - Next Day	25.00	375.00

Total	\$375.00
--------------	----------

Payments/Credits	\$0.00
Balance Due	\$375.00



**226 East 4800 South
Murray, Utah 84107
Phone 385-321-9701**

AN ASBESTOS SURVEY AND ASSESSMENT FOR

**BYU
Richards Building Bathrooms
15 Field House Dr
Provo, UT 84604
March 12, 2022**

**Prepared by:
Scott Bainbridge #ASB-6822
Elise Bainbridge #ASB-7303
Eldon C. Romney, LEHS #ASB-1362
Air Quality Consulting, LLC #603**

**385-321-9701
scott@airqualityconsult.com**

Executive Summary

Asbestos-containing material (ACM) was not found in the Richards Building Bathrooms.

* - Denotes less than 1% asbestos which is regulated by OSHA, it is recommended to review their regulations before removal

Building Description

Structure: Block and Wood or Metal Framed

Roof: Not Inspected

Siding: Brick

Foundation: Concrete

Insulation: None

Walls: Ceramic Tile

Ceiling: Ceiling Panel

Flooring: Ceramic Tile

Non-ACM Results by Material

Sample Number	Material/Lab Results	Homogeneous Area
Tile Backing		
RBB-31022-1	Tile Backing/None Detected	Men's Restroom
RBB-31022-2	Tile Backing/None Detected	Floor

Utah Asbestos Sampling Worksheet

Facility name, address: Richards Building Bathrooms, 15 Field House Dr, Provo, UT 84604

Scope: Test all suspect ACM for renovation


Anticipation of work: Collect samples of all homogenous, suspect materials

Suspect ACM	Quantity	Location	Sampled/ Assumed	RACM/ CAT 1/ CAT 2
RBB-31022-1	400 SF	Men's Restroom	Sampled	ND
RBB-31022-2	120 SF	Floor	Sampled	ND

Laboratory Analysis PLM/PCM/TEM PLM

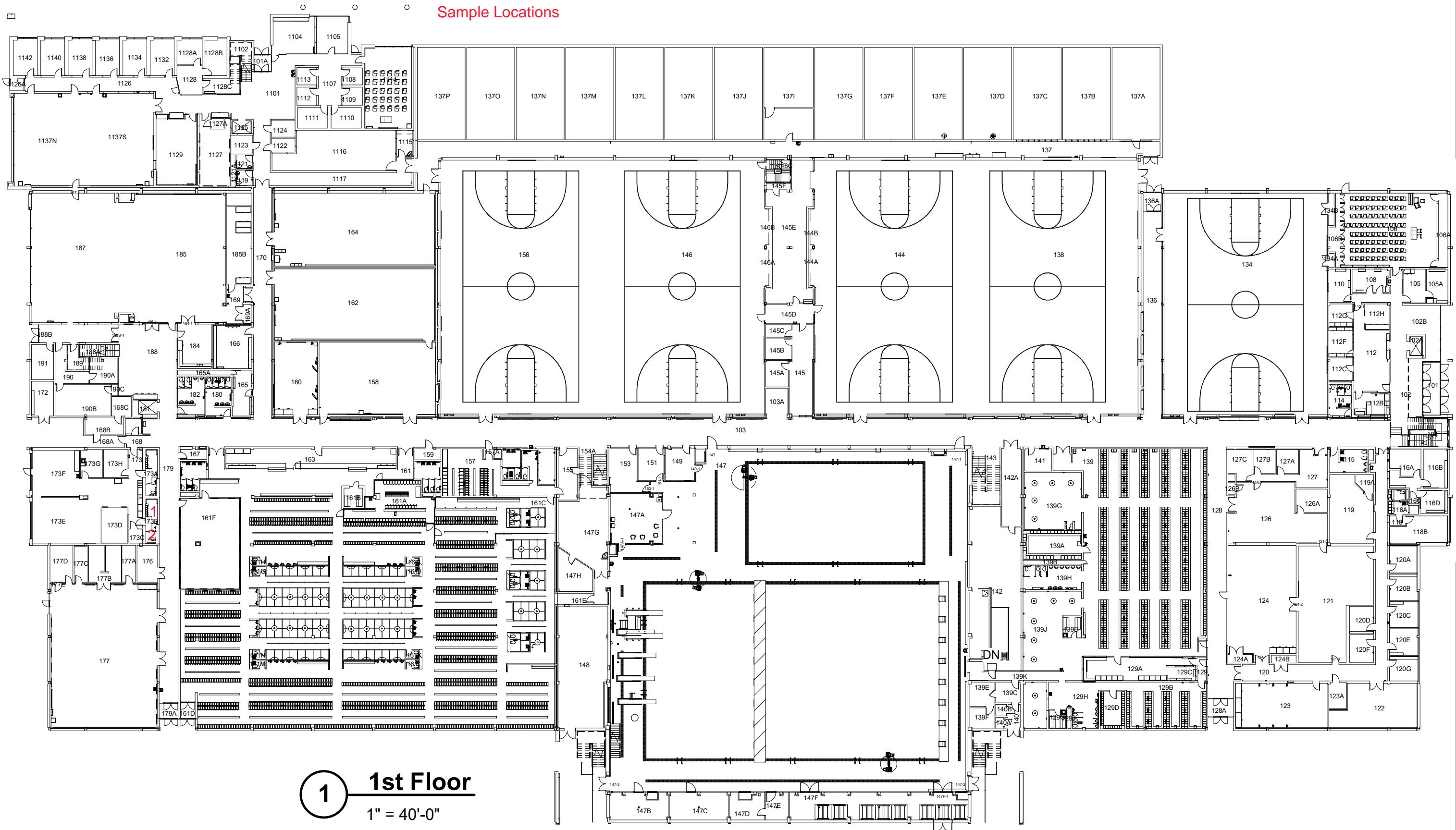
Inaccessible areas of suspect ACM Under concrete foundation

Scott Bainbridge Cert #ASB-6822

	10 Mar, 2022
---	---------------------

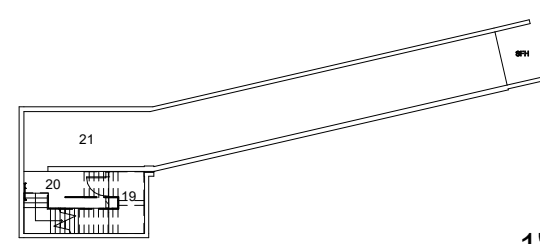
* - Denotes less than 1% asbestos which is regulated by OSHA, it is recommended to review their regulations before removal

Sample Locations

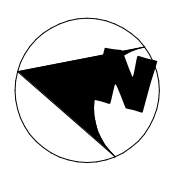


1 1st Floor
1" = 40'-0"

2 Tunnel
1" = 40'-0"



1" = 40'-0"



List of NESHAP Regulated Materials Tested and Found in Surveys

1. Friable asbestos material (>1% asbestos and can be crumbled, pulverized or reduced to powder by hand pressure)

Tested	Materials	Positive
_____	Thermal System Insulation (TSI)	_____
_____	Textured Ceiling Materials (TCM)	_____
_____	Spray-on Insulation or Fireproofing	_____
_____	Blown-in Insulation	_____
_____	Ceiling Tiles/Panels	_____
_____	Plaster, Gypsum Board, Joint Compound	_____
_____	Cloth Materials	_____
_____	Paper Materials	_____
_____	Electrical Wiring Insulation	_____
_____	Sink Undercoating (loose)	_____
_____	Other _____	_____

2. Category I ACM which has become friable

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category I ACM that will be or has been subjected to sanding, grinding, cutting or abrading

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

4. Category II ACM that has a high probability of becoming or has become friable in the course of demolition or renovation operations

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____

List of NESHAP Non-Regulated Materials Tested and Found in Survey

1. $\geq 1\%$ Asbestos
2. Category I Non-Friable (cannot be crumbled, pulverized or reduced to powder by hand pressure) ACM with $>1\%$ asbestos by new PLM procedure

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category II Non-Friable ACM with $>1\%$ asbestos by new PLM procedure (category includes items meeting Category I definition but not specifically listed in that category)

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____
_____	Other _Fume Hood Base_____	_____

Notes

1. All materials and conditions are interpreted by Air Quality Consulting LLC
2. The Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) asbestos revision as outlined in 40 CFR, Part 61, became effective November 20, 1990. The asbestos classification system outlined in the revision and included in this section is dynamic in nature. Asbestos materials classified as “Non-Regulated” at the time of the survey may become “Regulated” due to ongoing or planned maintenance, renovation or demolition actions which can transform a material containing greater than 1% asbestos from a “non-friable” and “Non-Regulated” to a “friable” and “Regulated” condition. Classification of ACM in this section and in the executive summary of this report is, therefore, based on the observations of the surveyor at the time of the survey and may or may not be appropriate at later dates.
3. Maintenance, renovation, demolition, weathering, normal wear, water or other damage can alter the “Non-Regulated” status of materials, and necessitate precautions required for handling them as “Regulated” asbestos-materials.
4. Details on testing locations, methods and results can be found on remaining report.



March 11, 2022

Subcontractor Number:
Laboratory Report: RES 519639-1
Project #/P.O. #: RBB-31022
Project Description: Richards Building

Scott Bainbridge
Air Quality Consulting, LLC
226 E 4800 S
Murray UT 84107

Dear Scott,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 519639-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by William Spells

Jeanne Spencer
President



EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 519639-1**
 Client: **Air Quality Consulting, LLC**
 Client Project/P.O.: **RBB-31022**
 Client Project Description: **Richards Building**
 Date Samples Received: **March 11, 2022**
 Analysis Type: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Rush**
 Date Samples Analyzed: **March 11, 2022**

NA = Not Analyzed
 NR = Not Received
 ND = None Detected
 TR = Trace; <1 % Visual Estimate
 Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	L A Y E R	Physical Description	Sub Part	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
Client Sample Number			(%)		(%)		
519639 - 1-Tile Backing	A	White fibrous woven material	5		ND	90	10
	B	Off white adhesive	25		ND	0	100
	C	White compound	70		ND	0	100
519639 - 2-Tile Backing	A	Gray granular material	100		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

Landon Spells
 Landon Spells
 Analyst

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES	
Company: Air Quality Consulting, LLC		Company: Air Quality Consulting, LLC		Contact: Scott Bainbridge		-1 PLM Rush *NO VERBALS*	
Address: 226 E 4800 S		Address: 226 E 4800 S		Phone: (385) 321-9701			
Murray, UT 84107		Murray, UT 84107		Fax:			
Project Number and/or P.O. #: RBB-31022				Cell:			
Project Description/Location: Richards Building				Final Data Deliverable Email Address:			
				scott@airqualityconsult.com (+ 1 ADDNL. CONTACTS)			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm		REQUESTED ANALYSIS		VALID MATRIX CODES		LAB NOTES	
PLM / PCM / TEM	DTL RUSH PRIORITY STANDARD	PLM - PLM Short Report (EPA/600/R-93/116) TEM - AHERA (+/- or Quantified), Microvac (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level II, ISO 10312, ISO 13794, Chatfield, Drinking Water, Waste Water, Bulk +/-, CARB Modified Ahera PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metals (7303, 8020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan ORGANICS - Methamphetamine, TSS VIABLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E.coli O157:H7, E.coli Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (w/o ID or w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C) MEDICAL - Biberden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification	Air = A	Bulk = B	Drinking Water = DW Waste Water = WW **ASTM E1792 approved wipe media only**	Laboratory Analysis Instructions	
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm			Dust = D	Food = F			
Dust	RUSH PRIORITY STANDARD		Paint = P	Soil = S			
Metals	RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT		Surface = SU	Swab = SW			
Organics*	SAME DAY RUSH PRIORITY STANDARD		Tape = T	Wipe = W			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm			Drinking Water = DW				
Viability Analysis**	PRIORITY STANDARD **TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH		Waste Water = WW				
Medical Device Analysis	RUSH STANDARD						
Mold Analysis	RUSH PRIORITY STANDARD						
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.							
Special Instructions:		Sample Volume (L) / Area	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	
Client Sample ID Number (Sample ID's must be unique)		Length (or Aliquots) x Width (or Area per Aliquot)					
1 1-Tile Backing	X		B				
2 2-Tile Backing	X		B				

REI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:	Scott Bainbridge	Date/Time: 03/10/2022 20:47:55	Sample Condition: Acceptable
Received By:	Jessica Shapiro	Date/Time: 03/11/2022 10:47:15	Carrier: Hand



Built Environment
Reservoirs

REMIT TO: 5801 Logan St, Suite 100, Denver, CO 80216

<p>Invoice To:</p> <p>Air Quality Consulting, LLC 226 E 4800 S Murray UT 84107</p>	<p>Invoice Date: March 11, 2022 Invoice Number: 81520</p> <p>TERMS: Net 30 Days</p> <p>Service Charge of 18% per annum may be charged on past due invoices.</p>
---	--

Quantity	Analytical Procedure	Unit Price	Amount
2	<p>RES Job#: RES 519639-1 Submitted By: Air Quality Consulting, LLC P/O Number: RBB-31022 Description: Richards Building Contact: Scott Bainbridge</p> <p>PLM Short Report (EPA/600 /R-93/116) Bulk Rush</p>	\$19.00	\$38.00
Invoice Total:			\$38.00

**Asbestos Survey and Assessment Performed at
Richards Building Bathrooms
15 Field House Dr
Provo, UT 84604
March 12, 2022**

Scope of Work

We were hired by BYU to survey the Richards Building Bathroom for a pending renovation. Samples were taken by Scott Bainbridge and tested at Reservoirs Environmental in Denver, Colorado. The results are included in this report.

Methods and Materials

A survey of the areas outlined in the floorplan sections was conducted to observe, identify, locate and sample any materials suspected of containing asbestos according to NESHAP categories. All accessible areas were identified and documented.

Bulk samples were collected using approved methods and microscopically analyzed for asbestos content by Reservoirs Environmental, Inc. in Denver, Colorado. Reservoirs participates in the National Institute for Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP).

Asbestos percentages were estimated utilizing the polarized light microscope (PLM) and dispersion staining methods as prescribed by NIOSH.

Scott Bainbridge

Scott Bainbridge
State of Utah Inspector #ASB-6822 exp. 7/16/22

March 12, 2022

Date

Elise Bainbridge

Elise Bainbridge
State of Utah Inspector #ASB-7303 exp. 7/16/22

March 12, 2022

Date

Eldon C. Romney

Eldon C. Romney, LEHS
State of Utah Inspector #ASB-1362 exp. 7/16/22

March 12, 2022

Date

Air Quality Consulting
1264 West Pitchfork Road
Murray, Utah 84123

AN ASBESTOS SURVEY AND ASSESSMENT OF



Richards Building
Boiler Room

28 December, 2020

Prepared by:
Scott Bainbridge #ASB-6822
Elise Bainbridge #ASB-7303
Eldon C. Romney, LEHS #ASB-1362
Air Quality Consulting, LLC #ASBC-603
1264 W. Pitchfork Rd.
Murray, UT 84123
385-321-9701
scott@airqualityconsult.com
801-541-0615
eldoncr2@gmail.com

Executive Summary

Asbestos containing material (ACM) was located in the tank insulation on both boilers and expansion tanks and mudded elbows connected to the expansion tanks. The gaskets and interior of the tanks have been assumed.

There is approximately 1,080 square feet of tank insulation on 4 tanks that contain 3-6% Chrysotile and 8% Amosite asbestos.

There are approximately 10 mudded elbows connected to the expansion tanks that contain 5% Chrysotile asbestos.

There are approximately 91 gaskets throughout the room that are assumed.

Building Description

The room is concrete and block construction. There are two large boiler tanks and 3 smaller expansion tanks.

ACM Results by Material

Sample Number	Material/Lab Results	Location
TSI Tank Insulation		
RBB-121820-1	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-2	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-3	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-8	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-9	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-14	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
RBB-121820-15	Tank Insulation 3-6% Chrysotile/8% Amosite	Tank 1, 2, Expansion Tanks
Mudded Elbows		
RBB-121820-13	Mudded Elbow 5% Chrysotile	Upper Expansion Tanks

1

2

3

4

5

6

E

D

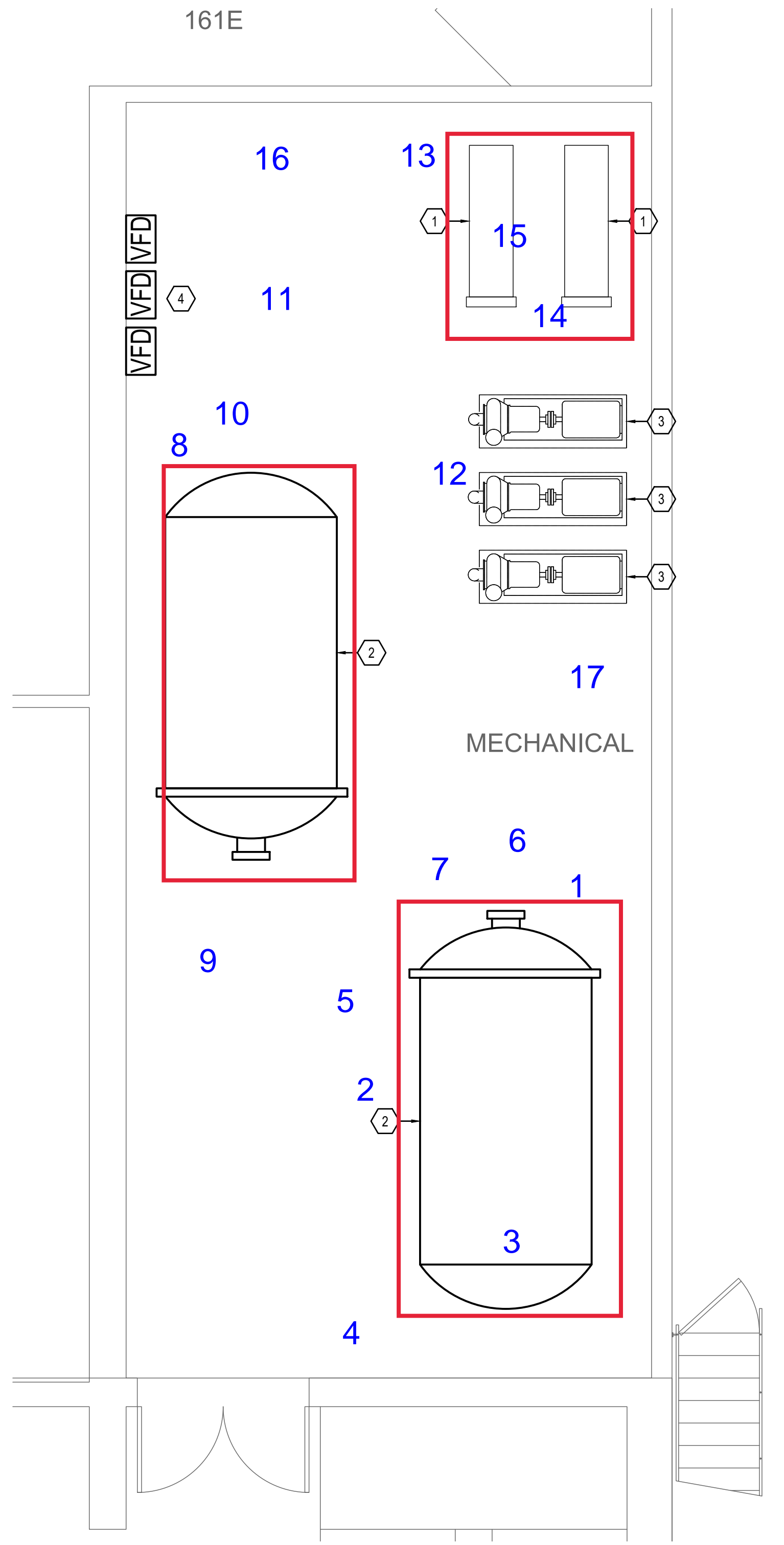
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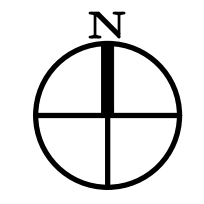
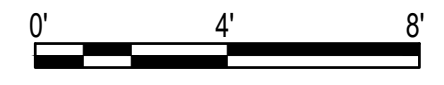
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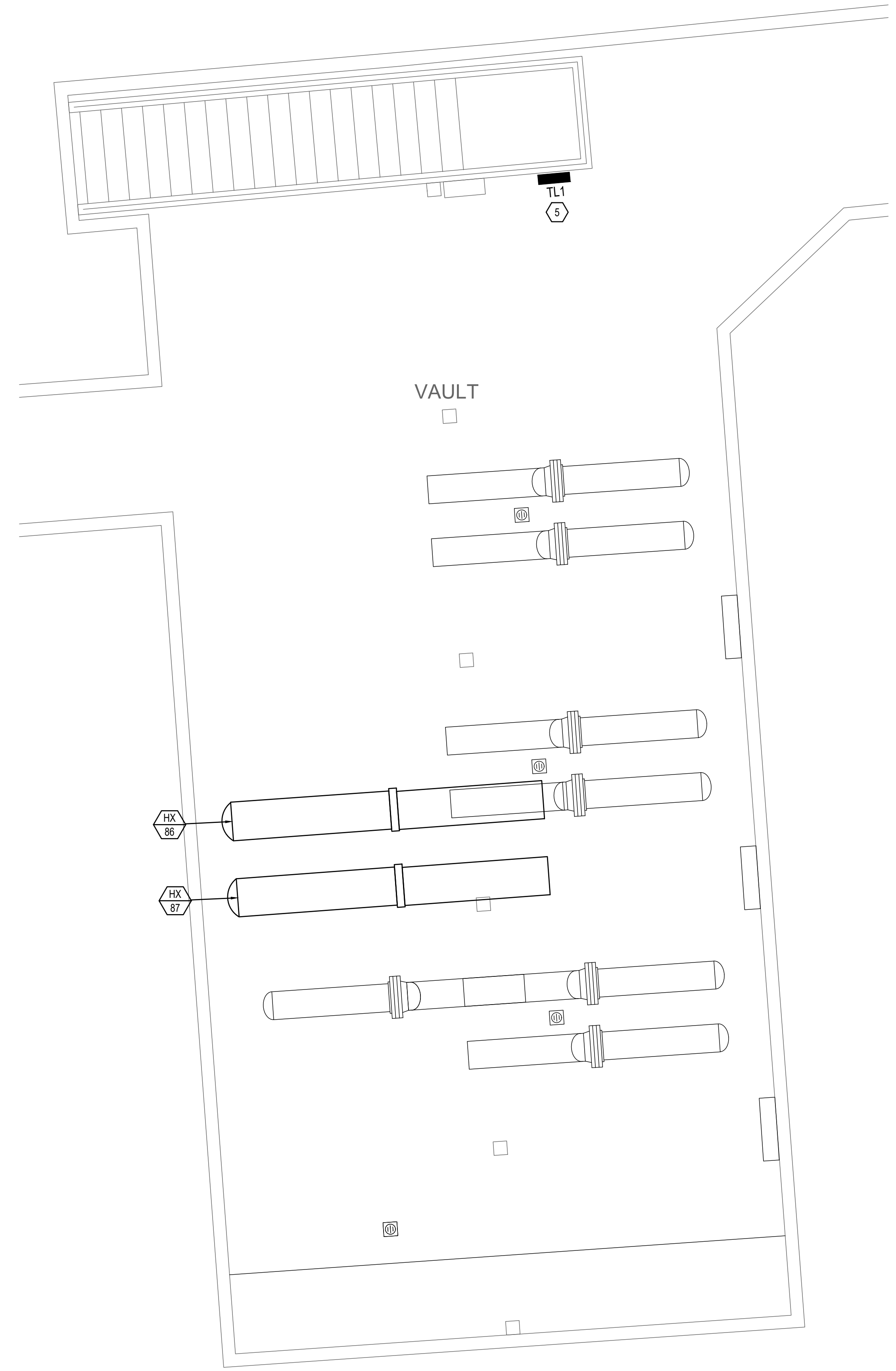
A

ACM TSI 

Sample Location
RBB-121820



 **1 ENLARGED MECHANICAL ROOM DEMOLITION**
ED401 SCALE: 1/4" = 1'-0"




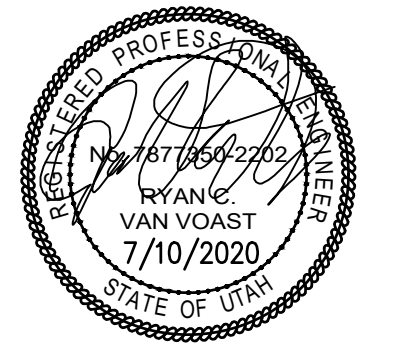
 **2 ENLARGED TUNNEL VAULT DEMOLITION**
ED401 SCALE: 1/4" = 1'-0"


KEYED NOTES

1. MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS.
2. PLUMBING EQUIPMENT. SEE PLUMBING DRAWINGS.
3. EXISTING HOT WATER PUMPS, ALL ASSOCIATED ACCESSORIES SHALL BE RELOCATED TO VAULT AS SHOWN ON ENLARGED TUNNEL VAULT PLAN. REMOVE CONDUIT AND WIRE BACK TO SOURCE AND MARK BREAKER AS SPARE. PROVIDE NEW UPDATED TYPED PANEL SCHEDULE INDEX. IF CONDUIT IS INACCESSIBLE, CUT CONDUIT FLUSH WITH STRUCTURAL SURFACE.
4. EXISTING PUMP VFD'S TO BE RELOCATED. SEE SHEET EP401 FOR NEW VFD LOCATION.
5. EXISTING PANEL AND BRANCH WIRING TO REMAIN. WIRE FOR PANEL POWER SUPPLY TO BE DEMOLISHED BACK TO THE SOURCE. REMOVE BREAKER, GIVE REMOVED BREAKER TO OWNER. EXISTING CONDUIT TO BE INTERCEPTED AND ROUTED TO NEW PANEL LOCATION. SEE SHEET EP401 FOR NEW PANEL LOCATION.



181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
• Van Boerum & Frank Assoc., 2020

**BYU Richards Building
Heat Exchangers Upgrades**
15 Field House Drive, Provo, UT 84604

REVISIONS	

VBFA PROJECT #: 19310
CHECKED BY: SA
DRAWN BY: AC
CURRENT/ISSUE DATE: 06.30.2020

SHEET CONTENTS
**ENLARGED
DEMOLITION PLANS**

100% REVIEW

ED401



ACM Tank Insulation - Tank 2 by entry - Samples RBB-121820-1 to 3



ACM Tank Insulation Tank 1 - RBB-121820-8 to 9



ACM Tank Insulation - Expansion Tanks RBB-121820-14 to 15



ACM Mudded Elbows - Samples RBB-121820-13

Non-ACM Results by Material

Sample Number	Material/Lab Results	Location
TSI Insulation		
RBB-121820-5	TSI Insulation/None Detected	Pipes
RBB-121820-6	TSI Insulation/None Detected	Pipes
TSI Mudded Elbows		
RBB-121820-4	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-7	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-10	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-11	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-12	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-16	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank
RBB-121820-17	TSI Mudded Elbow/None Detected	Throughout except around upper expansion tank

Utah Asbestos Sampling Worksheet

Facility name, address: Old Boiler Room, Richards Building, Brigham Young University, Provo, UT

Scope: Test all suspect ACM for NESHAP report

Anticipation of work: Collect samples of all homogenous, suspect materials

Suspect ACM	Quantity	Location	Sampled/ Assumed	RACM/ CAT 1/ CAT 2
RBB-121820-1 Tank Insulation	480 sf	Tank 2	Sampled	RACM
RBB-121820-2 Tank Insulation	480 sf	Tank 2	Sampled	RACM
RBB-121820-3 Tank Insulation	480 sf	Tank 2	Sampled	RACM
RBB-121820-4 Mudded Elbow	1	Tank 2	Sampled	ND
RBB-121820-5 TSI	23 lf	Tank 2	Sampled	ND
RBB-121820-6 TSI	23 lf	Tank 2	Sampled	ND
RBB-121820-7 Mudded Elbow	14	Tank 2	Sampled	ND
RBB-121820-8 Tank Insulation	480 sf	Tank 1	Sampled	RACM
RBB-121820-9 Tank Insulation	480 sf	Tank 1	Sampled	RACM
RBB-121820-10 Mudded Elbow	5	Tank 1	Sampled	ND
RBB-121820-11 Mudded Elbow	7	Green Pipes	Sampled	ND
RBB-121820-12 Mudded Elbow	9	NE Pipes	Sampled	ND
RBB-121820-13 Mudded Elbow	10	Expansion Tanks	Sampled	RACM
RBB-121820-14 Tank Insulation	70 sf	Upper Expansion Tank	Sampled	RACM
RBB-121820-15 Tank Insulation	180 sf	Lower Expansion Tanks	Sampled	RACM
RBB-121820-16 Mudded Elbow	7	Lower Expansion Tanks	Sampled	ND
RBB-121820-17 Mudded Elbow	7	Lower Expansion Tanks	Sampled	ND

Laboratory Analysis PLM/PCM/TEM PLM

Inaccessible areas of suspect ACM

Scott Bainbridge #ASB-6822

Scott Bainbridge

18 Dec, 2020

List of NESHAP Regulated Materials Tested and Found in Survey

1. Friable asbestos material (>1% asbestos and can be crumbled, pulverized or reduced to powder by hand pressure)

Tested	Materials	Positive
<u> X </u>	Thermal System Insulation (TSI)	<u> X </u>
<u> </u>	Textured Ceiling Materials (TCM)	<u> </u>
<u> </u>	Spray-on Insulation or Fireproofing	<u> </u>
<u> </u>	Blown-in Insulation	<u> </u>
<u> </u>	Ceiling Tiles/Panels	<u> </u>
<u> </u>	Plaster, Gypsum Board, Joint Compound	<u> </u>
<u> </u>	Cloth Materials	<u> </u>
<u> </u>	Paper Materials	<u> </u>
<u> </u>	Electrical Wiring Insulation	<u> </u>
<u> </u>	Sink Undercoating (loose)	<u> </u>
<u> </u>	Other _____	<u> </u>

2. Category I ACM which has become friable

Tested	Materials	Positive
<u> </u>	Packings	<u> </u>
<u> </u>	Gaskets	<u> </u>
<u> </u>	Vinyl Floor Tile and Sheet Vinyl Flooring	<u> </u>
<u> </u>	Asphalt Roofing Products	<u> </u>

3. Category I ACM that will be or has been subjected to sanding, grinding, cutting or abrading

Tested	Materials	Positive
<u> </u>	Packings	<u> </u>
<u> </u>	Gaskets	<u> </u>
<u> </u>	Vinyl Floor Tile and Sheet Vinyl Flooring	<u> </u>
<u> </u>	Asphalt Roofing Products	<u> </u>

4. Category II ACM that has a high probability of becoming or has become friable in the course of demolition or renovation operations

Tested	Materials	Positive
<u> </u>	Asbestos Cement Materials (transite)	<u> </u>
<u> </u>	Asphalt, tar and rubber base ACM products other than roofing	<u> </u>
<u> </u>	Non-asphalt and Non-paper Roofing Products	<u> </u>
<u> </u>	Paint	<u> </u>
<u> </u>	Fire Brick and/or Mortar	<u> </u>
<u> </u>	Stainless Steel Sink Undercoating (solid)	<u> </u>
<u> </u>	Encapsulated TCM	<u> </u>
<u> </u>	Encapsulated TSI	<u> </u>
<u> </u>	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	<u> </u>

List of NESHAP Non-Regulated Materials Tested and Found in Survey

1. $\geq 1\%$ Asbestos
2. Category I Non-Friable (cannot be crumbled, pulverized or reduced to powder by hand pressure) ACM with $>1\%$ asbestos by new PLM procedure

Tested	Materials	Positive
_____	Packings	_____
<u> X </u>	Gaskets	<u> X </u>
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category II Non-Friable ACM with $>1\%$ asbestos by new PLM procedure (category includes items meeting Category I definition but not specifically listed in that category)

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____
_____	Other _____	_____

Notes

1. All materials and conditions are interpreted by Air Quality Consulting LLC
2. The Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) asbestos revision as outlined in 40 CFR, Part 61, became effective November 20, 1990. The asbestos classification system outlined in the revision and included in this section is dynamic in nature. Asbestos materials classified as “Non-Regulated” at the time of the survey may become “Regulated” due to ongoing or planned maintenance, renovation or demolition actions which can transform a material containing greater than 1% asbestos from a “non-friable” and “Non-Regulated” to a “friable” and “Regulated” condition. Classification of ACM in this section and in the executive summary of this report is, therefore, based on the observations of the surveyor at the time of the survey and may or may not be appropriate at later dates.
3. Maintenance, renovation, demolition, weathering, normal wear, water or other damage can alter the “Non-Regulated” status of materials, and necessitate precautions required for handling them as “Regulated” asbestos-materials.
4. Details on testing locations, methods and results can be found on remaining report.

**Asbestos Survey and Assessment Performed at
Brigham Young University
Richards Building
Boiler Room
28 December, 2020**

Scope of Work

We were hired by Matt Giles and Jeff Throckmorton to survey the older boiler room in the Richards Building basement for potential renovations. All accessible suspect material was sampled by Scott Bainbridge. These samples were sent to Reservoirs Labs in Denver, Colorado and the results are included in this report.

Methods and Materials

A survey of the areas outlined in the floorplan sections was conducted to observe, identify, locate and sample any materials suspected of containing asbestos according to NESHAP categories. All accessible areas were identified and documented.

Bulk samples were collected using approved methods and microscopically analyzed for asbestos content by Reservoirs Environmental, Inc. in Denver, Colorado. Reservoirs participates in the National Institute for Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP).

Asbestos percentages were estimated utilizing the polarized light microscope (PLM) and dispersion staining methods as prescribed by NIOSH.

Scott Bainbridge

28 December, 2020

Scott Bainbridge
State of Utah Inspector #ASB-6822

Date



28 December, 2020

Eldon C. Romney, LEHS
State of Utah Inspector #ASB-1362

Date



December 22, 2020

Subcontractor Number:

Laboratory Report: RES 481169-1

Project #/P.O. #: Richards Building Boilers

Project Description: RBB-121820

Scott Bainbridge
Air Quality Consulting, LLC
1264 W. Pitchfork Rd
Murray UT 84123

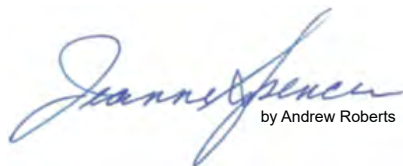
Dear Scott,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 481169-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Andrew Roberts

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 481169-1**
 Client: **Air Quality Consulting, LLC**
 Client Project Number / P.O.: **Richards Building Boilers**
 Client Project Description: **RBB-121820**
 Date Samples Received: **December 21, 2020**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Priority**
 Date Samples Analyzed: **December 22, 2020**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
1-TSI Tank Insulation	A	Off white fibrous woven material w/ off white/multi-colored paint	15		ND	70	30
	B	Off white insulation	25	Chrysotile	4	16	80
	C	Gray insulation	60	Chrysotile	3	24	65
2-TSI Tank Insulation	A	Gray insulation	100	Amosite	8	15	74
				Chrysotile	3		
3-TSI Tank Insulation	A	Off white fibrous woven material w/ off white/tan paint	20		ND	80	20
	B	Off white insulation	20	Chrysotile	5	15	80
	C	Gray insulation	60	Chrysotile	4	23	65
4-TSI Mudded Elbow	A	Off white fibrous woven material w/ white paint	25	Amosite	8	80	20
				Chrysotile	4		
B	Gray insulation	75		ND	50	50	

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

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 Trem/Act=Tremolite/Actinolite

Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
5-TSI	A	Off white fibrous woven material w/ silver paint	35		ND	90	10
	B	Gray insulation	65		ND	45	55
6-TSI	A	Off white fibrous woven material w/ silver paint	20		ND	80	20
	B	Tan insulation	80		ND	15	85
7-TSI Mudded Elbow	A	Off white/green insulation	100		ND	13	87
8-TSI Tank Insulation	A	Off white fibrous woven material w/ beige paint	10		ND	0	100
	B	Off white insulation	25	Chrysotile	5	15	80
	C	Gray insulation	65	Chrysotile Amosite	3 8	24	65
9-TSI Tank Insulation	A	Off white fibrous woven material w/ off white paint	10		ND	80	20
	B	Off white insulation	25	Chrysotile	6	14	80
	C	Gray insulation	65	Chrysotile Amosite	3 8	24	65

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

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ND=None Detected
 TR=Trace, <1% Visual Estimate
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Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
10-TSI Mudded Elbow	A	Off white fibrous woven material	15		ND	95	5
	B	White fibrous woven material	15		ND	95	5
	C	Gray insulation	70		ND	20	80
11-TSI Mudded Elbow	A	Gray insulation	100		ND	30	70
12-TSI Mudded Elbow	A	Yellow insulation	5		ND	95	5
	B	Off white/silver wrap	10		ND	65	35
	C	Off white fibrous woven material	25		ND	95	5
	D	Gray insulation	60		ND	25	75
13-TSI Mudded Elbow	A	Off white fibrous woven material w/ beige paint	10		ND	70	30
	B	Off white insulation	90	Chrysotile	5	15	80
14-TSI Tank Insulation	A	Off white fibrous woven material w/ beige paint	15		ND	75	25
	B	Tan insulation	35		ND	95	5
	C	Off white insulation	50	Chrysotile	6	14	80

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

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 Turnaround: **Priority**
 Date Samples Analyzed: **December 22, 2020**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
15-TSI Tank Insulation	A	Off white fibrous woven material w/ beige paint	15		ND	75	25
	B	Off white insulation	25	Chrysotile	5	15	80
	C	Gray insulation	60	Chrysotile Amosite	3 8	24	65
16-TSI Mudded Elbow	A	Off white fibrous woven material	10		ND	95	5
	B	Gray insulation	90		ND	20	80
17-TSI Mudded Elbow	A	Off white fibrous woven material w/ white paint	25		ND	70	30
	B	Gray insulation	75		ND	25	75

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

Andrew Roberts
Analyst / Data QA



RES Job #: 481169

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES	
Company: Air Quality Consulting, LLC		Company: Air Quality Consulting, LLC		Contact: Scott Bainbridge		-1 PLM Priority	
Address: 1264 W. Pitchfork Rd		Address: 1264 W. Pitchfork Rd		Phone: (385) 321-9701			
Murray, UT 84123		Murray, UT 84123		Fax:			
Project Number and/or P.O. #: Richards Building Boilers		Project Description/Location: RBB-121820		Cell:			
				Final Data Deliverable Email Address:			
				scott@airqualityconsult.com (+ 1 ADDNL. CONTACTS)			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm				REQUESTED ANALYSIS				VALID MATRIX CODES				LAB NOTES								
PLM / PCM / TEM	DTL	RUSH	PRIORITY	STANDARD						Air = A	Bulk = B									
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm										Dust = D	Food = F									
Dust		RUSH	PRIORITY	STANDARD						Paint = P	Soil = S									
Metals		RUSH	PRIORITY	STANDARD						Surface = SU	Swab = SW									
Organics*		SAME DAY	RUSH	PRIORITY	STANDARD					Tape = T	Wipe = W									
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm												Drinking Water = DW								
Viable Analysis**		PRIORITY	STANDARD									Waste Water = WW								
Medical Device Analysis		RUSH	STANDARD							**ASTM E1792 approved wipe media only**										
Mold Analysis		RUSH	PRIORITY	STANDARD																
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																				
Special Instructions:				PLM - Short Report	Long Report	CARB 435														
Client Sample ID Number (Sample ID's must be unique)				TEM - AHERA, (+/- or Quantified) Microwave (+/- or Quantified)	Wipe (+/- or Quantified), NIOSH 7402, Yamate Level II, ISO 10312, ISO 13794, Chanfield, Waste Water, Drinking Water, Bulk +/-, CARB Modified Ahera	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metal (7303, 6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid, Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan	ORGANICS - Methamphetamine, TSS	Viabiles Campylobacter, Bacillus, Salmonella (Culturable, 1-2), Listeria, E.coli O157:H7, E.coli/Coliforms - Plated, S. aureus, Yeast & Mold, Aerobic Plate Count, Coliforms/E.coli (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (wo/ID, w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C)	MEDICAL - Bioburden, LAL	MOLD - Spore Trap, Bulk Mold, Particulate Identification	Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hr:mm	Laboratory Analysis Instructions	
ASBESTOS				CHEMISTRY				MICROBIOLOGY												
1	1-TSI Tank Insulation	X												B						
2	2-TSI Tank Insulation	X												B						
3	3-TSI Tank Insulation	X												B						
4	4-TSI Mudded Elbow	X												B						
5	5-TSI	X												B						
6	6-TSI	X												B						
7	7-TSI Mudded Elbow	X												B						
8	8-TSI Tank Insulation	X												B						
9	9-TSI Tank Insulation	X												B						
10	10-TSI Mudded Elbow	X												B						
11	11-TSI Mudded Elbow	X												B						
12	12-TSI Mudded Elbow	X												B						
13	13-TSI Mudded Elbow	X												B						

REI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Scott Bainbridge	Date/Time: 12/18/2020 12:58:09	Sample Condition: Acceptable
Received By:		Rebecca Jewell	Date/Time: 12/21/2020 11:12:55	Carrier: Fed-Ex



REMIT TO: 5801 Logan St, Suite 100, Denver, CO 80216

<p>Invoice To:</p> <p>Air Quality Consulting, LLC 1264 W. Pitchfork Rd Murray UT 84123</p>	<p>Invoice Date: December 22, 2020 Invoice Number: 481169-1</p> <p>TERMS: Net 30 Days</p> <p>Service Charge of 18% per annum may be charged on past due invoices.</p>
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Quantity	Analytical Procedure	Unit Price	Amount
17	<p>RES Job#: RES 481169-1 Submitted By: Air Quality Consulting, LLC P/O Number: Richards Building Boilers Description: RBB-121820 Contact: Scott Bainbridge</p> <p>PLM Short Report (EPA/600 /R-93/116) Bulk Priority</p>	\$12.00	\$204.00
Invoice Total:			\$204.00

Air Quality Consulting
4852 South Wasatch Street
Murray, Utah 84107

AN ASBESTOS SURVEY AND ASSESSMENT OF



Richards Building
Dance Studios

12 May, 2021

Prepared by:

Scott Bainbridge #ASB-6822

Elise Bainbridge #ASB-7303

Eldon C. Romney, LEHS #ASB-1362

Air Quality Consulting, LLC #ASBC-603

4852 S. Wasatch St.

Murray, UT 84107

385-321-9701

scott@airqualityconsult.com

801-541-0615

eldoncr2@gmail.com

Executive Summary

No asbestos containing material (ACM) is found in rooms 158, 160 and 162 of the Richards Building.

Building or Rooms Description

Structure: Block, Metal Framed

Roof: Not Observed

Siding: Not Observed

Foundation: Concrete

Insulation: None

Walls: Ceramic Tile

Ceiling: Ceiling Panel

Flooring: Wood

Non ACM Results by Material

Sample Number	Material/Lab Results	Homogeneous Area
Flooring		
BYUDS-51021-1	Wood Flooring Layers/None Detected	Rooms 162
BYUDS-51021-2	Wood Flooring Layers/None Detected	Rooms 162
BYUDS-51021-3	Wood Flooring Layers/None Detected	Rooms 162
BYUDS-51021-10	Wood Flooring Layer/None Detected	Rooms 158
BYUDS-51021-11	Wood Flooring Layers/None Detected	Rooms 158
BYUDS-51021-12	Wood Flooring Layers/None Detected	Rooms 158
BYUDS-51021-15	Wood Flooring Layers/None Detected	Rooms 160
BYUDS-51021-16	Wood Flooring Layers/None Detected	Rooms 160
Paint		
BYUDS-51021-4	Creme Block Paint/None Detected	Rooms 158, 160, 162
BYUDS-51021-5	Creme Block Paint/None Detected	Rooms 158, 160, 162
BYUDS-51021-6	Creme Block Paint/None Detected	Rooms 158, 160, 162
BYUDS-51021-13	Creme Block Paint/None Detected	Rooms 158, 160, 162
BYUDS-51021-14	Creme Block Paint/None Detected	Rooms 158, 160, 162
BYUDS-51021-17	Creme Block Paint/None Detected	Rooms 158, 160, 162
Wall Tile		
BYUDS-51021-7	1'x1' Fissured Wall Tile and Mastic/None Detected	Rooms 158, 160, 162
BYUDS-51021-8	1'x1' Fissured Wall Tile and Mastic/None Detected	Rooms 158, 160, 162
BYUDS-51021-18	1'x1' Fissured Wall Tile and Mastic/None Detected	Rooms 158, 160, 162
Tile Backing		
BYUDS-51021-9	Tile Backing/None Detected	Rooms 158, 160, 162
Ceiling Panel		
BYUDS-51021-19	2'x2' Wormhole Ceiling Panel/None Detected	Rooms 158, 160, 162
BYUDS-51021-20	2'x2' Wormhole Ceiling Panel/None Detected	Rooms 158, 160, 162

Utah Asbestos Sampling Worksheet

Facility name, address: Dance Studios, Richards Building, Brigham Young University, Provo, UT

Scope: Test all suspect ACM fireproofing for potential renovation to dance studios


Anticipation of work: Collect samples of all homogenous, suspect materials

Suspect ACM	Quantity	Location	Sampled/ Assumed	RACM/ CAT 1/ CAT 2
BYUDS-51021-1 Flooring	2,200 sf	Room 162	Sampled	ND
BYUDS-51021-2 Flooring	2,200 sf	Room 162	Sampled	ND
BYUDS-51021-3 Flooring	2,200 sf	Room 162	Sampled	ND
BYUDS-51021-4 Paint	1,510 sf	Room 162	Sampled	ND
BYUDS-51021-5 Paint	1,510 sf	Room 162	Sampled	ND
BYUDS-51021-6 Paint	1,510 sf	Room 162	Sampled	ND
BYUDS-51021-7 Wall Tile and Mastic	540 sf	Room 162	Sampled	ND
BYUDS-51021-8 Wall Tile and Mastic	540 sf	Room 162	Sampled	ND
BYUDS-51021-9 Tile Backing	970 sf	Room 162	Sampled	ND
BYUDS-51021-10 Flooring	1,580 sf	Room 158	Sampled	ND
BYUDS-51021-11 Flooring	1,580 sf	Room 158	Sampled	ND
BYUDS-51021-12 Flooring	1,580 sf	Room 158	Sampled	ND
BYUDS-51021-13 Paint	1,510 sf	Room 158	Sampled	ND
BYUDS-51021-14 Paint	1,510 sf	Room 158	Sampled	ND
BYUDS-51021-15 Flooring	600 sf	Room 160	Sampled	ND
BYUDS-51021-16 Flooring	600 sf	Room 160	Sampled	ND
BYUDS-51021-17 Paint	1,510 sf	Room 160	Sampled	ND
BYUDS-51021-18 Wall Tile and Mastic	540 sf	Room 160	Sampled	ND
BYUDS-51021-19 Ceiling Panel	4,380 sf	Corridor	Sampled	ND
BYUDS-51021-20 Ceiling Panel	4,380 sf	Corridor	Sampled	ND

Laboratory Analysis PLM/PCM/TEM PLM

Inaccessible areas of suspect ACM

Scott Bainbridge #ASB-6822

	10 May, 2021
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List of NESHAP Regulated Materials Tested and Found in Survey

1. Friable asbestos material (>1% asbestos and can be crumbled, pulverized or reduced to powder by hand pressure)

Tested	Materials	Positive
_____	Thermal System Insulation (TSI)	_____
_____	Textured Ceiling Materials (TCM)	_____
_____	Spray-on Insulation or Fireproofing	_____
_____	Blown-in Insulation	_____
_____	Ceiling Tiles/Panels	_____
_____	Plaster, Gypsum Board, Joint Compound	_____
_____	Cloth Materials	_____
_____	Paper Materials	_____
_____	Electrical Wiring Insulation	_____
_____	Sink Undercoating (loose)	_____
_____	Other _____ Door Core _____	_____

2. Category I ACM which has become friable

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category I ACM that will be or has been subjected to sanding, grinding, cutting or abrading

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

4. Category II ACM that has a high probability of becoming or has become friable in the course of demolition or renovation operations

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____

List of NESHAP Non-Regulated Materials Tested and Found in Survey

1. $\geq 1\%$ Asbestos
2. Category I Non-Friable (cannot be crumbled, pulverized or reduced to powder by hand pressure) ACM with $>1\%$ asbestos by new PLM procedure

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category II Non-Friable ACM with $>1\%$ asbestos by new PLM procedure (category includes items meeting Category I definition but not specifically listed in that category)

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____
_____	Other _____ Door Core _____	_____

Notes

1. All materials and conditions are interpreted by Air Quality Consulting LLC
2. The Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) asbestos revision as outlined in 40 CFR, Part 61, became effective November 20, 1990. The asbestos classification system outlined in the revision and included in this section is dynamic in nature. Asbestos materials classified as “Non-Regulated” at the time of the survey may become “Regulated” due to ongoing or planned maintenance, renovation or demolition actions which can transform a material containing greater than 1% asbestos from a “non-friable” and “Non-Regulated” to a “friable” and “Regulated” condition. Classification of ACM in this section and in the executive summary of this report is, therefore, based on the observations of the surveyor at the time of the survey and may or may not be appropriate at later dates.
3. Maintenance, renovation, demolition, weathering, normal wear, water or other damage can alter the “Non-Regulated” status of materials, and necessitate precautions required for handling them as “Regulated” asbestos-materials.
4. Details on testing locations, methods and results can be found on remaining report.



May 11, 2021

Subcontractor Number:

Laboratory Report: RES 493368-1

Project #/P.O. #: BYUDS-51021

Project Description: BYU Dance Studios

Scott Bainbridge
Air Quality Consulting, LLC
1264 W. Pitchfork Rd
Murray UT 84123

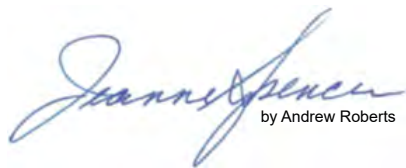
Dear Scott,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 493368-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Andrew Roberts

Jeanne Spencer
President



RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 493368-1**
 Client: **Air Quality Consulting, LLC**
 Client Project Number / P.O.: **BYUDS-51021**
 Client Project Description: **BYU Dance Studios**
 Date Samples Received: **May 11, 2021**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Priority**
 Date Samples Analyzed: **May 11, 2021**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
			Mineral	Visual Estimate (%)		
493368 - 1-Flooring	A Gray/white sheet vinyl w/ colorless adhesive	10		ND	8	92
	B Tan wood	90		ND	85	15
493368 - 2-Flooring	A Gray/white sheet vinyl w/ colorless adhesive	15		ND	8	92
	B Tan wood	85		ND	85	15
493368 - 3-Flooring	A Gray/white sheet vinyl w/ colorless adhesive	15		ND	8	92
	B Tan wood	85		ND	85	15
493368 - 4-Paint	A Gray granular cementitious material	35		ND	0	100
	B White block filler w/ white paint	65		ND	0	100
493368 - 5-Paint	A Gray adhesive	7		ND	0	100
	B White block filler w/ white paint	43		ND	0	100
	C Gray granular cementitious material	50		ND	0	100
493368 - 6-Paint	A White block filler w/ white paint	30		ND	0	100
	B Gray granular cementitious material	70		ND	0	100
493368 - 7-Wall Tile and Mastic	A Gray/white wall tile	100		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 493368-1**
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ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
			Mineral	Visual Estimate (%)		
493368 - 8-Wall Tile and Mastic	A Gray/white wall tile	100		ND	70	30
493368 - 9-Tile Backing	A Gray granular cementitious material	10		ND	0	100
	B Tan ceramic tile	90		ND	0	100
493368 - 10-Flooring	A Brown wood	100		ND	85	15
493368 - 11-Flooring	A Brown wood	100		ND	85	15
493368 - 12-Flooring	A Black mastic	3		ND	0	100
	B Brown wood	97		ND	85	15
493368 - 13-Paint	A Gray cinder block w/ white paint	100		ND	0	100
493368 - 14-Paint	A Gray granular cementitious material w/ gray paint	100		ND	0	100
493368 - 15-Flooring	A Black mastic	TR		ND	0	100
	B Tan wood	100		ND	85	15
493368 - 16-Flooring	A Colorless resinous material	2		ND	0	100
	B Tan wood	98		ND	85	15

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

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 Date Samples Analyzed: **May 11, 2021**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non- Fibrous Components (%)
			Mineral	Visual Estimate (%)		
493368 - 17-Paint	A White block filler w/ white paint	35		ND	0	100
	B Gray granular cementitious material	65		ND	0	100
493368 - 18-Wall Tile and Mastic	A Gray/white wall tile	100		ND	70	30
493368 - 19-Ceiling Panel	A Gray/white ceiling tile	100		ND	60	40
493368 - 20-Ceiling Panel	A Gray/white ceiling tile	100		ND	60	40

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.



Andrew Roberts
Analyst



Res Job#: 493368

Submitted By: Air Quality Consulting, LLC

Client Sample ID Number <small>(Sample ID's must be unique)</small>	REQUESTED ANALYSIS			VALID MATRIX CODES					LAB NOTES
	ASBESTOS	CHEMISTRY	MICROBIOLOGY	Sample Volume (L) / Area	Length (or Aliquots) x Width (or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	
14 14-Paint	X					B			
15 15-Flooring	X					B			
16 16-Flooring	X					B			
17 17-Paint	X					B			
18 18-Wall Tile and Mastic	X					B			
19 19-Ceiling Panel	X					B			
20 20-Ceiling Panel	X					B			

REQUESTED ANALYSIS			VALID MATRIX CODES					LAB NOTES	
PLM - PLM Short Report (EPA/600/R-93/116) TEM - AHERA (+/- or Quantified), Microvac (+/- or Quantified), Wipe (+/- or Quantified), NIOSH 7402, Yamate Level II, ISO 13794, Chatfield, Drinking Water, Waste Water, Bulk +/-, CARB Modified Ahera PCM - 7400A, 7400B, OSHA DUST - Total, Respirable METALS - Analyte(s) Lead Only (7062, 7420, Waste Water, Foodware), MultiMetals (7303,6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, FullMetals Scan ORGANICS - Methamphetamine, TSS VIABLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E.coli O157:H7, E.coli/Coliforms - Plated, S aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (wo/ID or w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C) MEDICAL - Bioburden, LAL MOLD - Spore Trap, Bulk Mold, Particulate Identification	Air = A Bulk = B Dust = D Food = F Paint = P Soil = S Surface = SU Swab = SW Tape = T Wipe = W Drinking Water = DW Waste Water = WW **ASTM E1792 approved wipe media only**								
ASBESTOS	CHEMISTRY	MICROBIOLOGY	Sample Volume (L) / Area	Length (or Aliquots) x Width (or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions



REMIT TO: 5801 Logan St, Suite 100, Denver, CO 80216

<p>Invoice To:</p> <p>Air Quality Consulting, LLC 1264 W. Pitchfork Rd Murray UT 84123</p>	<p>Invoice Date: May 11, 2021 Invoice Number: 493368-1</p> <p>TERMS: Net 30 Days</p> <p>Service Charge of 18% per annum may be charged on past due invoices.</p>
---	---

Quantity	Analytical Procedure	Unit Price	Amount
20	<p>RES Job#: RES 493368-1 Submitted By: Air Quality Consulting, LLC P/O Number: BYUDS-51021 Description: BYU Dance Studios Contact: Scott Bainbridge</p> <p>PLM Short Report (EPA/600 /R-93/116) Bulk Priority</p>	\$12.00	\$240.00
Invoice Total:			\$240.00

**Asbestos Survey and Assessment Performed at
Brigham Young University
Richards Building
Dance Studio
12 May, 2021**

Scope of Work

We were hired by Matt Giles and Jeff Throckmorton to survey the suspect materials in the dance studios at the Richards Building for a potential renovation. All accessible suspect material was sampled by Scott Bainbridge. These samples were sent to Reservoirs Labs in Denver, Colorado and the results are included in this report.

Methods and Materials

A survey of the areas outlined in the floorplan sections was conducted to observe, identify, locate and sample any materials suspected of containing asbestos according to NESHAP categories. All accessible areas were identified and documented.

Bulk samples were collected using approved methods and microscopically analyzed for asbestos content by Reservoirs Environmental, Inc. in Denver, Colorado. Reservoirs participates in the National Institute for Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP).

Asbestos percentages were estimated utilizing the polarized light microscope (PLM) and dispersion staining methods as prescribed by NIOSH.



12 May, 2021

Elise Bainbridge
State of Utah Inspector #ASB-7303

Date



12 May, 2021

Scott Bainbridge
State of Utah Inspector #ASB-6822

Date



12 May, 2021

Eldon C. Romney, LEHS
State of Utah Inspector #ASB-1362

Date



**226 East 4800 South
Murray, Utah 84107
Phone 385-321-9701**

AN ASBESTOS SURVEY AND ASSESSMENT FOR

**Brigham Young University
Stephen L. Richards Building
15 Field House Drive
Provo, Utah 84604
30 November, 2023**

**Prepared by:
Scott Bainbridge #ASB-6822
Annabelle Mitchell #ASB-8012
Air Quality Consulting, LLC #603**

**385-321-9701
scott@airqualityconsult.com**

Executive Summary

Asbestos-containing material (ACM) was not found in the suspect materials in Room 123 of the Richards Building.

* - Denotes less than 1% asbestos which is regulated by OSHA, it is recommended to review their regulations before removal

Room 123 Description

Structure: Block, Concrete, Framed

Roof: Not Inspected

Siding: Brick

Foundation: Concrete


Insulation: Fiberglass

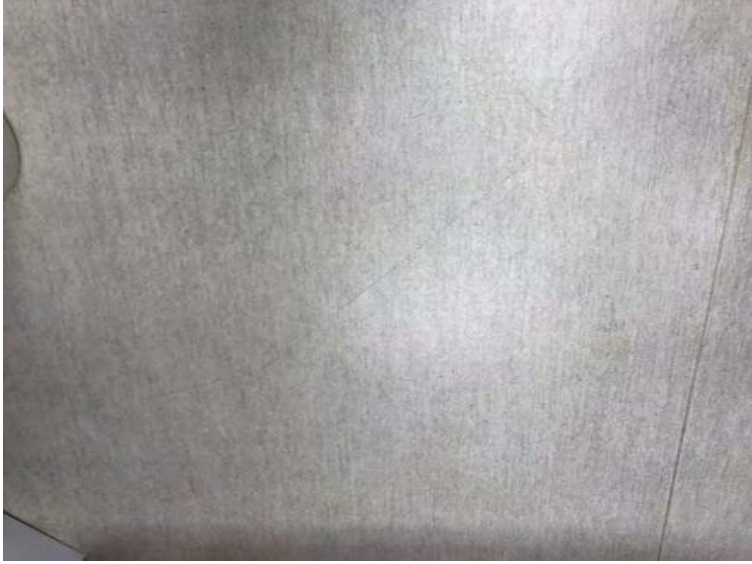
Walls: Drywall

Ceiling: Ceiling Panel

Flooring: Sheet Vinyl

Non-ACM Results by Material

Sample Number	MaterialDescription/Lab Results	Amount	Homogeneous Area
Ceiling Panel			
RB-112823-1	2'x4' Ceiling Panel/None Detected	800 sf	Room 123
RB-112823-2	2'x4' Ceiling Panel/None Detected	800 sf	Room 123
RB-112823-3	2'x4' Ceiling Panel/None Detected	800 sf	Room 123
			
Drywall System			
RB-112823-4	Drywall System/None Detected	1200 sf	Room 123
RB-112823-5	Drywall System/None Detected	1200 sf	Room 123
RB-112823-6	Drywall System/None Detected	1200 sf	Room 123
Sheet Vinyl			
RB-112823-7	Gray Sheet Vinyl/None Detected	800 sf	Room 123
RB-112823-8	Gray Sheet Vinyl/None Detected	800 sf	Room 123



Utah Asbestos Sampling Worksheet

Facility name, address: Room 123, Richards Building, BYU, 15 Field House Dr, Provo, UT 84604

Scope: Test all suspect ACM for renovation


Anticipation of work: Collect samples of all homogenous, suspect materials

Suspect ACM	Quantity	Location	Sampled/ Assumed	RACM/ CAT 1/ CAT 2
RB-112823-1 Ceiling Panel	800 sf	Room 123	Sampled	ND
RB-112823-2 Ceiling Panel	800 sf	Room 123	Sampled	ND
RB-112823-3 Ceiling Panel	800 sf	Room 123	Sampled	ND
RB-112823-4 Drywall System	1200 sf	Room 123	Sampled	ND
RB-112823-5 Drywall System	1200 sf	Room 123	Sampled	ND
RB-112823-6 Drywall System	1200 sf	Room 123	Sampled	ND
RB-112823-7 Sheet Vinyl	800 sf	Room 123	Sampled	ND
RB-112823-8 Sheet Vinyl	801 sf	Room 124	Sampled	ND

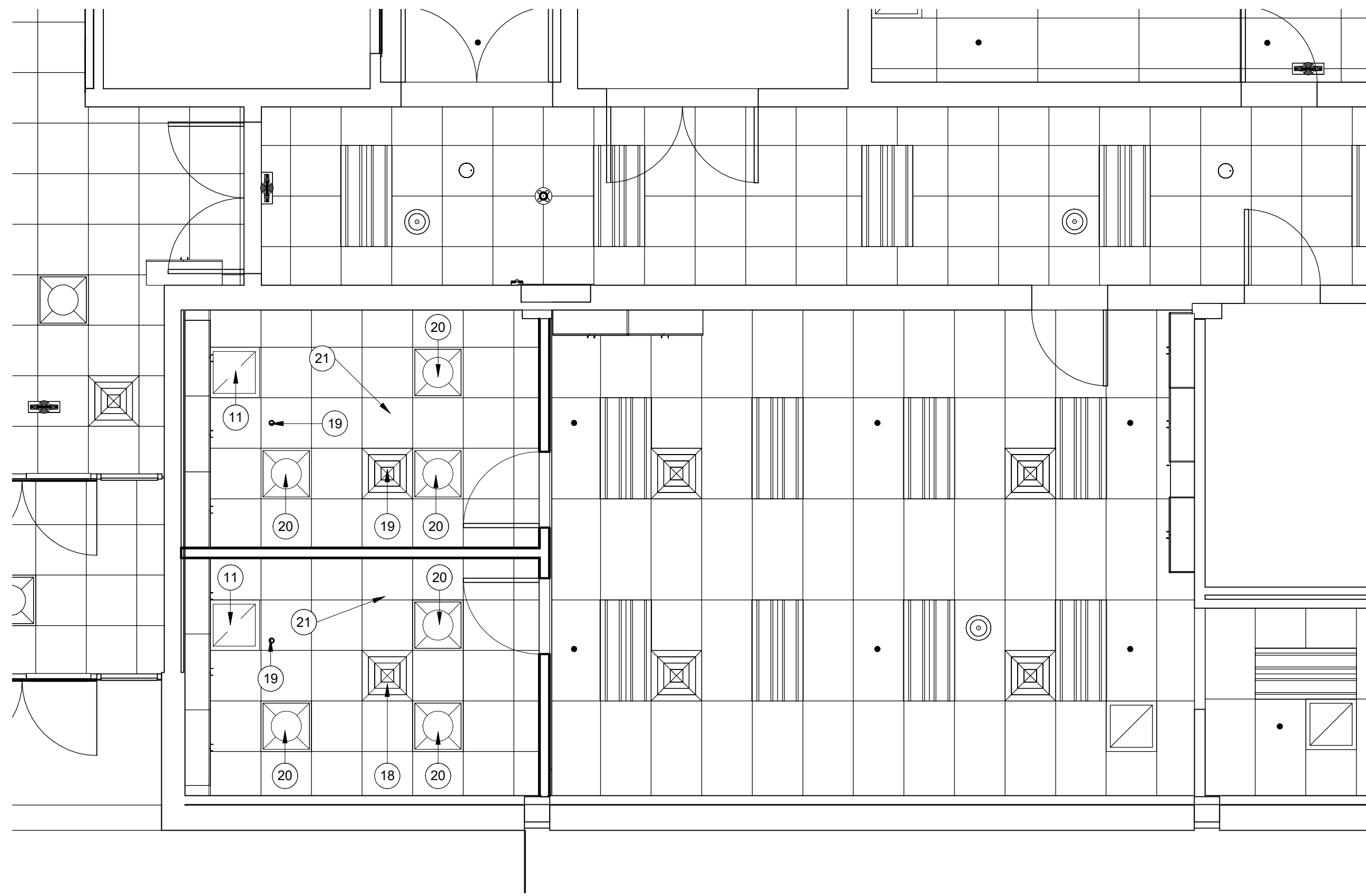
Laboratory Analysis PLM/PCM/TEM PLM

Inaccessible areas of suspect ACM Under concrete foundation

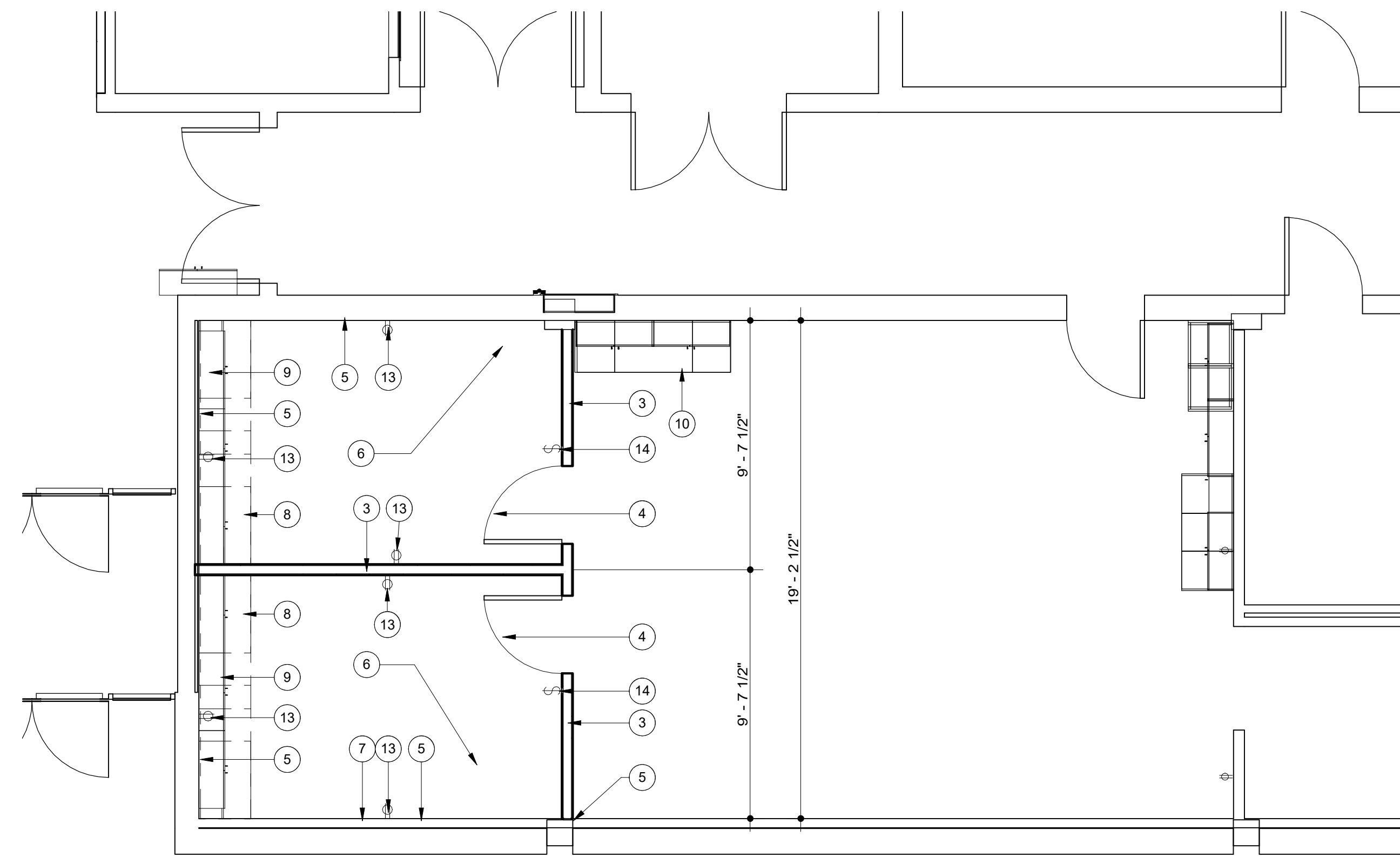
Scott Bainbridge Cert #ASB-6822

	11/28/23
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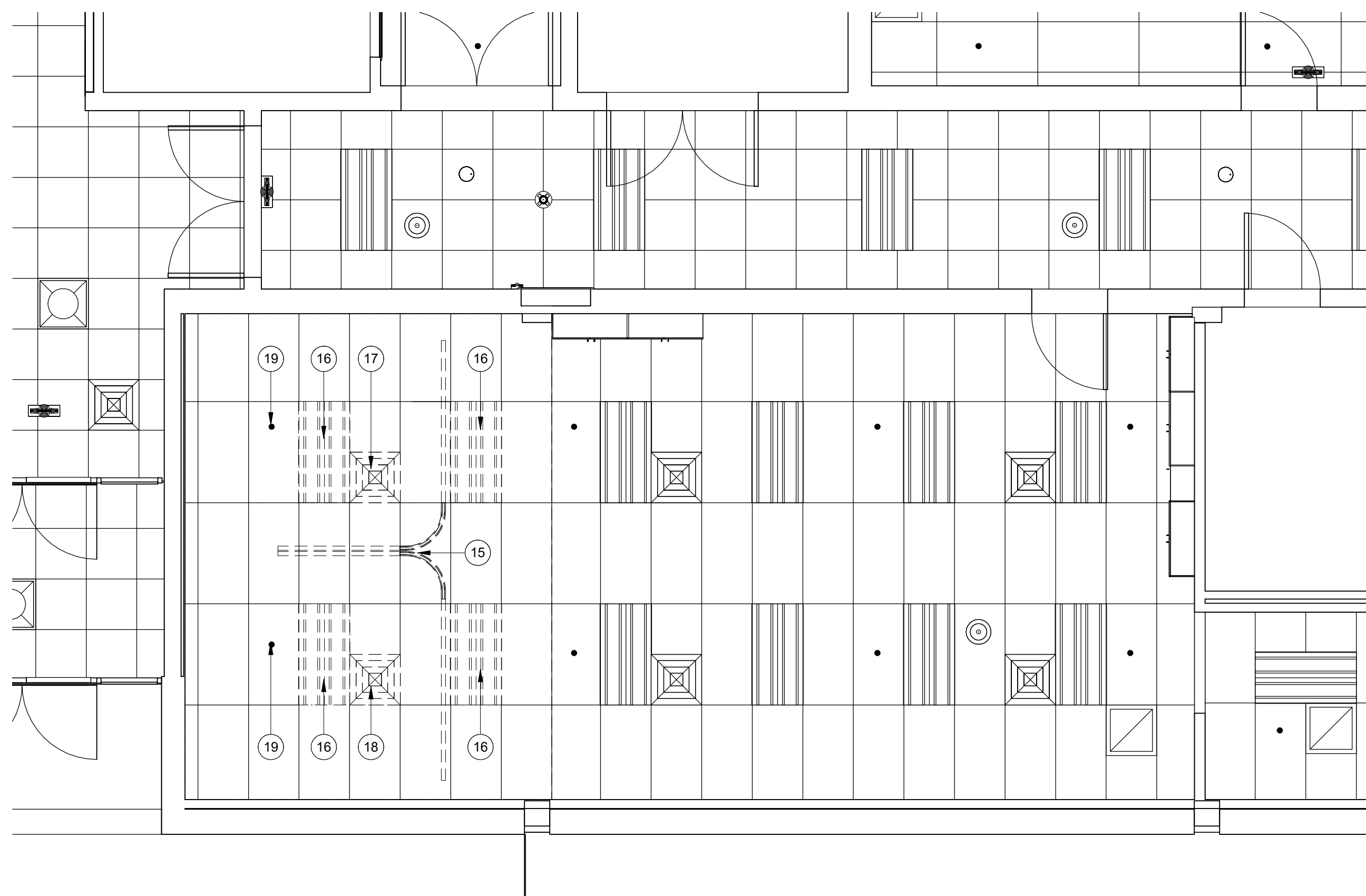
* - Denotes less than 1% asbestos which is regulated by OSHA, it is recommended to review their regulations before removal



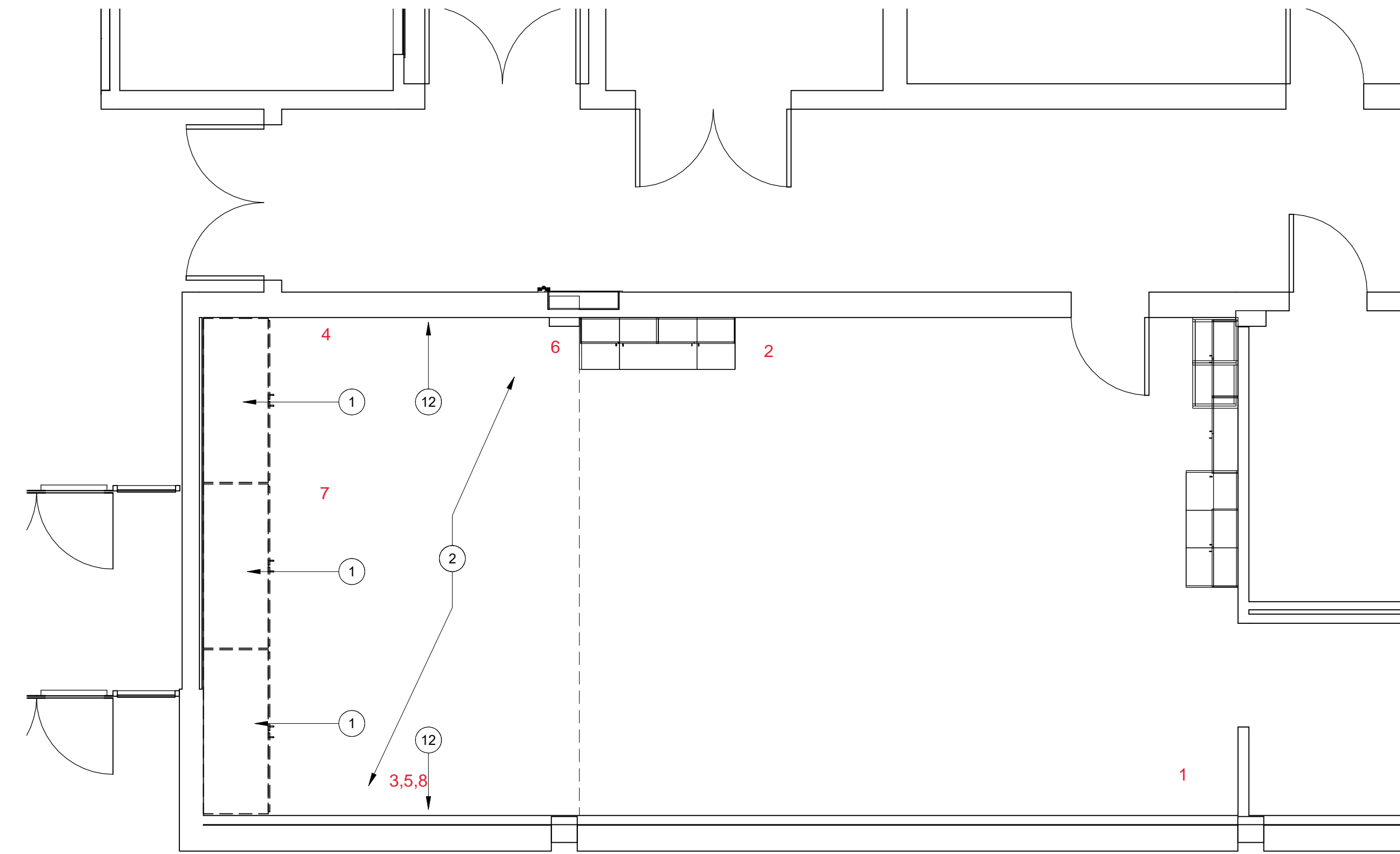
M6071 NEW CEILING PLAN
SCALE: 1/4" = 1'-0" **4**



M6071 NEW FLOOR PLAN
SCALE: 1/4" = 1'-0" **2**



M6071 DEMOLITION CEILING PLAN
SCALE: 1/4" = 1'-0" **3**



M6071 DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0" **1**

REFERENCE NOTES

- 1 EXISTING FULL HEIGHT CABINET TI BE REMOVED.
- 2 EXISTING FLOOR TO BE REMOVED WHERE NEW CONSTRUCTION IS OCCURRING.
- 3 NEW 2X4 GYP. WALL TO BE INSTALLED.
- 4 NEW DOOR TO BE INSTALLED.
- 5 EXISTING WALLS TO BE PATCHED AND PAINTED AS NEEDED.
- 6 NEW LINOLEUM FLOOR TO BE INSTALLED.
- 7 NEW OIT JACK TO BE INSTALLED.
- 8 NEW 24" DEEP BASE CABINETS TO BE INSTALLED.
- 9 NEW UPPER CABINETS TO BE INSTALLED.
- 10 EXISTING CABINETS TO REMAIN.
- 11 NEW RETURN AIR GRILL TO BE INSTALLED.
- 12 EXISTING POWER TRACK TO BE REMOVED.
- 13 NEW OUTLET TO BE INSTALLED.
- 14 NEW LIGHT SWITCH TO BE INSTALLED.
- 15 EXISTING CURTIN RAIL TO BE REMOVED.
- 16 EXISTING LIGHTS TO BE REMOVED.
- 17 EXISTING SUPPLY AIR DIFFUSER TO BE REMOVED.
- 18 NEW SUPPLY AIR VENT TO BE INSTALLED.
- 19 EXISTING SPRINKLER HEAD TO REMAIN.
- 20 NEW TROFFER LIGHTS TO BE INSTALLED.
- 21 NEW 2X2 LAY-IN CEILING.



FACILITIES PLANNING
240 BRWB PROVO, UTAH 84602
PHONE: (801) 422-5504
FAX: (801) 422-0566

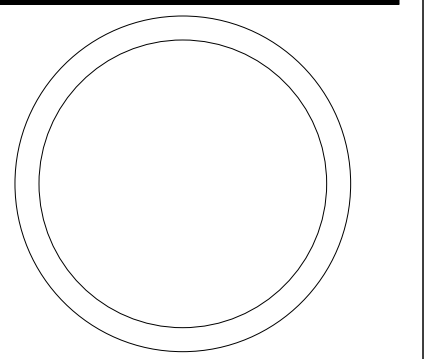
DATE: 11/04/21
DESIGNER: S. KING
DRAWN BY: RED

ADA CHECK: _____
CODE CHECK: _____
STRUCTURAL: _____
ENGINEERING: _____
PLANNING DIR: _____

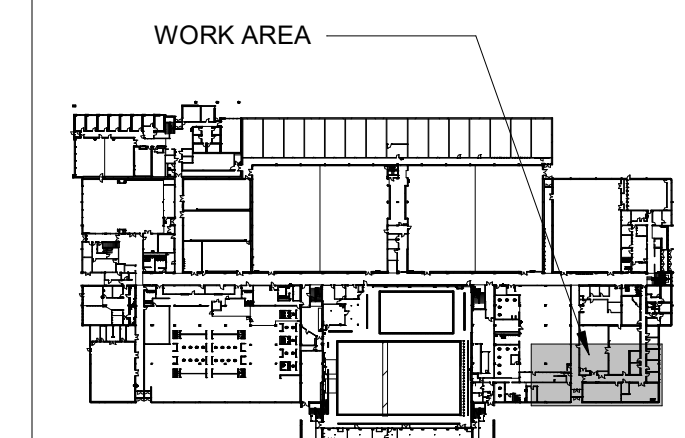
CLIENT APPROVAL _____ DATE _____

REVISIONS

BRIGHAM YOUNG
UNIVERSITY
RM 123 LAB SPACE REMODEL
LIFE SCIENCES
RB - LEVEL 1



LOCATION PLAN



FLOOR & CEILING PLANS

WORK ORDER & SHEET NO.

M6071
A1.0

PRELIMINARY DRAWINGS

RB - LEVEL 2

11/19/2021 9:21:43 AM C:\Users\shelbyk\Documents\RB_shelbyk.rvt

List of NESHAP Regulated Materials Tested and Found in Surveys

1. Friable asbestos material (>1% asbestos and can be crumbled, pulverized or reduced to powder by hand pressure)

Tested	Materials	Positive
_____	Thermal System Insulation (TSI)	_____
_____	Textured Ceiling Materials (TCM)	_____
_____	Spray-on Insulation or Fireproofing	_____
_____	Blown-in Insulation	_____
_____	Ceiling Tiles/Panels	_____
_____	Plaster, Gypsum Board, Joint Compound	_____
_____	Cloth Materials	_____
_____	Paper Materials	_____
_____	Electrical Wiring Insulation	_____
_____	Sink Undercoating (loose)	_____
_____	Other _____	_____

2. Category I ACM which has become friable

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category I ACM that will be or has been subjected to sanding, grinding, cutting or abrading

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

4. Category II ACM that has a high probability of becoming or has become friable in the course of demolition or renovation operations

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____

List of NESHAP Non-Regulated Materials Tested and Found in Survey

1. ≥ 1% Asbestos

2. Category I Non-Friable (cannot be crumbled, pulverized or reduced to powder by hand pressure) ACM with >1% asbestos by new PLM procedure

Tested	Materials	Positive
_____	Packings	_____
_____	Gaskets	_____
_____	Vinyl Floor Tile and Sheet Vinyl Flooring	_____
_____	Asphalt Roofing Products	_____

3. Category II Non-Friable ACM with >1% asbestos by new PLM procedure (category includes items meeting Category I definition but not specifically listed in that category)

Tested	Materials	Positive
_____	Asbestos Cement Materials (transite)	_____
_____	Asphalt, tar and rubber base ACM products other than roofing	_____
_____	Non-asphalt and Non-paper Roofing Products	_____
_____	Paint	_____
_____	Fire Brick and/or Mortar	_____
_____	Stainless Steel Sink Undercoating (solid)	_____
_____	Encapsulated TCM	_____
_____	Encapsulated TSI	_____
_____	Mastic for Floor Tile, Ceiling Tile, Cove Molding, etc.	_____
_____	Other _Fume Hood Base_____	_____

Notes

1. All materials and conditions are interpreted by Air Quality Consulting LLC
2. The Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) asbestos revision as outlined in 40 CFR, Part 61, became effective November 20, 1990. The asbestos classification system outlined in the revision and included in this section is dynamic in nature. Asbestos materials classified as “Non-Regulated” at the time of the survey may become “Regulated” due to ongoing or planned maintenance, renovation or demolition actions which can transform a material containing greater than 1% asbestos from a “non-friable” and “Non-Regulated” to a “friable” and “Regulated” condition. Classification of ACM in this section and in the executive summary of this report is, therefore, based on the observations of the surveyor at the time of the survey and may or may not be appropriate at later dates.
3. Maintenance, renovation, demolition, weathering, normal wear, water or other damage can alter the “Non-Regulated” status of materials, and necessitate precautions required for handling them as “Regulated” asbestos-materials.
4. Details on testing locations, methods and results can be found on remaining report.



**Built Environment Testing
Reservoirs**

November 29, 2023

Subcontractor Number:

Laboratory Report: RES 585138-1

Project #/P.O. #: RB-112823

Project Description: Richards Building

Scott Bainbridge
Air Quality Consulting, LLC
226 E 4800 S
Murray UT 84107

Dear Scott,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 585138-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received and with the information provided by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



by Andrew Roberts

Jeanne Spencer
President



EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 585138-1**
 Client: **Air Quality Consulting, LLC**
 Client Project/P.O.: **RB-112823**
 Client Project Description: **Richards Building**
 Date Samples Received: **November 29, 2023**
 Analysis Type: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Rush**
 Date Samples Analyzed: **November 29, 2023**

NA = Not Analyzed
NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID Client Sample Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
585138 - 1-Ceiling Panel		Sample Not Received.					
585138 - 2-Ceiling Panel	A	Gray/white ceiling tile	100		ND	60	40
585138 - 3-Ceiling Panel	A	Gray/white ceiling tile	100		ND	55	45
585138 - 4-Drywall System	A	White paint w/ white compound	3		ND	0	100
	B	Gray/tan drywall	97		ND	15	85
585138 - 5-Drywall System	A	White compound w/ white paint	5		ND	0	100
	B	Gray/tan drywall	95		ND	17	83
585138 - 6-Drywall System	A	Blue fibrous woven material	4		ND	85	15
	B	Pink compound w/ white paint	16		ND	0	100
	C	Gray/tan drywall	30		ND	40	60
	D	White compound	50		ND	0	100
585138 - 7-Sheet Vinyl	A	Green fibrous material w/ blue adhesive	2		ND	30	70
	B	Gray leveling compound w/ colorless adhesive	8		ND	0	100
	C	Gray/multi-colored flooring	90		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

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Laboratory Sample ID	L A Y E R	Physical Description	Sub Part	Asbestos Content		Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
				Mineral	Visual Estimate (%)		
Client Sample Number			(%)		(%)		
585138 - 8-Sheet Vinyl	A	Green fibrous material w/ blue adhesive	6		ND	30	70
	B	Gray leveling compound w/ colorless adhesive	14		ND	0	100
	C	Gray/multi-colored flooring	80		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

Andrew Roberts
Analyst

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES	
Company: Air Quality Consulting, LLC		Company: Air Quality Consulting, LLC		Contact: Scott Bainbridge		-1 PLM Rush *NO VERBALS*	
Address: 226 E 4800 S		Address: 226 E 4800 S		Phone: (385) 321-9701			
Murray, UT 84107		Murray, UT 84107		Fax:			
Project Number and/or P.O. #: RB-112823				Cell: (385) 321-9701			
Project Description/Location: Richards Building				Final Data Deliverable Email Address: scott@airqualityconsult.com			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm		REQUESTED ANALYSIS				VALID MATRIX CODES		LAB NOTES	
PLM / PCM / TEM DTL RUSH PRIORITY STANDARD						Air = A Bulk = B			
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm						Dust = D Food = F			
Dust RUSH PRIORITY STANDARD						Paint = P Soil = S			
Metals RUSH PRIORITY STANDARD						Surface = SU Swab = SW			
						Tape = T Wipe = W			
Organics* SAME DAY RUSH PRIORITY STANDARD						Drinking Water = DW			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm						Waste Water = WW			
Viable Analysis** PRIORITY STANDARD						**ASTM E1792 approved wipe media only**			
Medical Device Analysis RUSH STANDARD						Sample Volume (L) / Area			
Mold Analysis RUSH PRIORITY STANDARD						Length (or Aliquots) x Width (or Area per Aliquot)			
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.						Matrix Code			
Special Instructions:						# of Containers			
Client Sample ID Number (Sample ID's must be unique)						Date Collected mm/dd/yy			
						Time Collected hh:mm			
						Laboratory Analysis Instructions			
1 1-Ceiling Panel		ASBESTOS	CHEMISTRY	MICROBIOLOGY	ICO				
2 2-Ceiling Panel		X				B			
3 3-Ceiling Panel		X				B			
4 4-Drywall System		X				B			
5 5-Drywall System		X				B			
6 6-Drywall System		X				B			
7 7-Sheet Vinyl		X				B			
8 8-Sheet Vinyl		X				B			

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.

EREI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Scott Bainbridge	Date/Time: 11/28/2023 12:12:46	Sample Condition: Acceptable
Received By:		Victoria Hernandez	Date/Time: 11/29/2023 13:02:58	Carrier: Fed-Ex

**Asbestos Survey and Assessment Performed at
Stephen L. Richards Building
15 Field House Drive
Provo, Utah 84604
30 November, 2023**

Scope of Work

We were hired by Brigham Young University to survey Room 123 in the Richards Building for a pending renovation. Samples were taken by Scott Bainbridge and tested at Reservoirs Environmental in Denver, Colorado. The results are included in this report.

Methods and Materials

A survey of the areas outlined in the floorplan sections was conducted to observe, identify, locate and sample any materials suspected of containing asbestos according to NESHAP categories. All accessible areas were identified and documented.

Bulk samples were collected using approved methods and microscopically analyzed for asbestos content by Reservoirs Environmental, Inc. in Denver, Colorado. Reservoirs participates in the National Institute for Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP).

Asbestos percentages were estimated utilizing the polarized light microscope (PLM) and dispersion staining methods as prescribed by NIOSH.

Scott Bainbridge

30 November, 2023

Scott Bainbridge
State of Utah Inspector #ASB-6822 exp. 1/6/24

Date

Annabelle Mitchell

30 November, 2023

Annabelle Mitchell
State of Utah Inspector #ASB-8012 exp. 2/10/24

Date

NEW DANCE TEACHING STATIONS

REMODELING OF ROOM 158 - RICHARDS PHYSICAL EDUCATION BLDG.

PROJECT NUMBER - 7 64188

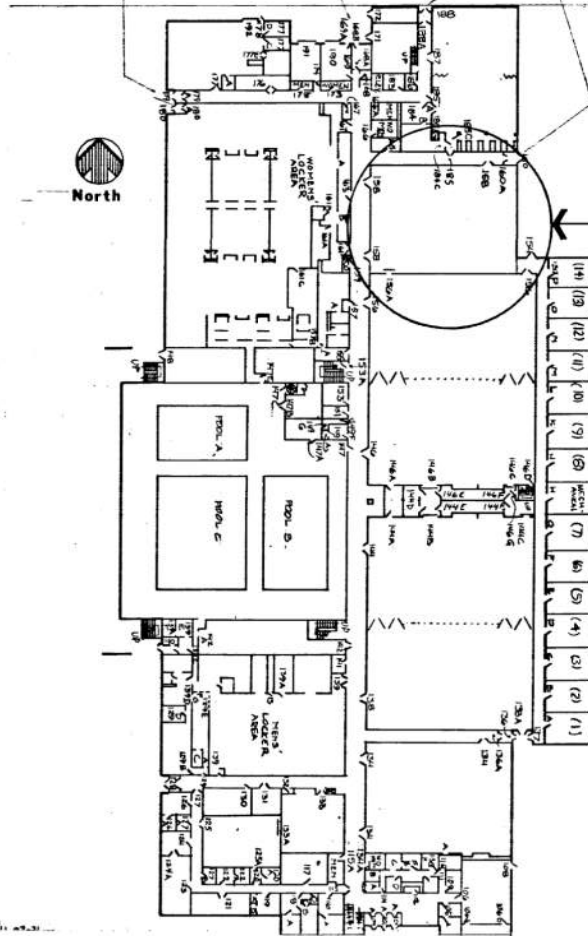
APPROVALS

SIGNATURE	DATE
<i>Clayton R. Johnson</i>	3 May 83
<i>John A. [unclear]</i>	3 May 83
<i>Richard [unclear]</i>	3 May 1983
<i>Edwin [unclear]</i>	3 May 83

INDEX OF DRAWINGS

SHEET NUMBER	DRAWING DESCRIPTION
A1	TITLE SHEET
A2	DEMOLITION PLANS & ELEVATIONS
B1	FOOTING PLAN, FRAMING PLAN & DETAILS
B2	WALL SECTIONS AND DETAILS
A3	FLOOR PLANS, SCHEDULES AND NOTES
A4	INTERIOR WALL ELEVATIONS AND DETAILS
A5	INTERIOR WALL ELEVATIONS
A6	INTERIOR WALL ELEVATIONS
A7	REFLECTED CEILING PLANS, DOOR DETAILS
A8	ALTERNATE REFLECTED CEILING PLANS
A9	ALTERNATE MILLWORK DETAILS
M1	MECHANICAL FLOOR PLANS
M2	MECHANICAL NOTES & SCHEDULES
M-3	MECHANICAL PLAN & DETAILS
E1	ELECTRICAL FLOOR PLANS
E2	ALTERNATE ELECTRICAL FLOOR PLANS

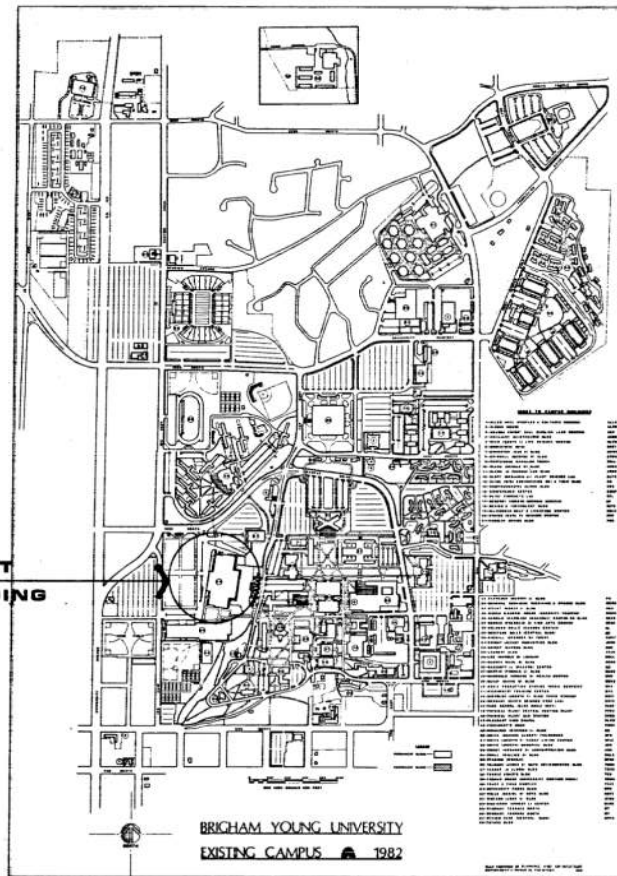
ACCESS FOR CONSTRUCTION MATERIALS AND WORKERS SHALL BE FROM THE NORTH END OF BUILDING - ROOMS 179, 165, 158 & 160.



FIRST FLOOR PLAN
RICHARDS P. E. BUILDING

LOCATION OF PROJECT
ROOM 158

LOCATION OF PROJECT
RICHARDS P. E. BUILDING



KEY PLAN
B. Y. U. CAMPUS

Drawn By
M. Schiller
Date
April 1983
W.O. No.

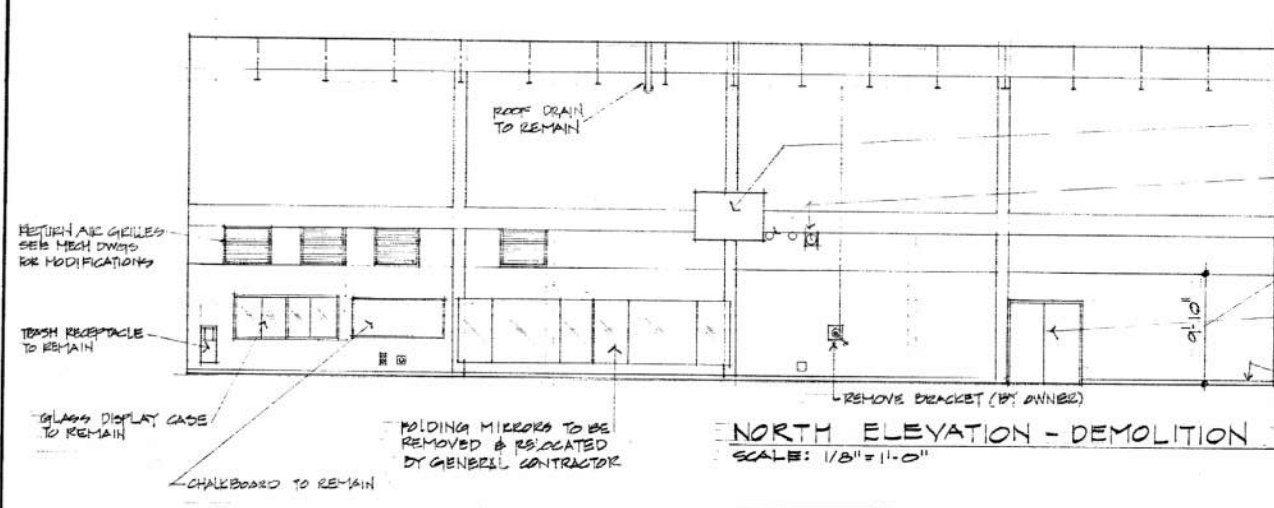
Brigham Young University
Planning and Architecture Department
240 BRWB Brigham Young University Provo, Utah 84602



LOCATION PLANS
TITLE APPROVALS, INDEX OF DRAWINGS
REMODEL ROOM 158
RICHARDS P. E. BUILDING

A1





CUT OPENING FOR NEW 6'x7' DOOR SEE DTL'S FOR SIZE

CHALKBOARD TO BE REMOVED BY CONTRACTOR (SURPLUS TO OWNER)

CLOCK & BELLS TO BE REMOVED BY CONTRACTOR (SURPLUS TO OWNER)

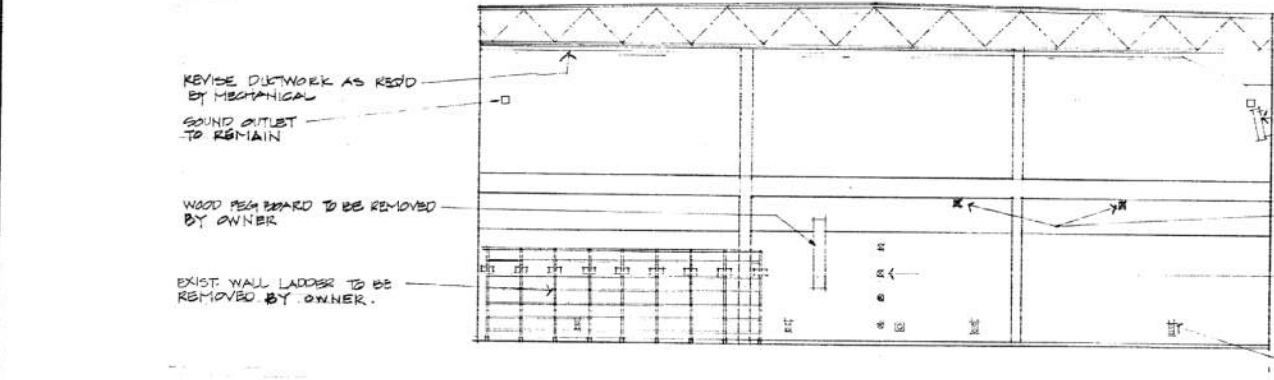
GLAZED WALL TILE UNITS TYPICAL ALL AROUND

EXISTING DOOR TO REMAIN

ALUMINUM EDGE ANGLE REMOVE ONLY AS REQUIRED FOR NEW CONSTRUCTION

BASKETBALL BACKBOARD LIFT MECHANISM, MOTOR, AND SUPPORTING STRUCTURE TO BE REMOVED BY CONTRACTOR - SURPLUS TO OWNER

REMOVE BRACKET (BY OWNER)



REVISE DUCTWORK AS REQ'D BY MECHANICAL

SOUND OUTLET TO REMAIN

WOOD PANEL BOARD TO BE REMOVED BY OWNER

EXIST. WALL LADDER TO BE REMOVED BY OWNER

ROOF DRAIN TO REMAIN

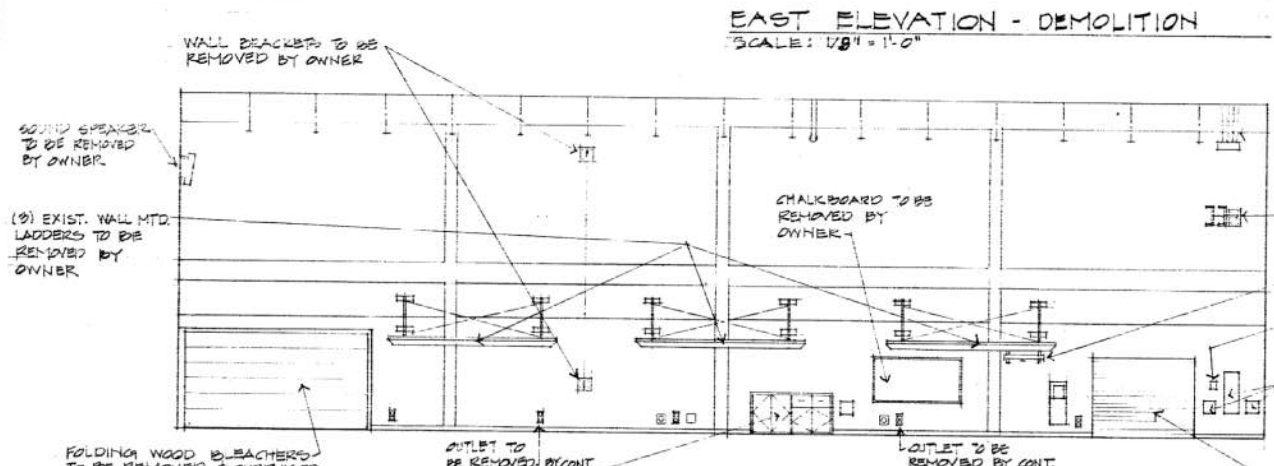
BRACKETS TO BE REMOVED

EXIST. TRUSSES & BRIDGING TO REMAIN AS IS

BRACKETS TO BE REMOVED BY OWNER

BRACKETS & SUPPORT SYSTEM TO BE REMOVED BY OWNER

ROOF DRAIN TO REMAIN



WALL BRACKETS TO BE REMOVED BY OWNER

SOUND SPEAKER TO BE REMOVED BY OWNER

(9) EXIST. WALL MTD. LADDERS TO BE REMOVED BY OWNER

CHALKBOARD TO BE REMOVED BY OWNER

ELECTRICAL CONDUIT & DISTRIBUTION BOX SEE ELEC. DWGS FOR MODIFICATIONS

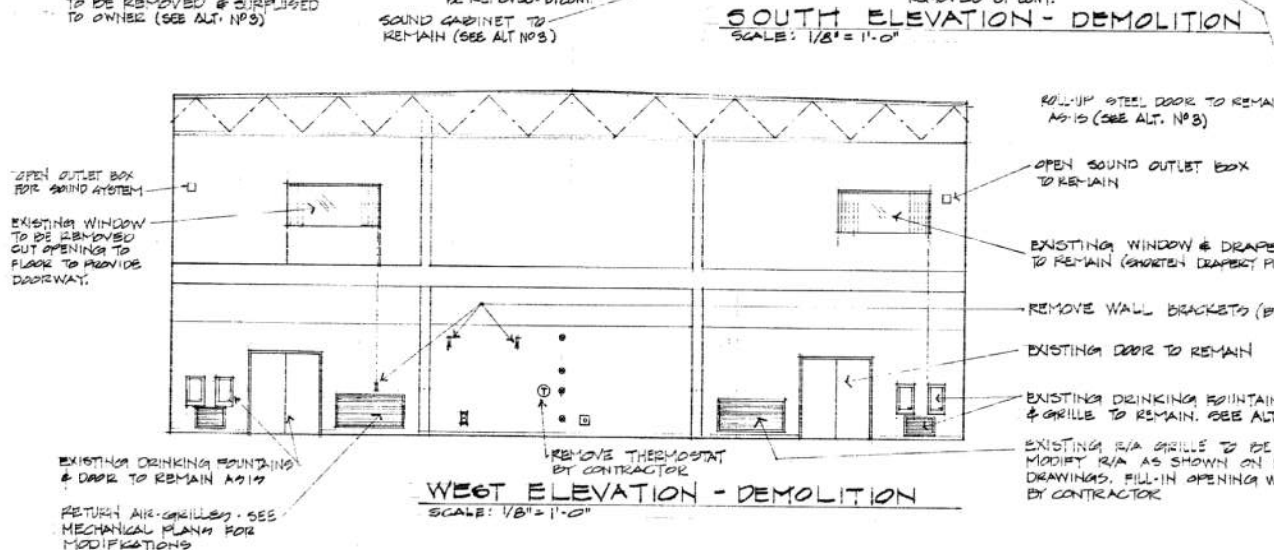
STEEL BRACKET ON WALL TO BE REMOVED & SURPLUS TO OWNER

WALL-MTD. ROLL-UP PDS. SCREEN TO BE REMOVED BY OWNER

MOTOR SWITCH FOR BASKETBALL BACKBOARDS TO BE REMOVED BY CONT.

ELECTRICAL PANELS SEE ELEC. DRAWINGS FOR MODIFICATIONS

REMOVE SECTION OF DISPLAY CASE & SURPLUS TO OWNER. CUT OPENING FOR NEW 6'x7' DOOR



REMOVE THERMOSTAT BY CONTRACTOR

EXIST. DRINKING FOUNTAINS & GRILLE TO REMAIN. SEE ALT. NO. 6

EXISTING R/A GRILLE TO BE REMOVED MODIFY R/A AS SHOWN ON MECH. DRAWINGS. FILL-IN OPENING W/ BLOCK BY CONTRACTOR

ROLL-UP STEEL DOOR TO REMAIN AS IS (SEE ALT. NO. 3)

OPEN SOUND OUTLET BOX TO REMAIN

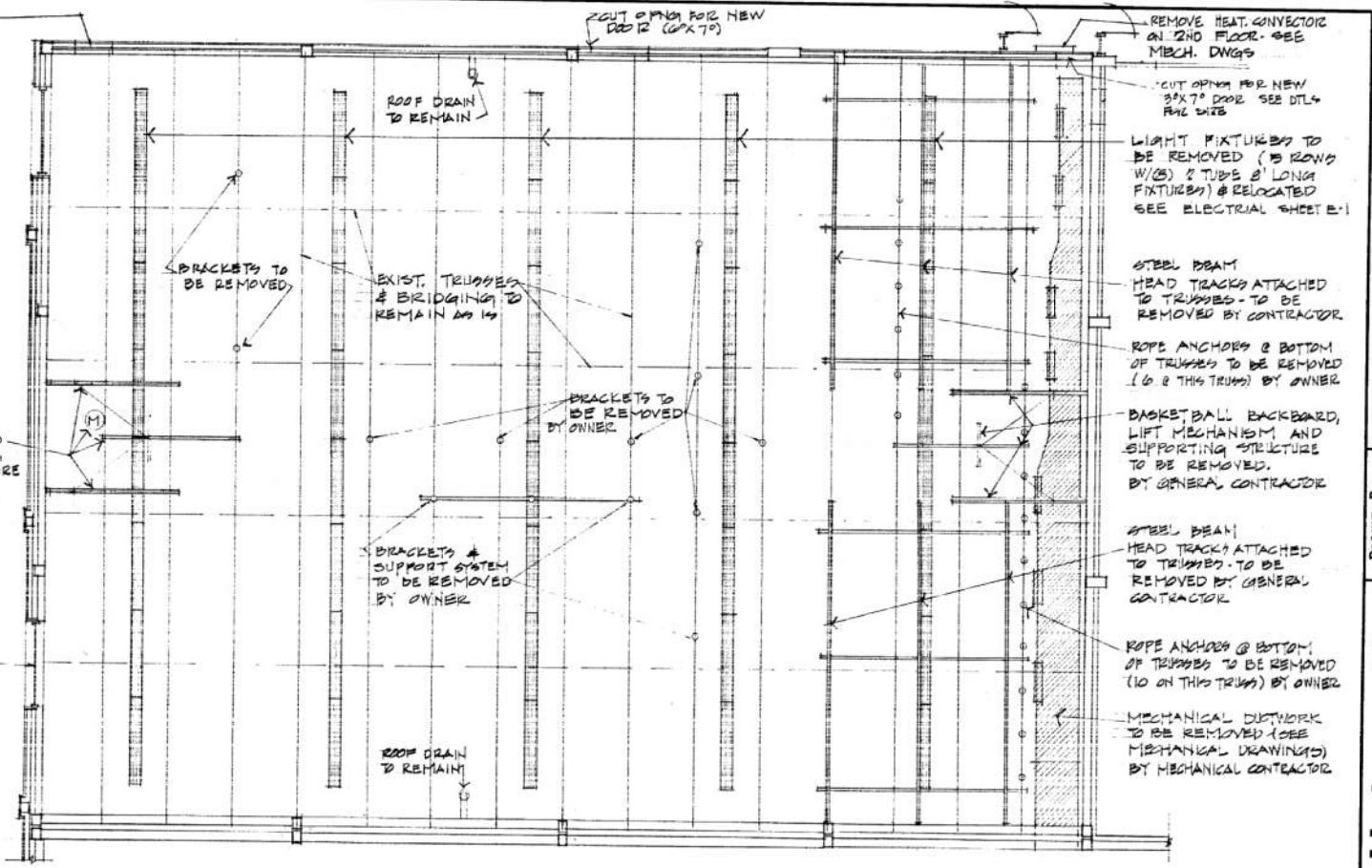
EXISTING WINDOW & DRAPES TO REMAIN (SHORTEN DRAPERY PULLCHORD)

REMOVE WALL BRACKETS (BY OWNER)

EXISTING DOOR TO REMAIN

EXISTING DRINKING FOUNTAINS & GRILLE TO REMAIN. SEE ALT. NO. 6

EXISTING R/A GRILLE TO BE REMOVED MODIFY R/A AS SHOWN ON MECH. DRAWINGS. FILL-IN OPENING W/ BLOCK BY CONTRACTOR



REMOVE HEAT CONVECTOR ON 2ND FLOOR - SEE MECH. DWGS

CUT OPEN FOR NEW 6'x7' DOOR SEE DTL'S FOR SIZE

LIGHT FIXTURES TO BE REMOVED (15 ROWS W/ (3) & TUBE & LONGI FIXTURES) & RELOCATED SEE ELECTRICAL SHEET E-1

STEEL BEAM HEAD TRACKS ATTACHED TO TRUSSES - TO BE REMOVED BY CONTRACTOR

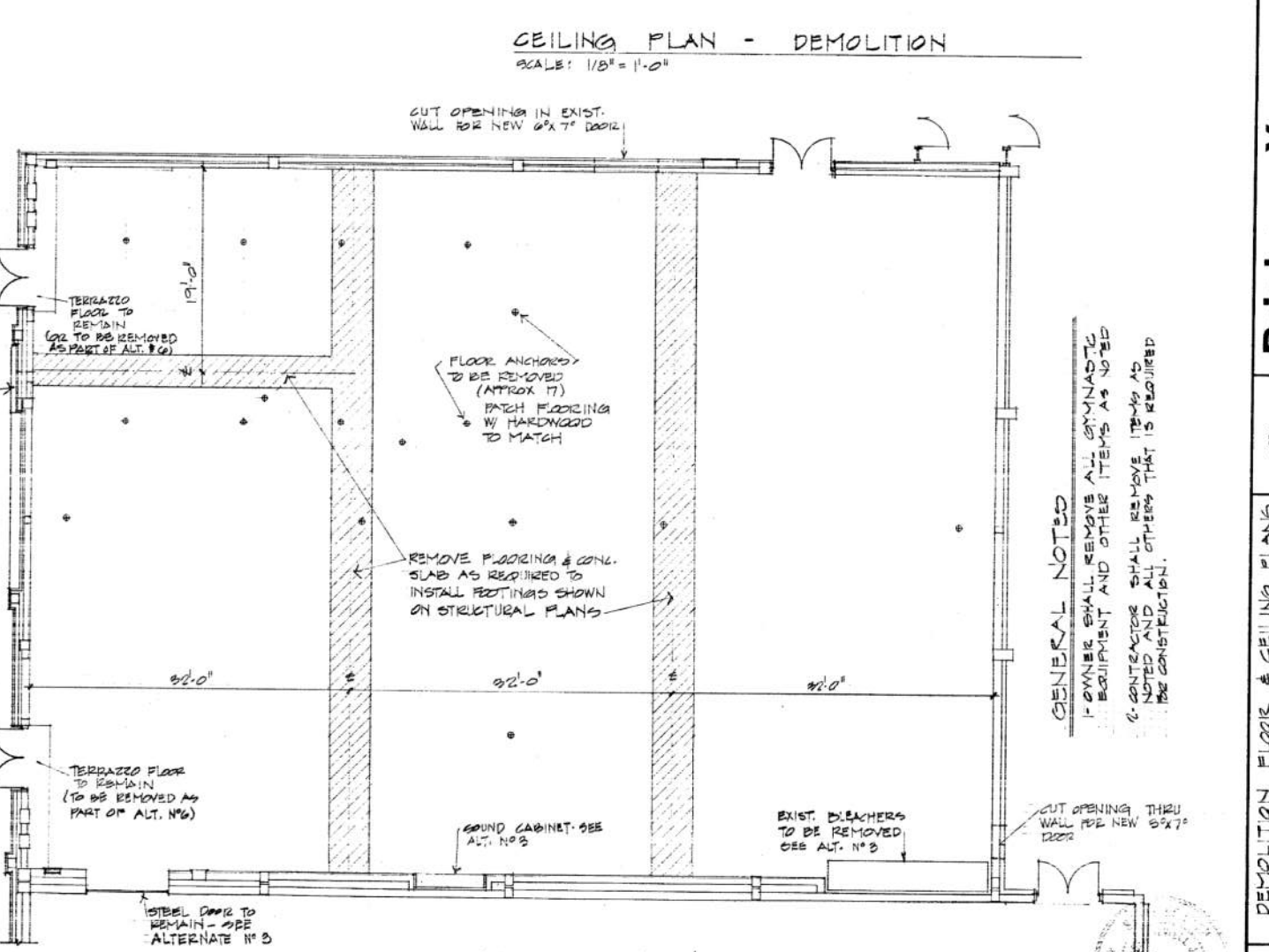
ROPE ANCHORS @ BOTTOM OF TRUSSES TO BE REMOVED (10 @ THIS TRUSS) BY OWNER

BASKETBALL BACKBOARD, LIFT MECHANISM, AND SUPPORTING STRUCTURE TO BE REMOVED BY GENERAL CONTRACTOR

STEEL BEAM HEAD TRACKS ATTACHED TO TRUSSES - TO BE REMOVED BY GENERAL CONTRACTOR

ROPE ANCHORS @ BOTTOM OF TRUSSES TO BE REMOVED (10 ON THIS TRUSS) BY OWNER

MECHANICAL DUCTWORK TO BE REMOVED (SEE MECHANICAL DRAWINGS) BY MECHANICAL CONTRACTOR



CUT OPENING IN EXIST. WALL FOR NEW 6'x7' DOOR

TERRAZZO FLOOR TO REMAIN (OR TO BE REMOVED AS PART OF ALT. NO. 6)

FLOOR ANCHORS TO BE REMOVED (APPROX 17) PATCH FLOORING W/ HARDWOOD TO MATCH

REMOVE FLOORING & CONG. SLAB AS REQUIRED TO INSTALL FOOTINGS SHOWN ON STRUCTURAL PLANS

REMOVE SECTION OF DISPLAY CASE & SURPLUS TO OWNER. CUT OPENING FOR NEW 6'x7' DOOR

TERRAZZO FLOOR TO REMAIN (TO BE REMOVED AS PART OF ALT. NO. 6)

SOUND CABINET - SEE ALT. NO. 3

EXIST. BLEACHERS TO BE REMOVED SEE ALT. NO. 3

CUT OPENING THRU WALL FOR NEW 6'x7' DOOR

STEEL DOOR TO REMAIN - SEE ALTERNATE NO. 3

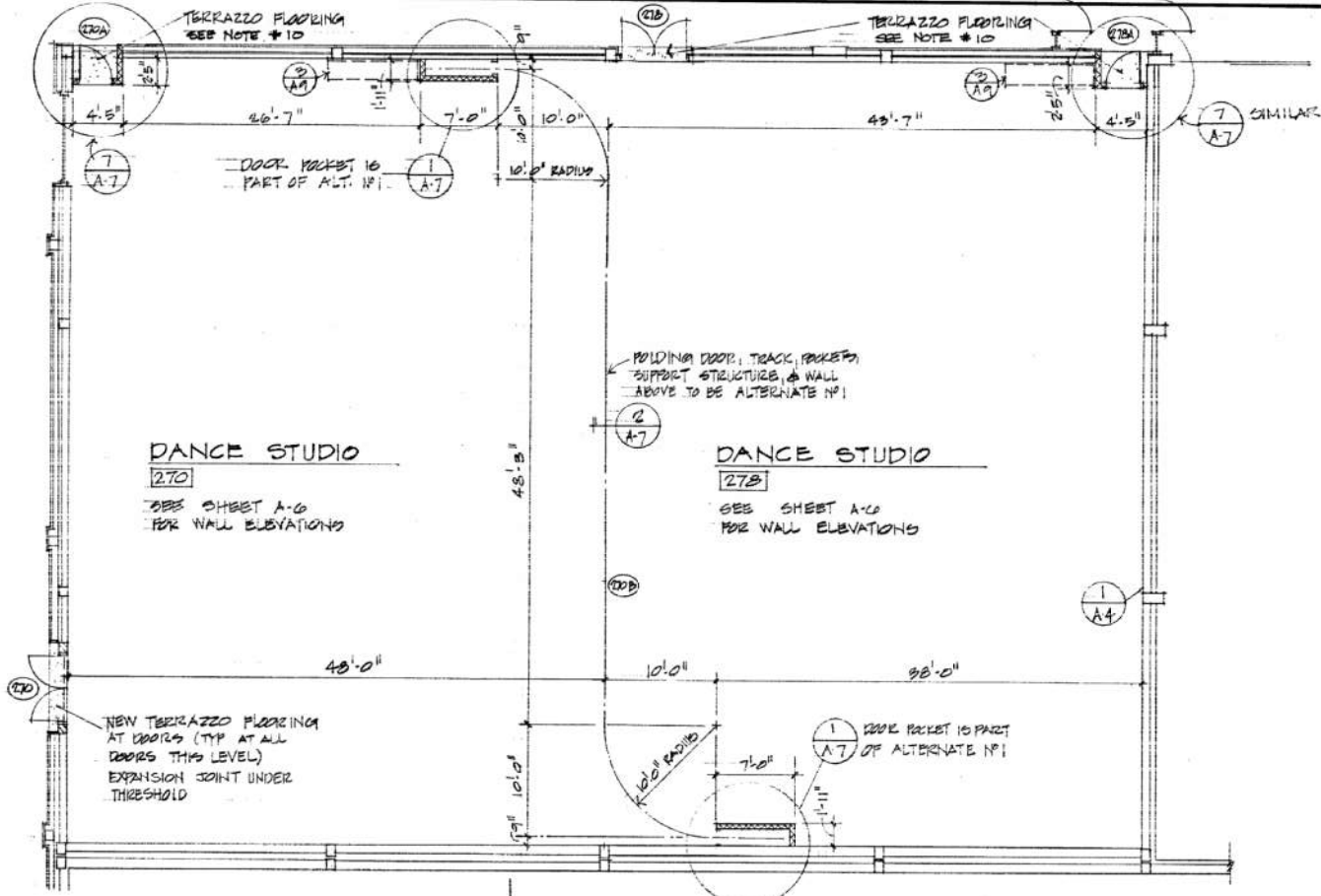
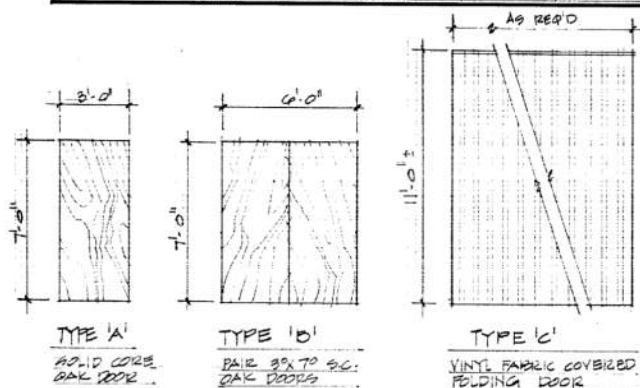
GENERAL NOTES

1. OWNER SHALL REMOVE ALL GYMNASIUM EQUIPMENT AND OTHER ITEMS AS NOTED

2. CONTRACTOR SHALL REMOVE ITEMS AS NOTED AND ALL OTHERS THAT IS REQUIRED FOR CONSTRUCTION.

DOOR SCHEDULE

DOOR NUMBER	DOOR TYPE	SIZE			HAND	MATERIAL	DETAILS	HARDWARE GROUP	REMARKS
		WIDTH	HEIGHT	THICK.					
158	EXIST.	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	-	Nº 2	
158-A	'A'	6'-0"	7'-0"	1 3/4"	L.H.	OAK	5/A-7	Nº 3	
160	EXIST.	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	-	Nº 2	
162	'B'	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	5/A-7	Nº 3	
162-A	'A'	6'-0"	7'-0"	1 3/4"	L.H.	OAK	5/A-7	Nº 3	
164	EXIST.	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	-	Nº 2	
164-A	'A'	6'-0"	7'-0"	1 3/4"	R.H.	OAK	4/A-7	Nº 4	
270	'B'	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	6/A-7	Nº 3	
270-A	'A'	6'-0"	7'-0"	1 3/4"	L.H.	OAK	7#3/A-7	Nº 4	
270-B	'C'	AS REQ'D	11'-0"	-	FOLDING	VINYL	1#2 A/7	Nº 1	ALTERNATE Nº 1
278	'B'	6'-0"	7'-0"	1 3/4"	DOUBLE	OAK	5/A-7	Nº 3	
278-A	'A'	6'-0"	7'-0"	1 3/4"	R.H.	OAK	7#3/A-7	Nº 4	



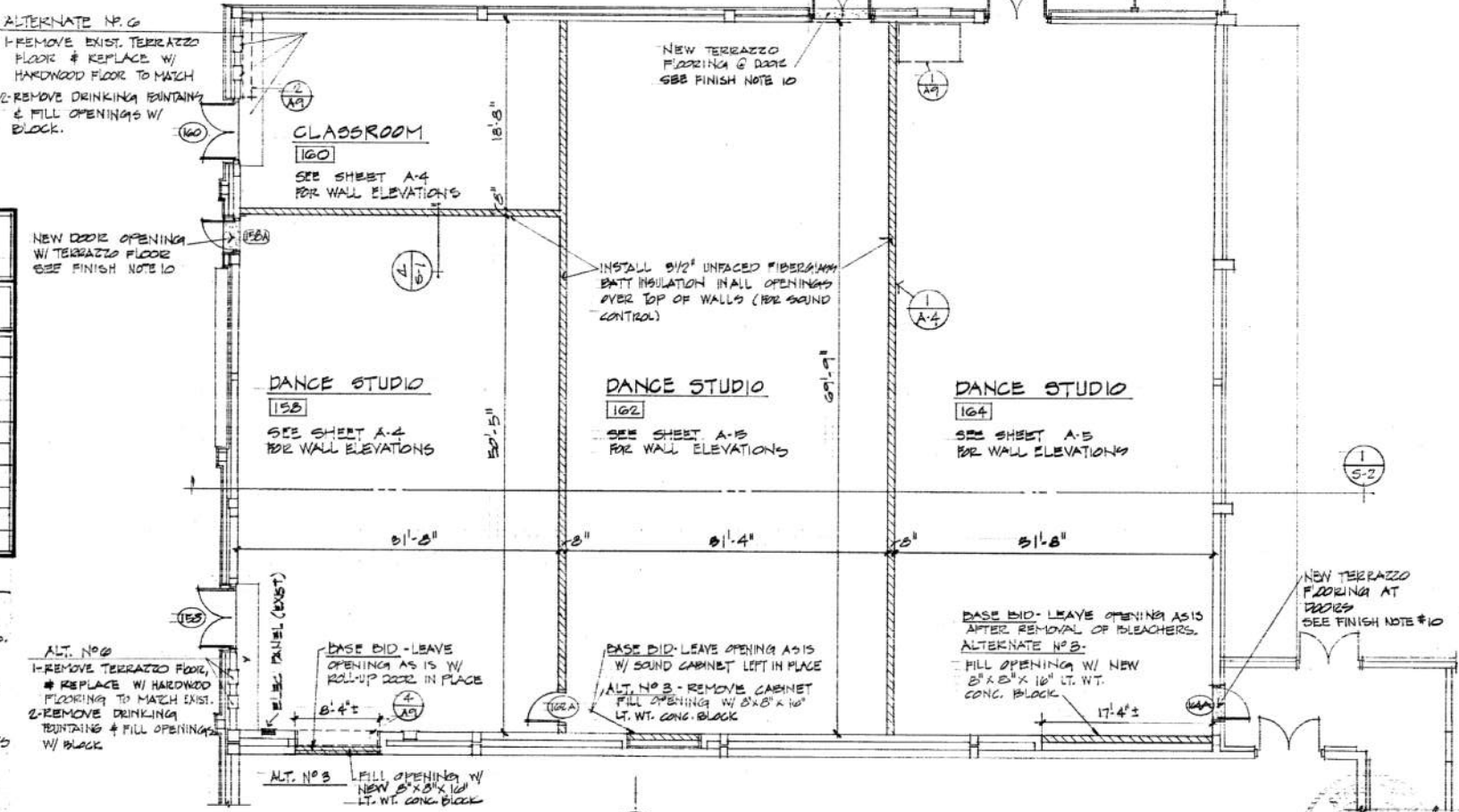
SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

ROOM FINISH SCHEDULE

ROOM	NUMBER	FLOOR	BASE	WALLS				CEILING	REMARKS
				NORTH	EAST	SOUTH	WEST		
DANCE STUDIO	158	EXIST. H.W.	ALUM.	BLOCK	BLOCK	EXIST.	EXIST.	ACOUST. T#1	
CLASSROOM	160	EXIST. H.W.	ALUM.	EXIST.	BLOCK	BLOCK	EXIST.	ACOUST. T#1	
DANCE STUDIO	162	EXIST. H.W.	ALUM.	EXIST.	BLOCK	EXIST.	BLOCK	ACOUST. T#1	
DANCE STUDIO	164	EXIST. H.W.	ALUM.	EXIST.	EXIST.	EXIST./BLK	BLOCK	ACOUST. T#1	
DANCE STUDIO	270	HARDWOOD	ALUM.	EXIST./G.B.	FOLDING DOOR	EXIST.	EXIST.	EXIST.	SEE NOTE Nº 9 FOR ALT. CLR. FINISH
DANCE STUDIO	278	HARDWOOD	ALUM.	EXIST./G.B.	EXIST.	EXIST./G.B.	FOLDING DOOR	EXIST.	" " " " " "

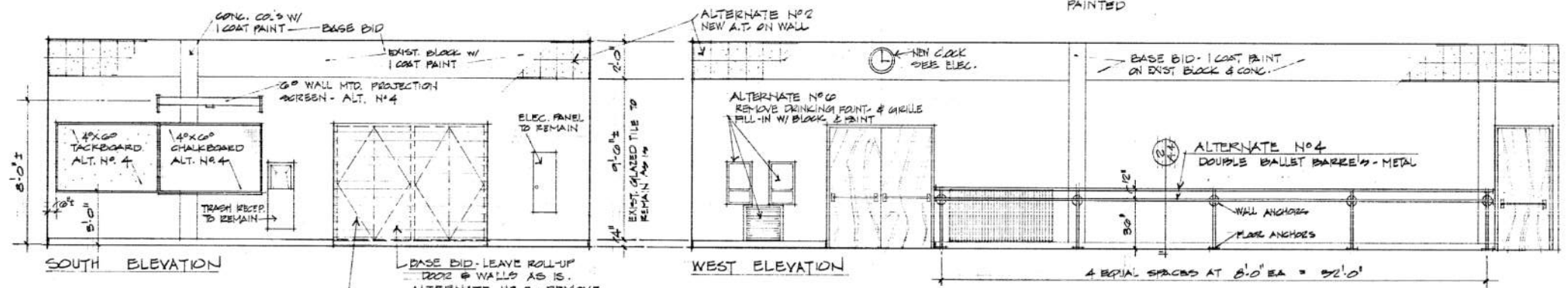
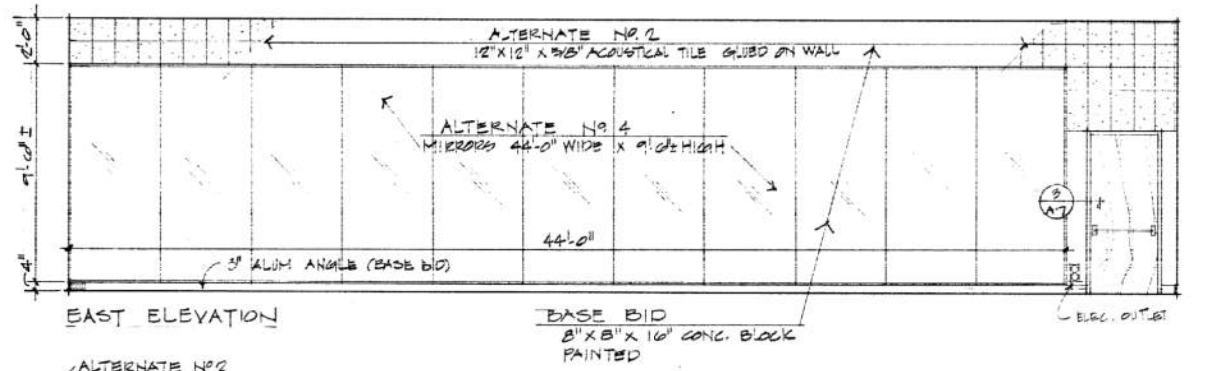
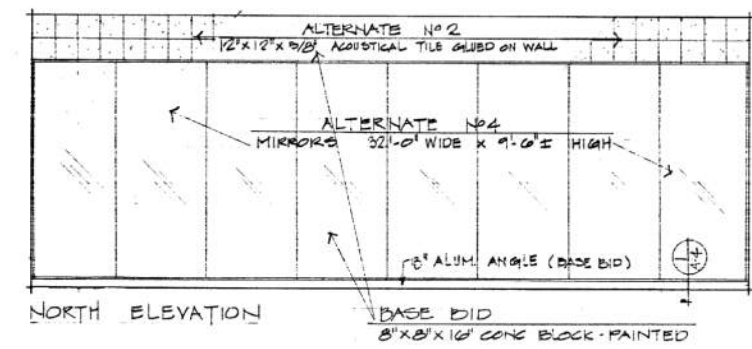
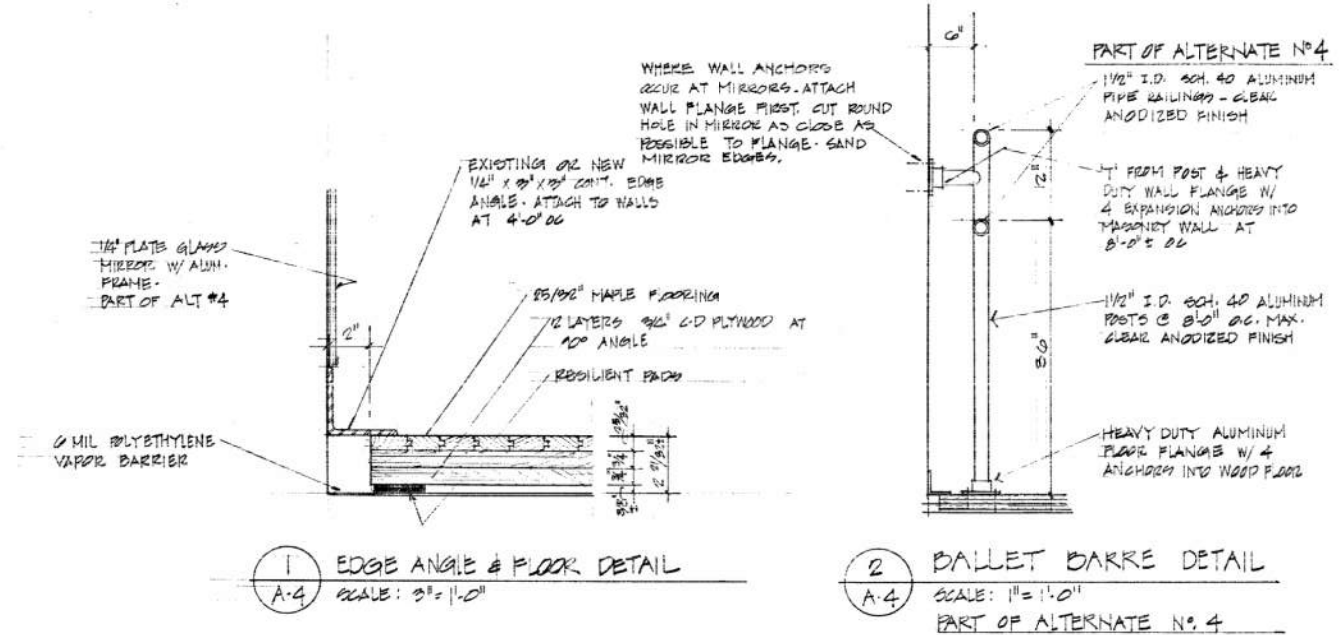
FINISH SCHEDULE NOTES

- EXIST. H.W. - INDICATES EXISTING HARDWOOD FLOOR. PATCH HOLES WHERE FLOOR ANCHORS HAVE BEEN REMOVED, WITH SIMILAR HARDWOOD FLOORING. PATCH FLOOR AROUND PERIMETERS WHERE NEW WALLS OCCUR (SEE SECT.)
- HARDWOOD - INDICATES NEW 25/32" MAPLE HARDWOOD OVER 2 LAYERS OF FLYWOOD ON RESILIENT PADS.
- ALUM. - REFERS TO ALUMINUM ANGLE. SEE DETAILS FOR EXPANSION JOINT BETWEEN WALLS & FLOORING.
- BLOCK - INDICATES NEW BLOCK WALLS. SEE SECTIONS FOR DETAILS. TO BE PAINTED. SEE SPECS.
- EXIST. - REFERS TO EXISTING WALLS. EXIST. WALLS ARE EITHER GLAZED TILE (TO REMAIN AS IS) OR CONCRETE BLOCK (TO BE PAINTED W/ NEW).
- G.B. - REFERS TO WALLS TO RECEIVE 5/8" GYPSUM BOARD - SEE DETAILS. (TO BE PAINTED) PART OF ALT. Nº 1 FOLDING DOOR - INDICATES NEW FOLDING DOOR. SEE SPECS & DETAILS - ALTERNATE Nº 1
- ACOUST. T#1 - INDICATES 2'-0" x 2'-0" SUSPENDED ACOUSTICAL TILE CEILING SYSTEM W/ 5/8" MINERAL FIBER "FIBRURED" DESIGN ACOUSTICAL TILE - SEE SPECS.
- ACOUST. T#2 - INDICATES 1'-0" x 1'-0" x 3/4" GULF ON ACOUSTICAL TILE CEILING. ATTACHED TO 2"x4" GYP. BOARDS ATTACHED TO METAL ROOF DECK. THIS FINISH IS PART OF ALTERNATE Nº 2 - BASE DID TO BE EXISTING CONSTRUCTION LEFT AS IS
- TERRAZZO FLOORING TO BE INSTALLED AT NEW DOORWAYS MATCH EXISTING COLOR IF POSSIBLE. INSTALL JOINT DIVIDER STRIPS & EXPANSION JOINTS AS NOTED. CASE NOT REQUIRED. [OPTION - IF CONTRACTOR CANNOT FIND TERRAZZO INSTALLER FOR SMALL QUANTITY SHOWN, PRECAST TERRAZZO PANELS WILL BE ACCEPTABLE, FIT AS TIGHT AS POSSIBLE AND GROUT IN PLACE.]

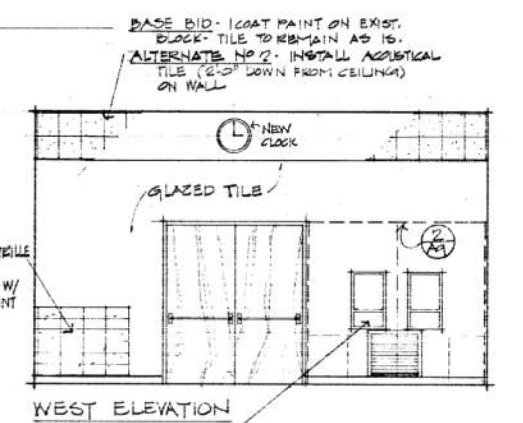
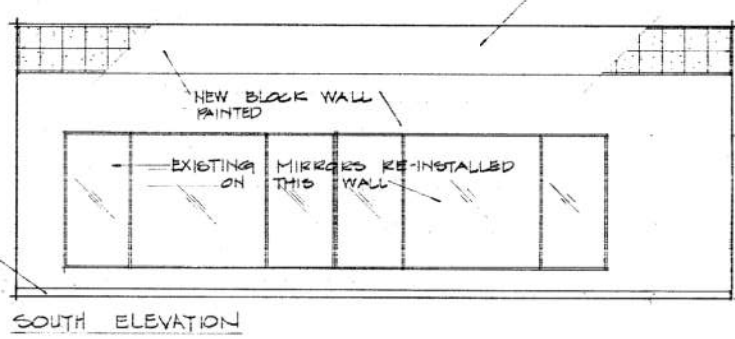
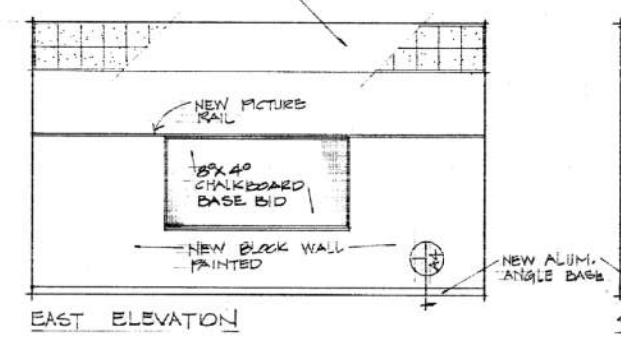
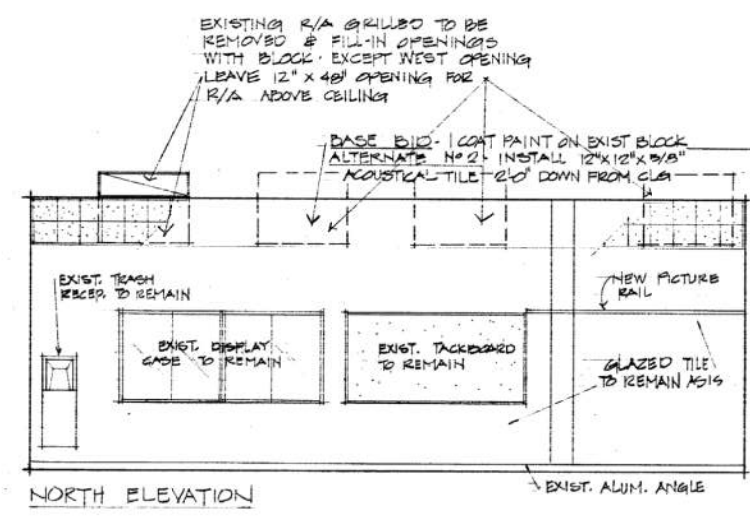


FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



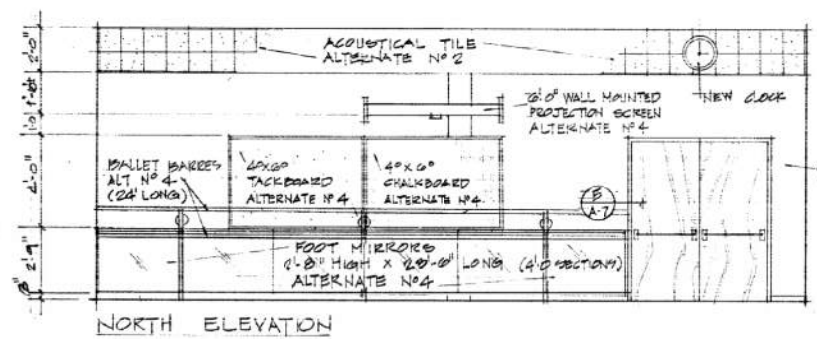


INTERIOR ELEVATION - DANCE STUDIO #158
SCALE: 1/4" = 1'-0"

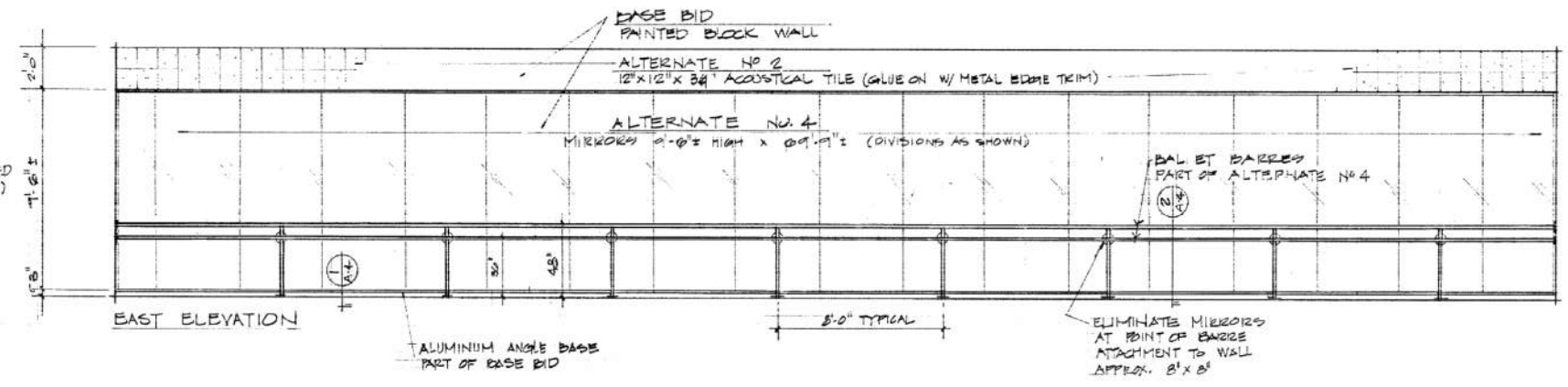


INTERIOR ELEVATION - CLASSROOM #160
SCALE: 1/4" = 1'-0"

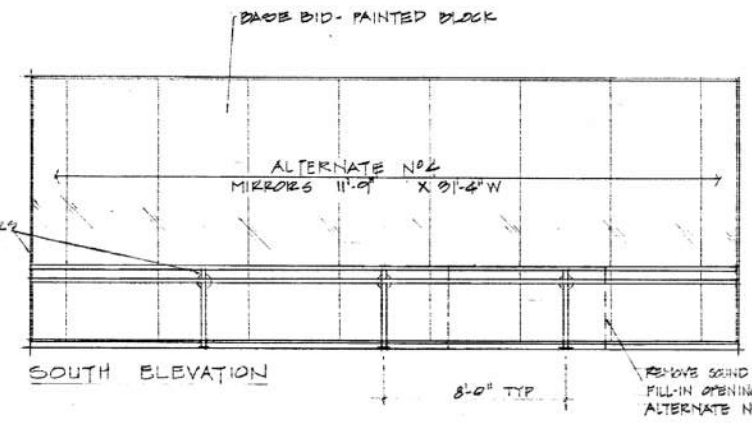




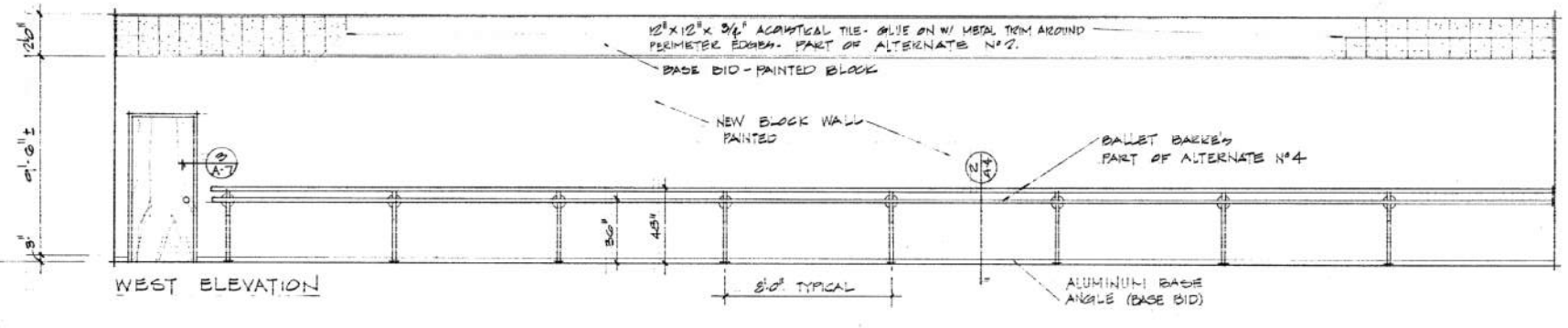
NORTH ELEVATION



EAST ELEVATION

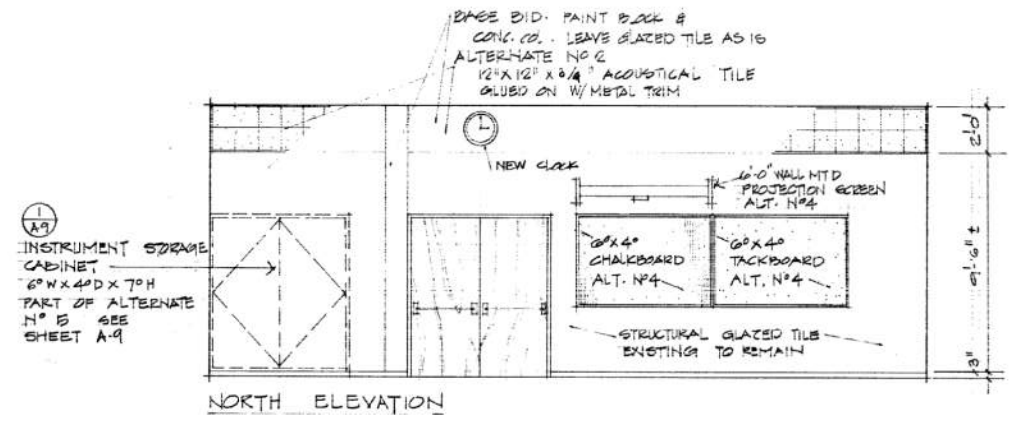


SOUTH ELEVATION

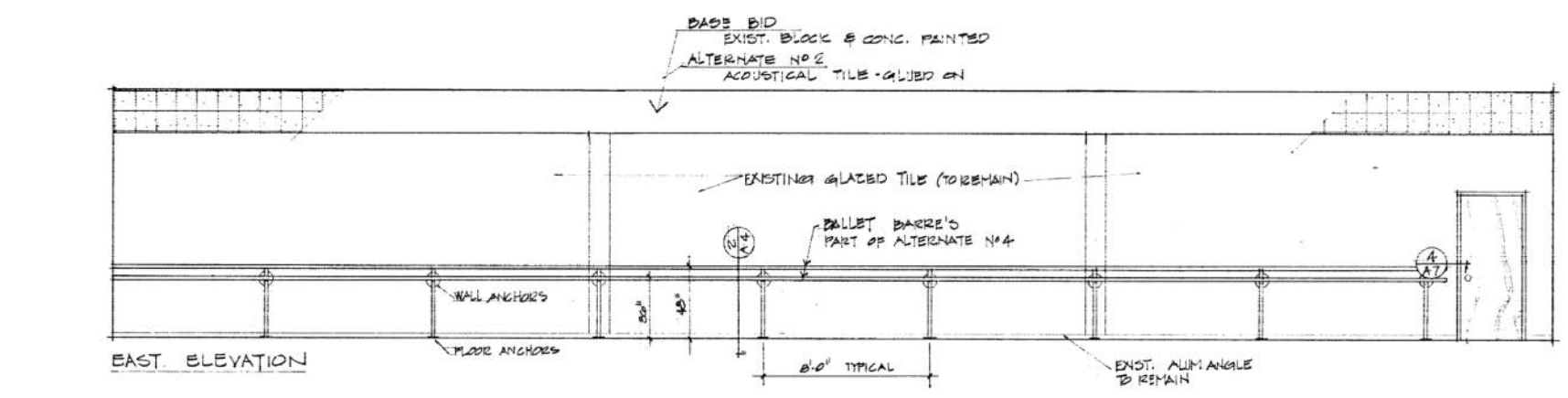


WEST ELEVATION

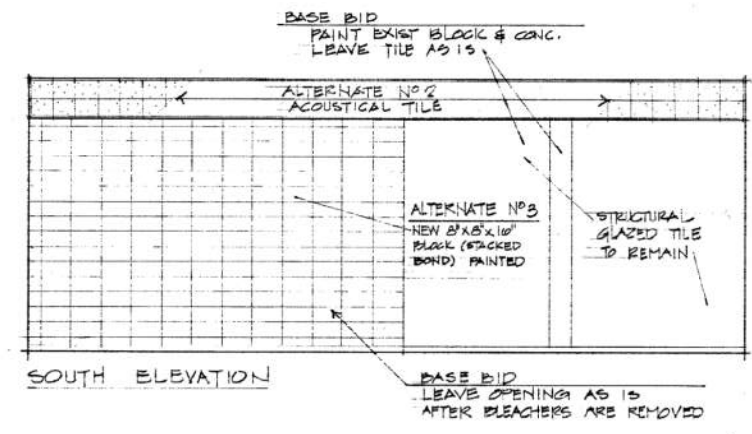
INTERIOR ELEVATION - DANCE STUDIO #162
SCALE: 1/4" = 1'-0"



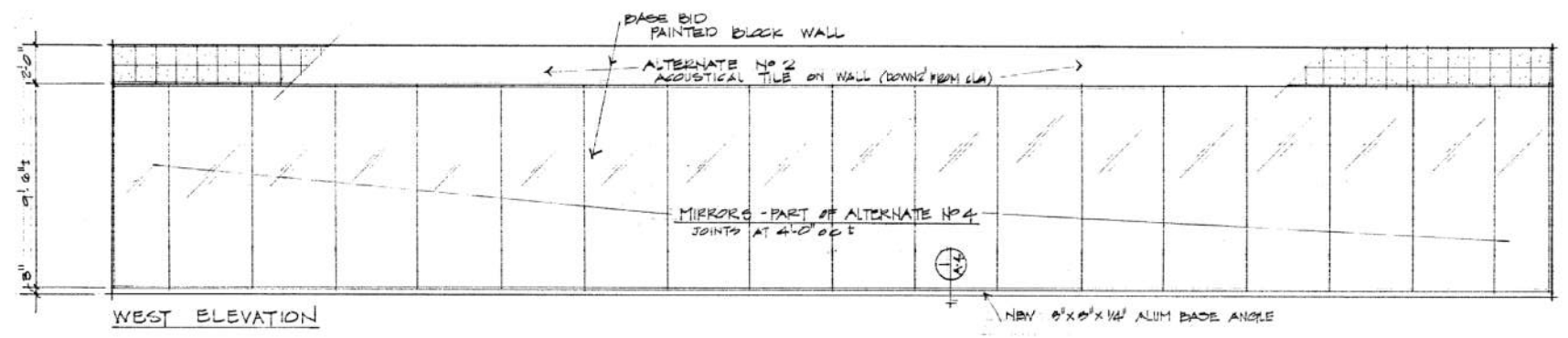
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

INTERIOR ELEVATION - DANCE STUDIO #164



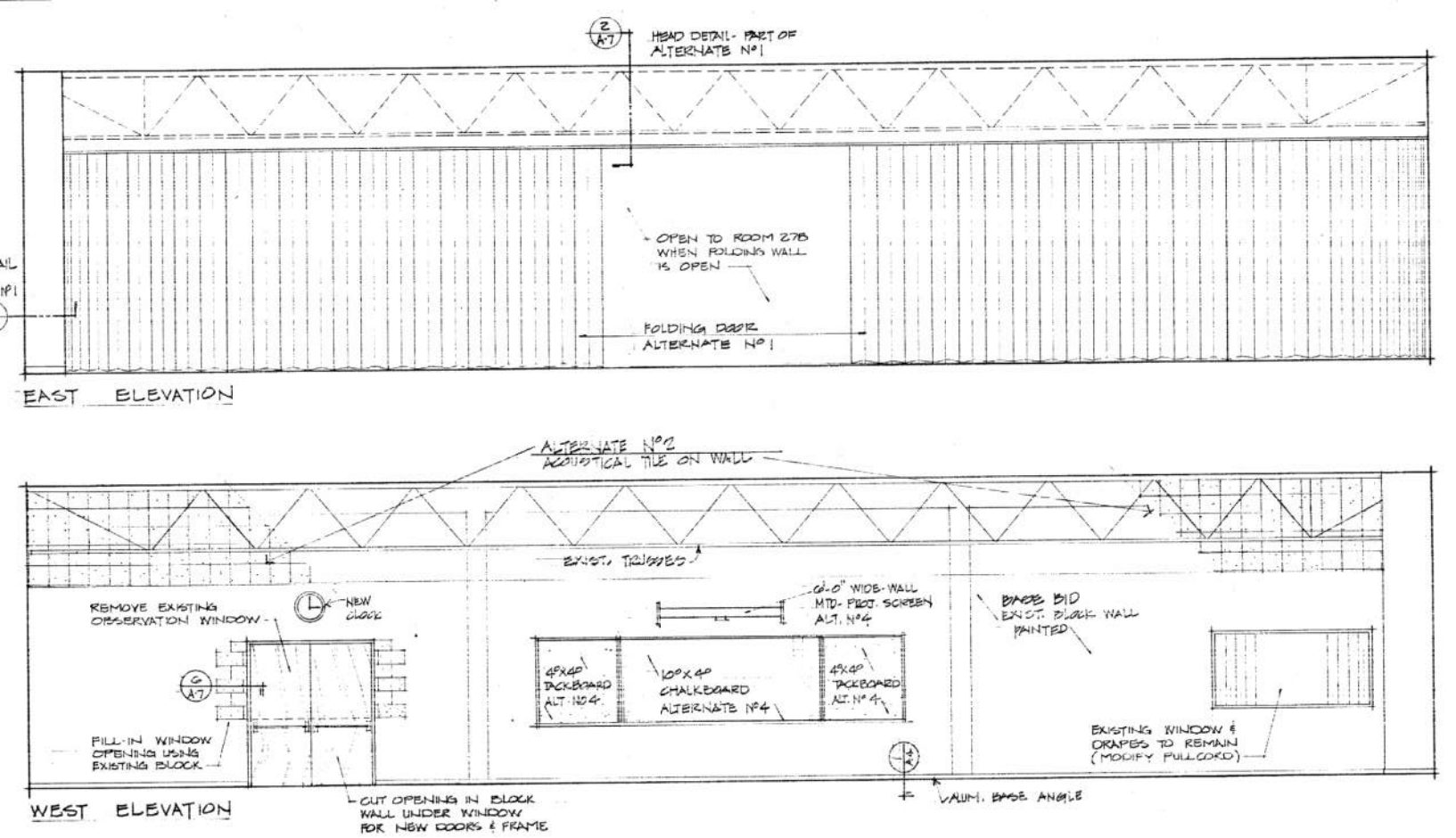
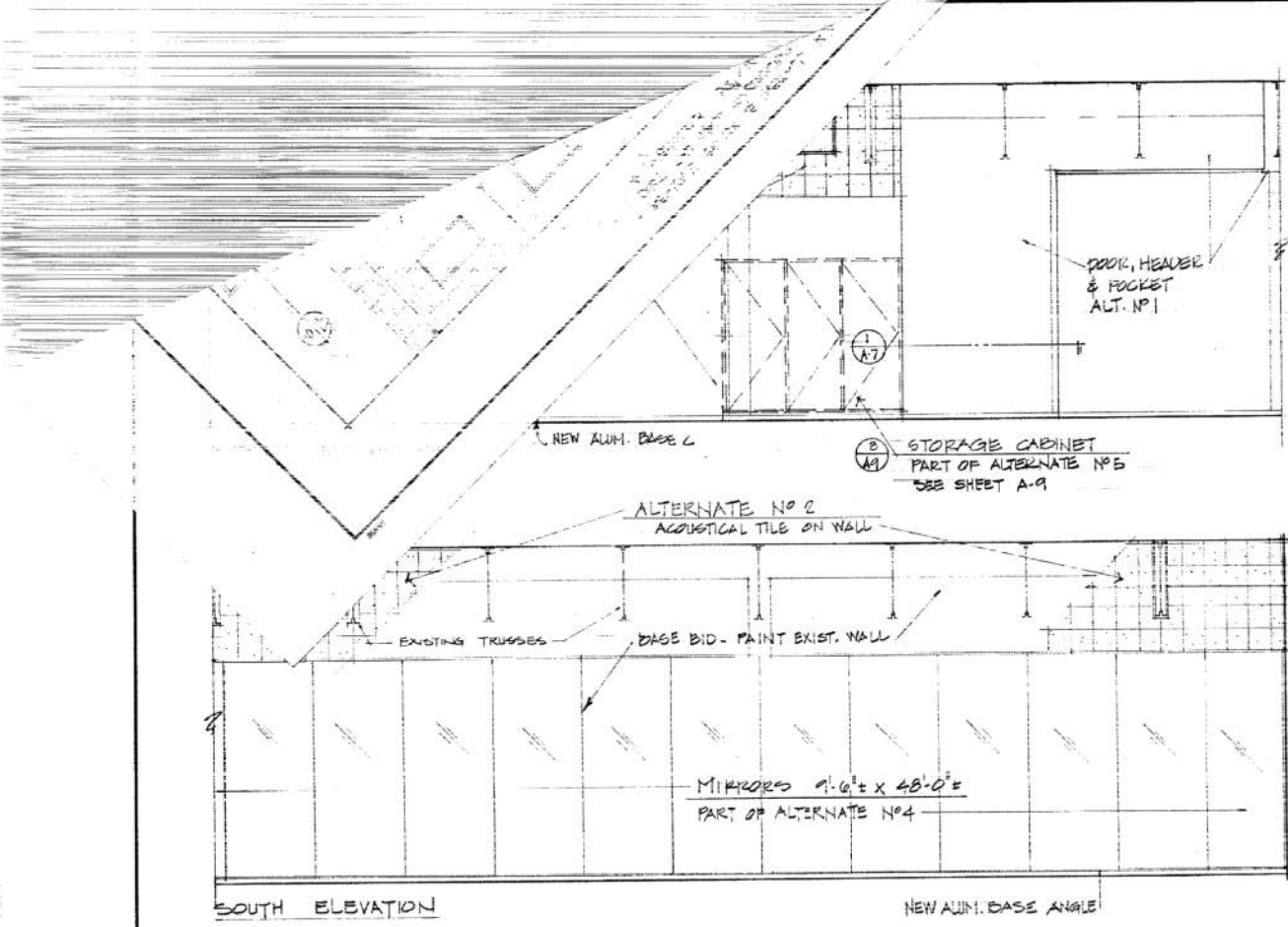
Brigham Young University
Planning and Architecture Department
240 BRWB Brigham Young University Provo, Utah 84602

Drawn By: G. K. W. Date: APRIL 1985 W. O. No.:

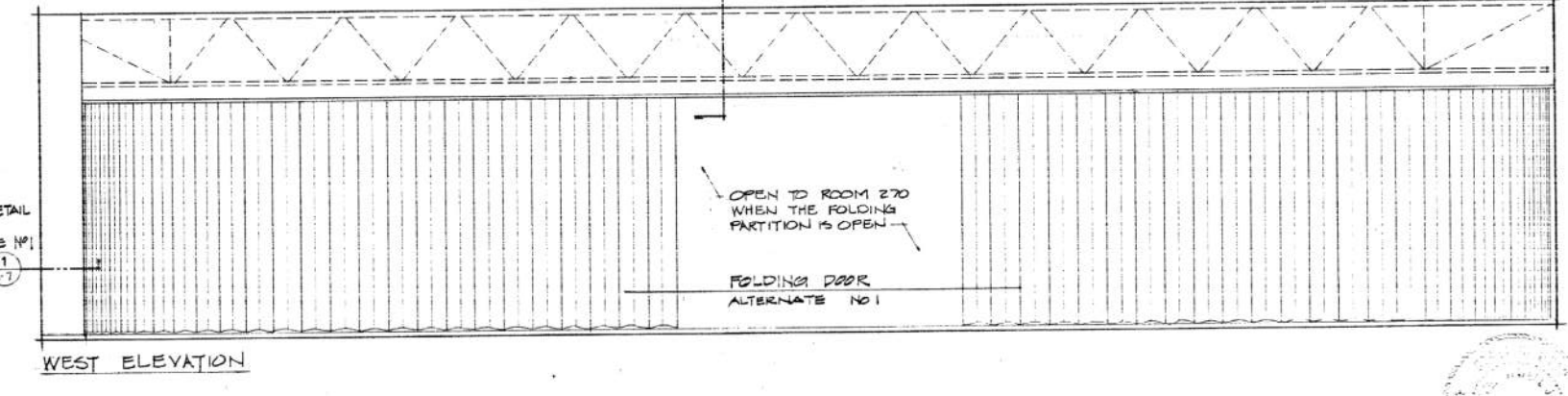
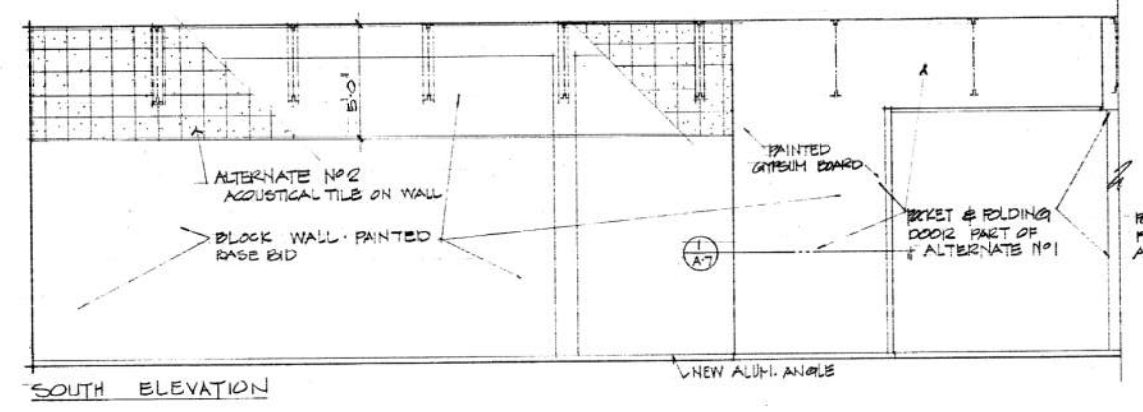
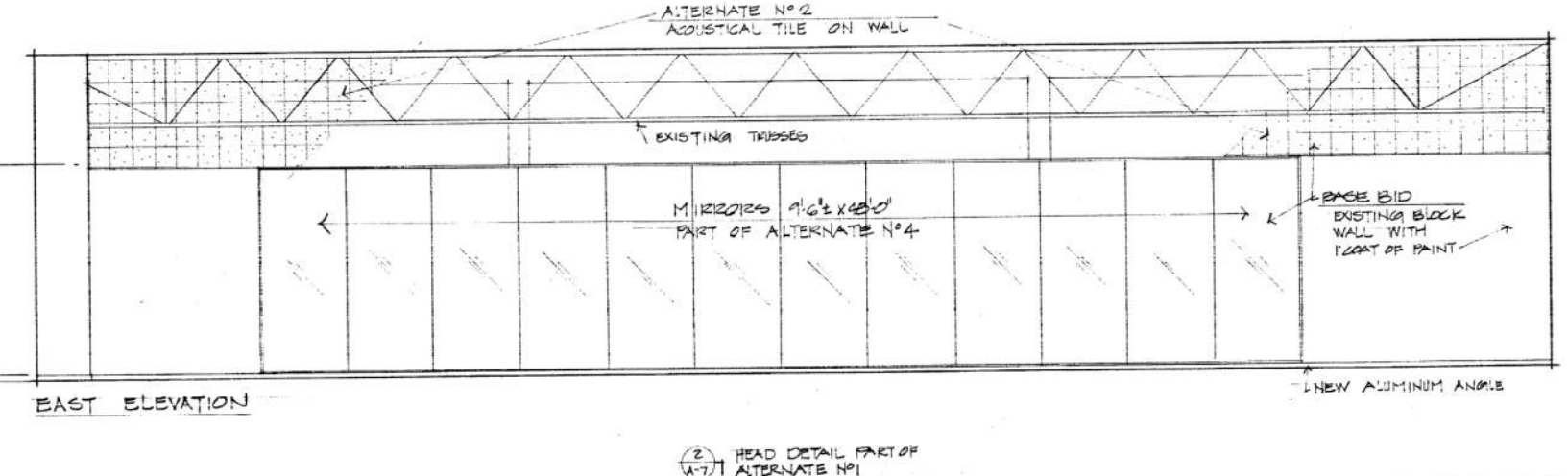
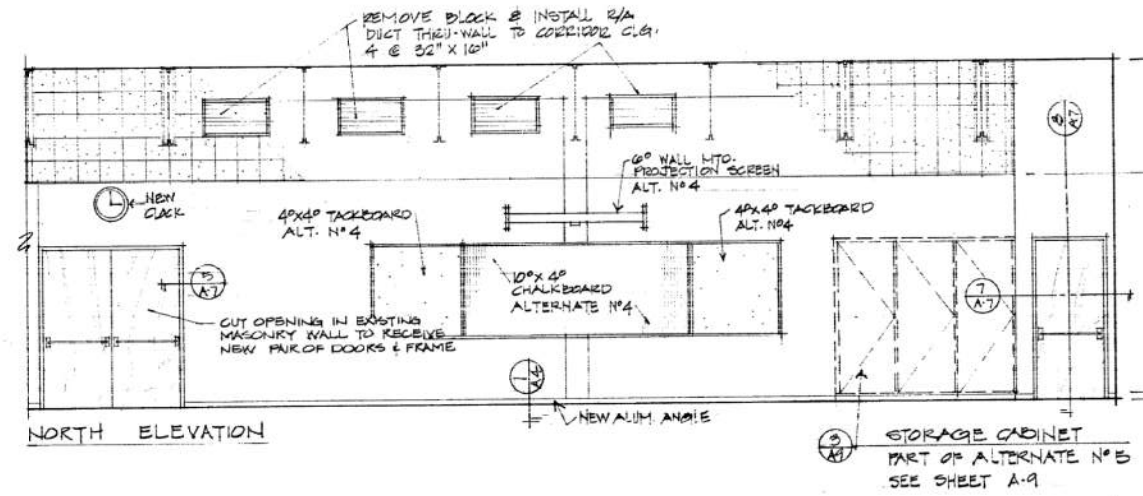
THE COLORADO STATE UNIVERSITY

INTERIOR ELEVATIONS FOR
DANCE STUDIOS #162 & #164
REMODEL ROOM 163
RICHARDS P.E. BUILDING

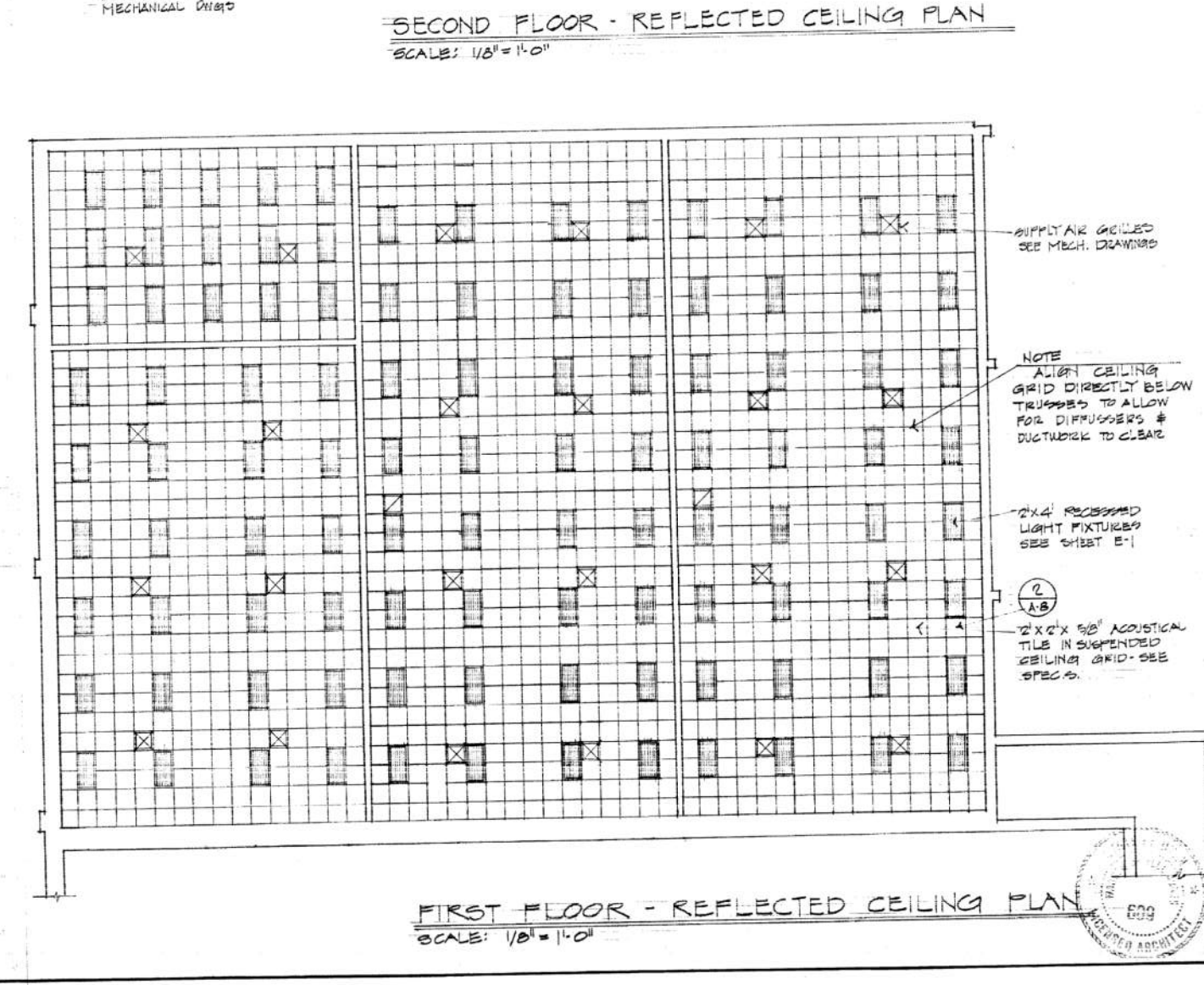
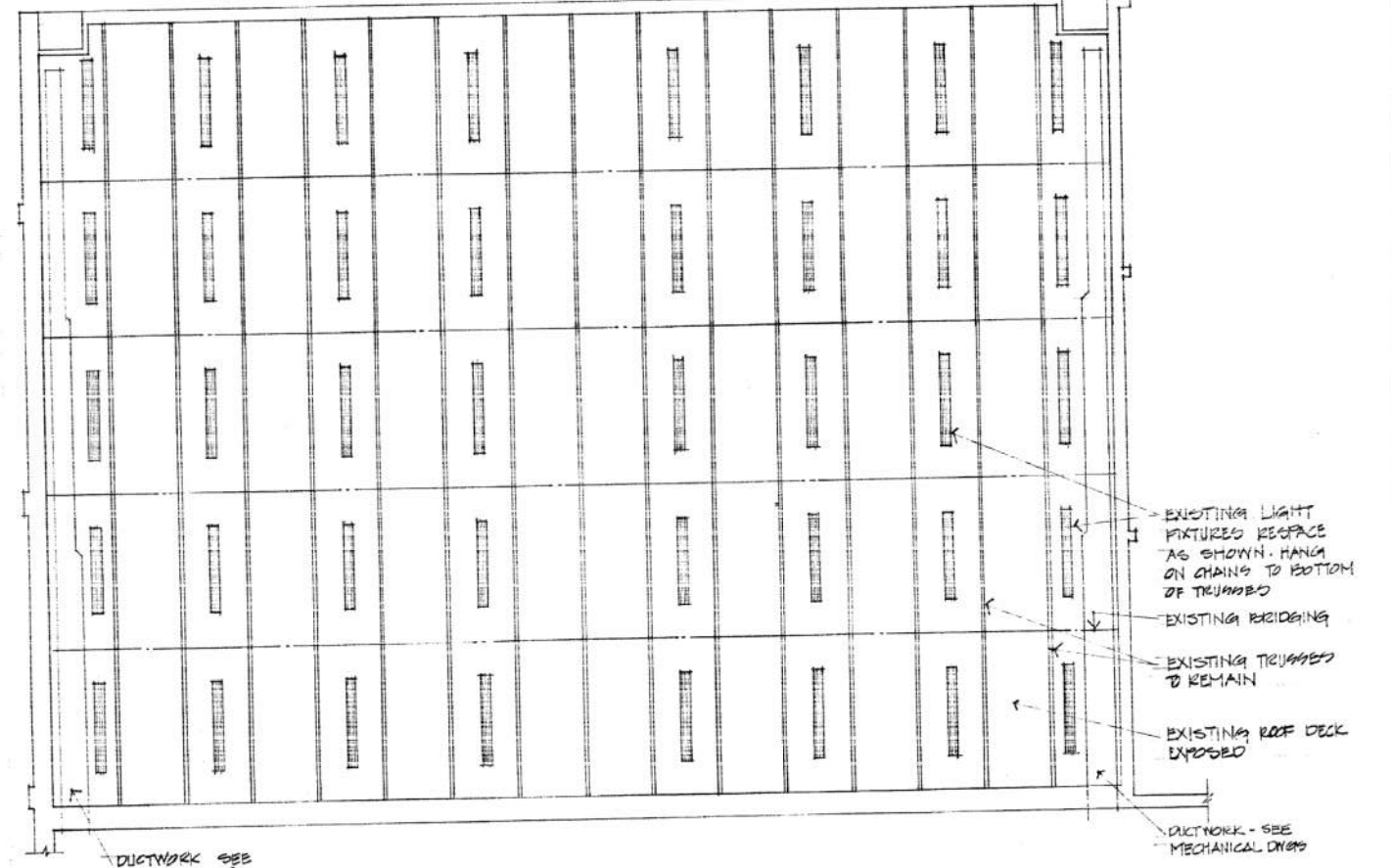
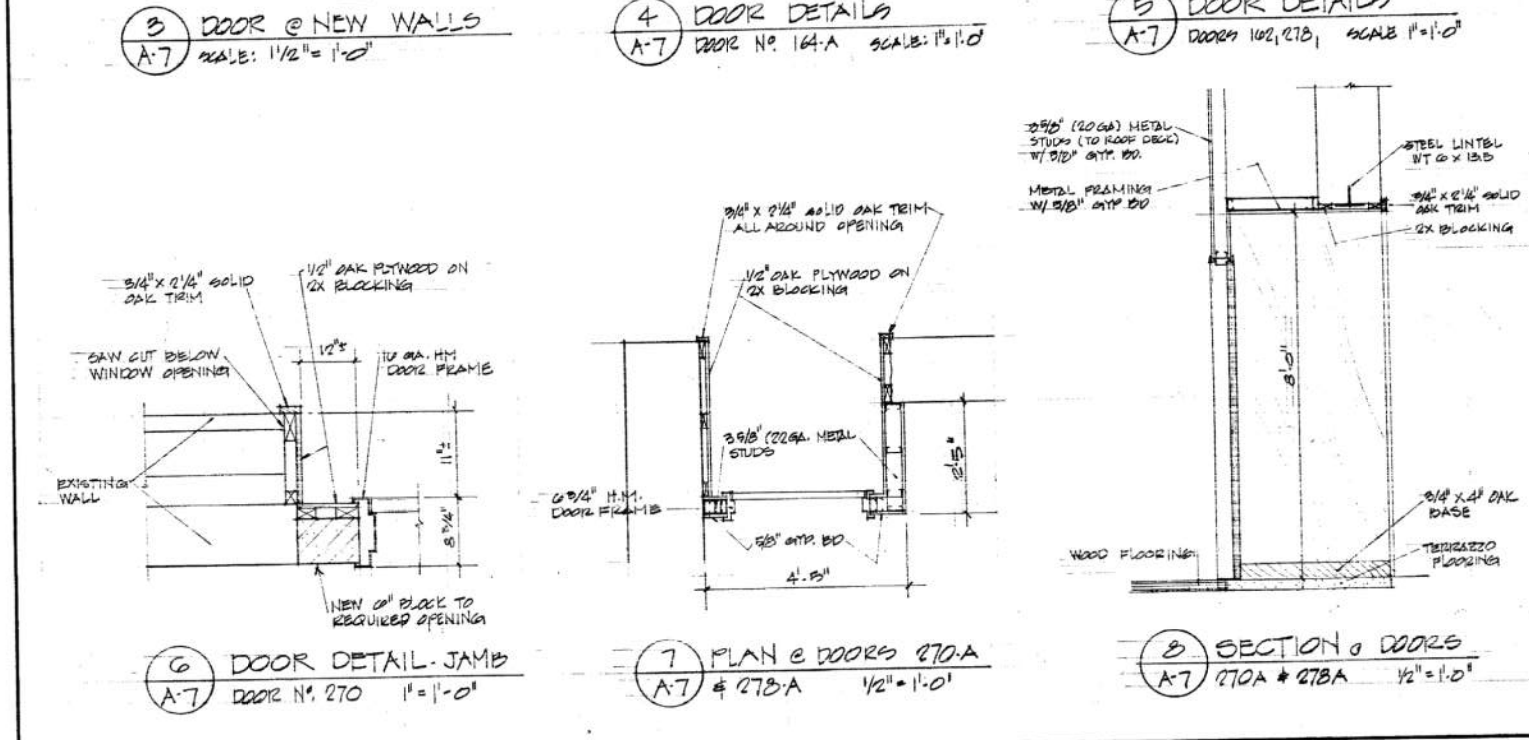
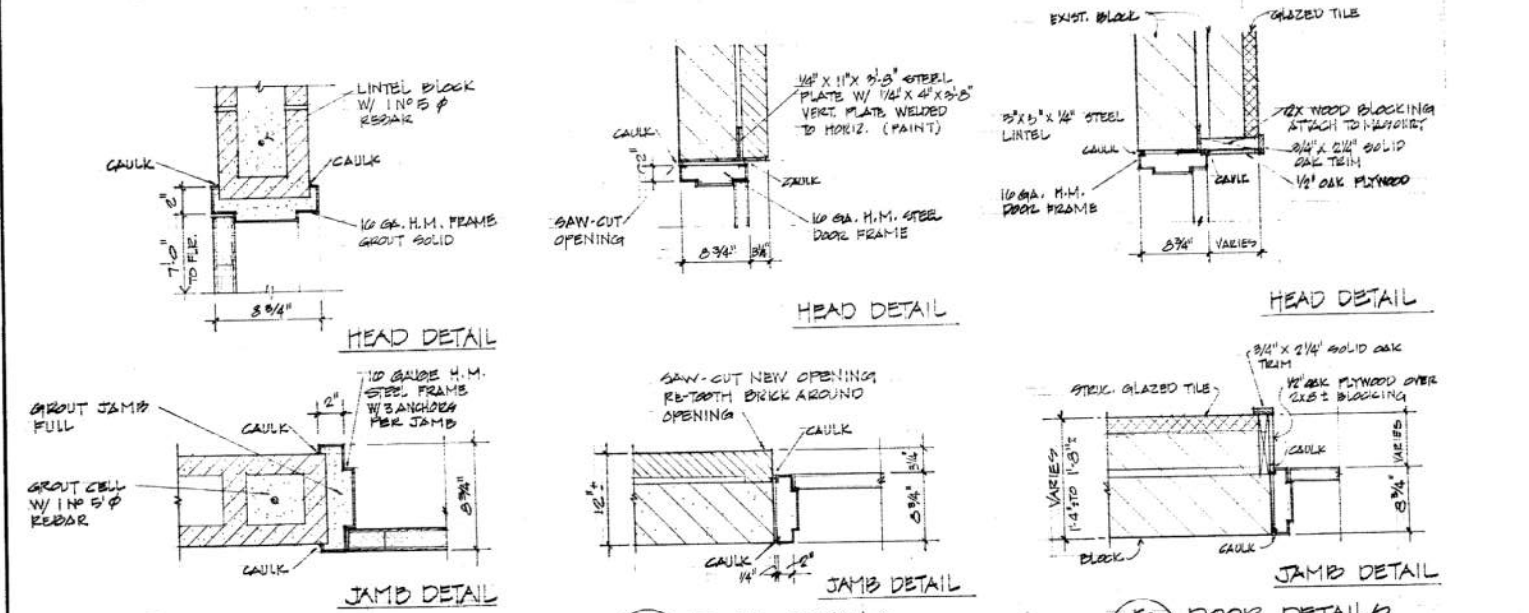
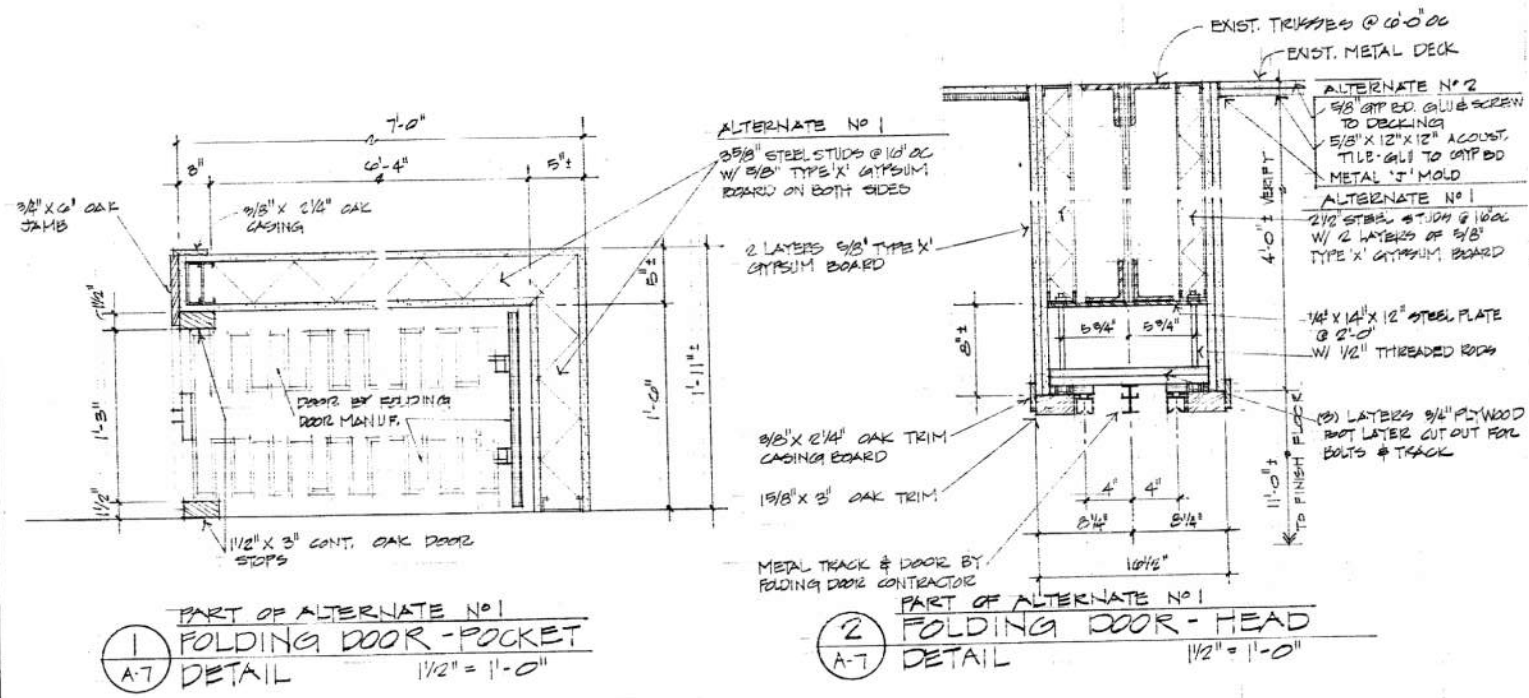
A5
6-83

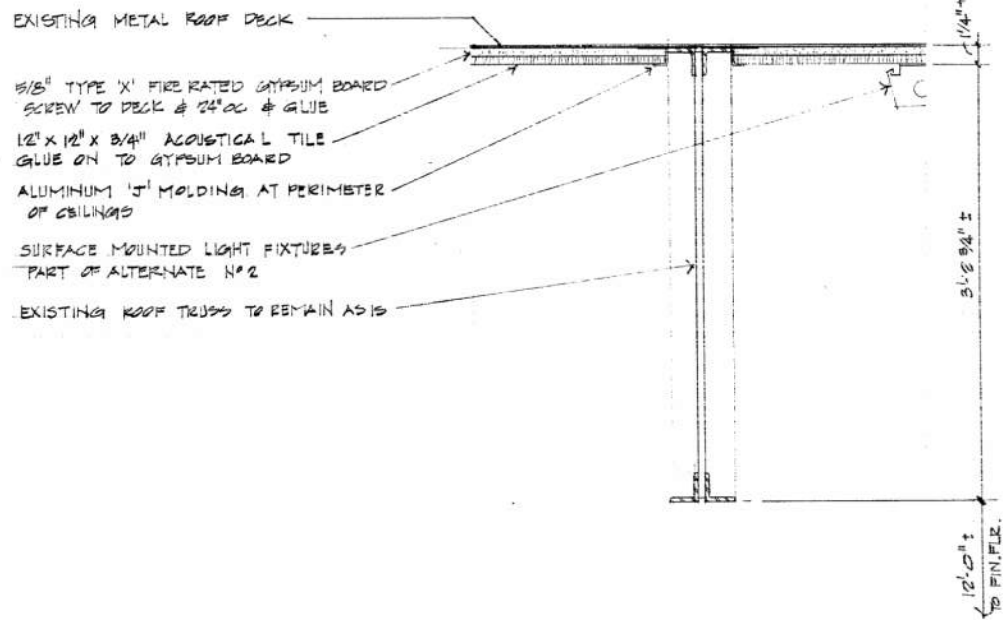


INTERIOR ELEVATION - DANCE STUDIO #270
SCALE: 1/4" = 1'-0"



INTERIOR ELEVATION - DANCE STUDIO #278
SCALE: 1/4" = 1'-0"

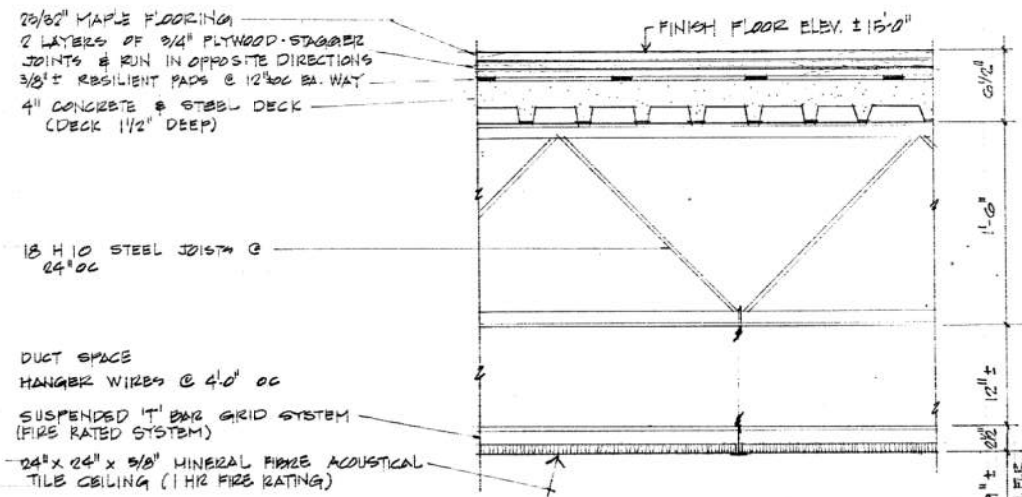




1 CEILING DETAIL - SECOND FLOOR

SCALE: 1/2" = 1'-0"

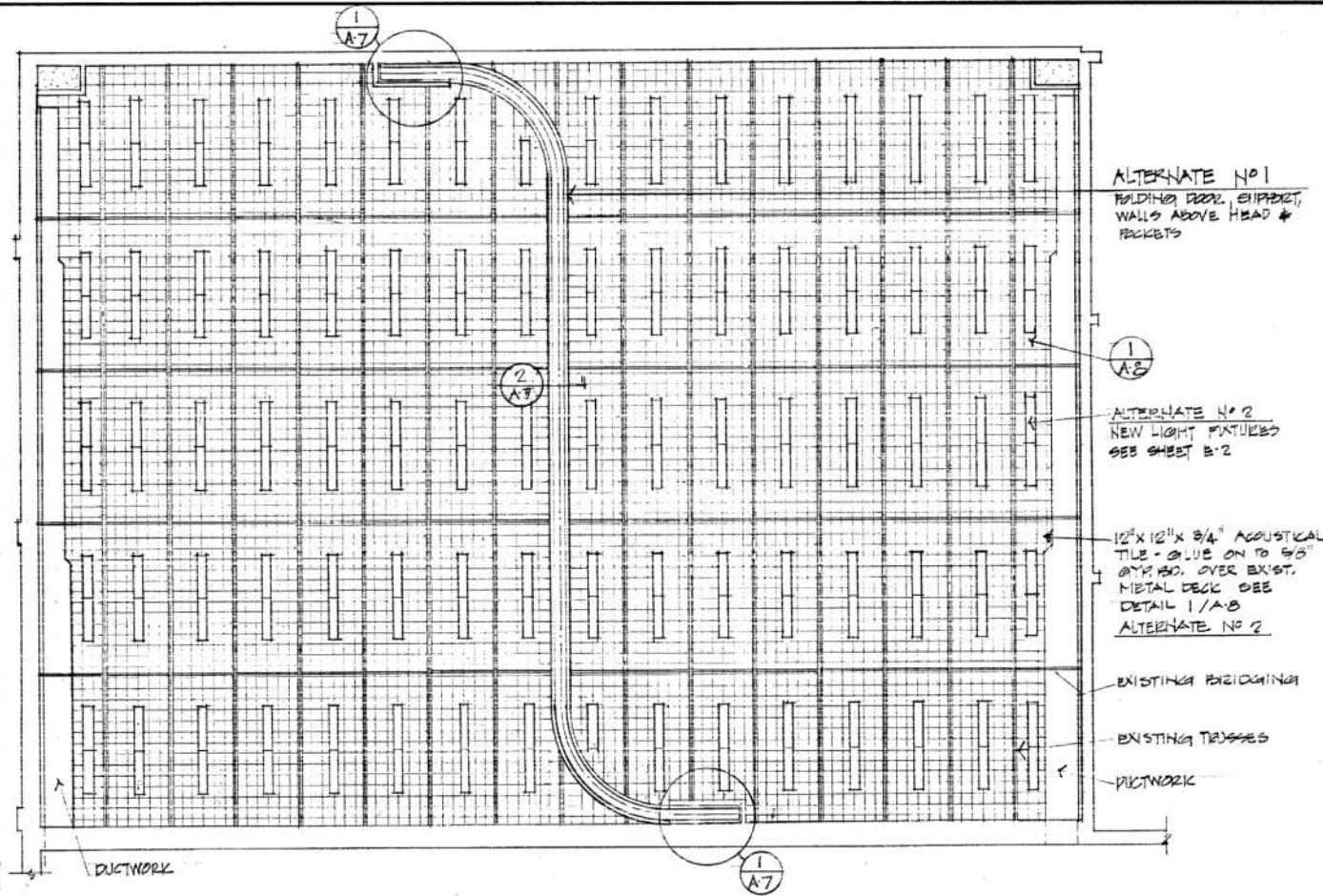
NOTE: THIS CEILING DETAIL APPLIES FOR ALTERNATE NO. 2
BASE BID - LEAVE AS IS (RESPACE EXIST. LIGHTS)



2 CEILING DETAIL - FIRST FLOOR

SCALE: 1/2" = 1'-0"

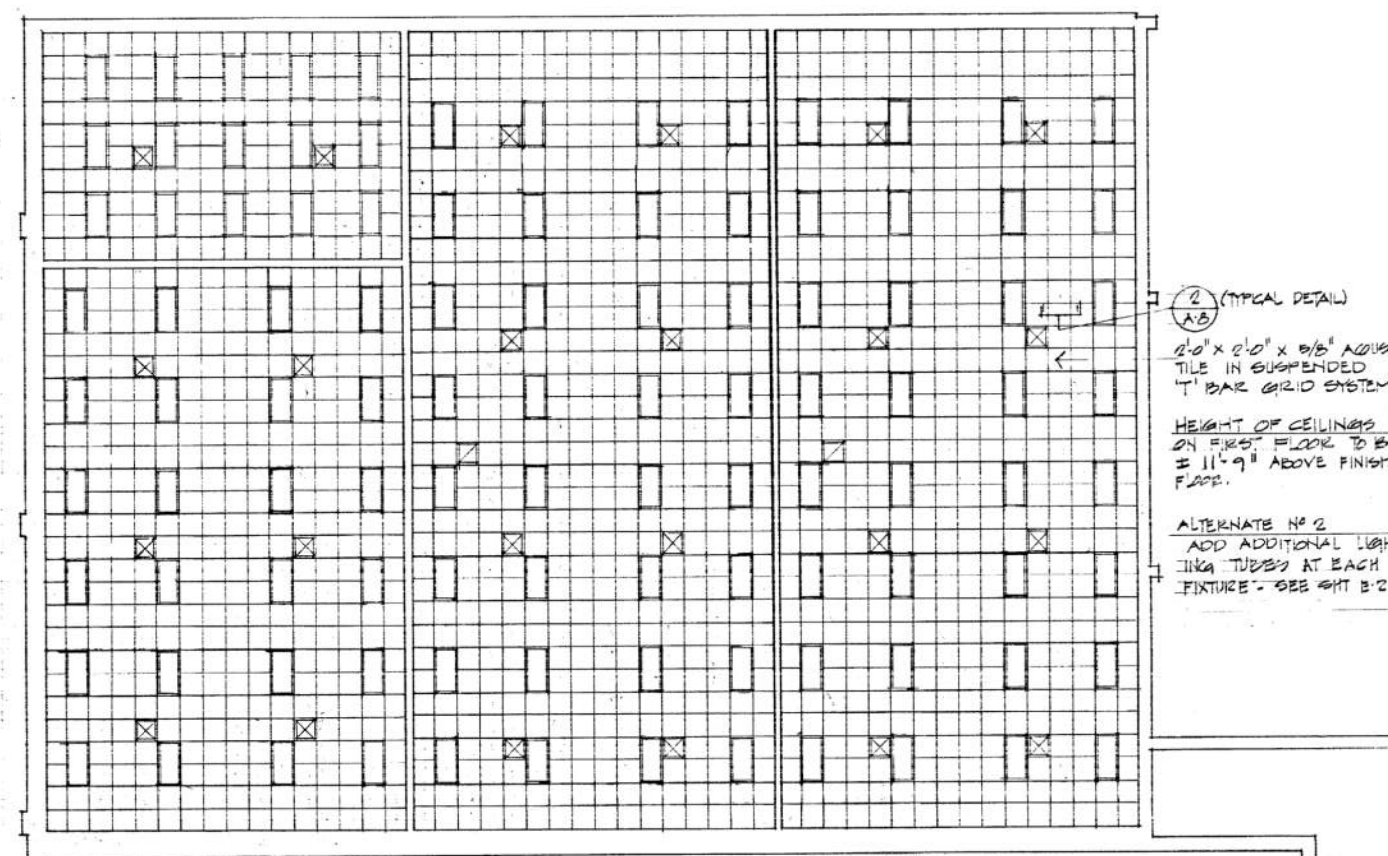
NOTE - CEILING DETAIL APPLIES FOR BOTH BASE BID & ALTERNATE SITUATIONS.



"ALTERNATE" SECOND FLOOR - REFLECTED CEILING PLAN

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

PART OF ALTERNATE NO. 2



"ALTERNATE" FIRST FLOOR - REFLECTED CEILING PLAN

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

PART OF ALTERNATE NO. 2

Drawn By
H.J.
Date
APRIL 1953
W. O. No.

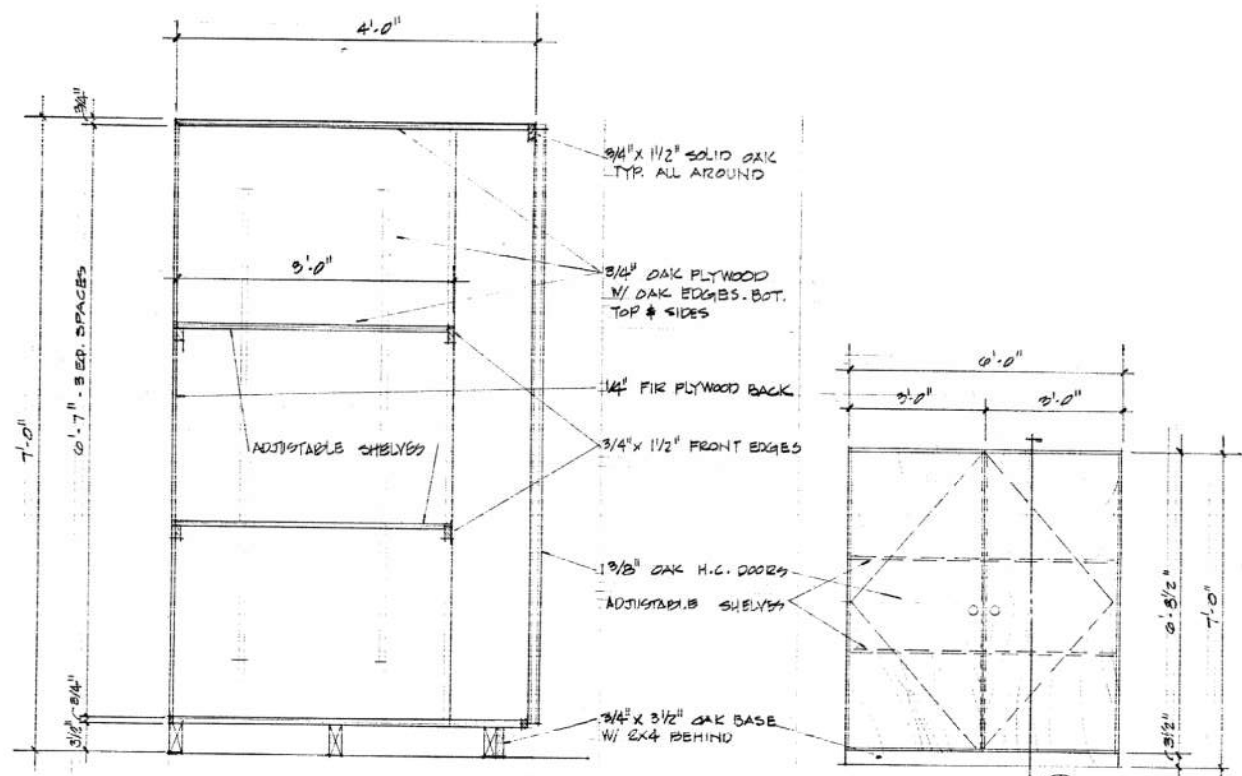
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REFLECTED CEILING PLANS
REMODEL ROOM 158
RICHARDS P.E. BUILDING

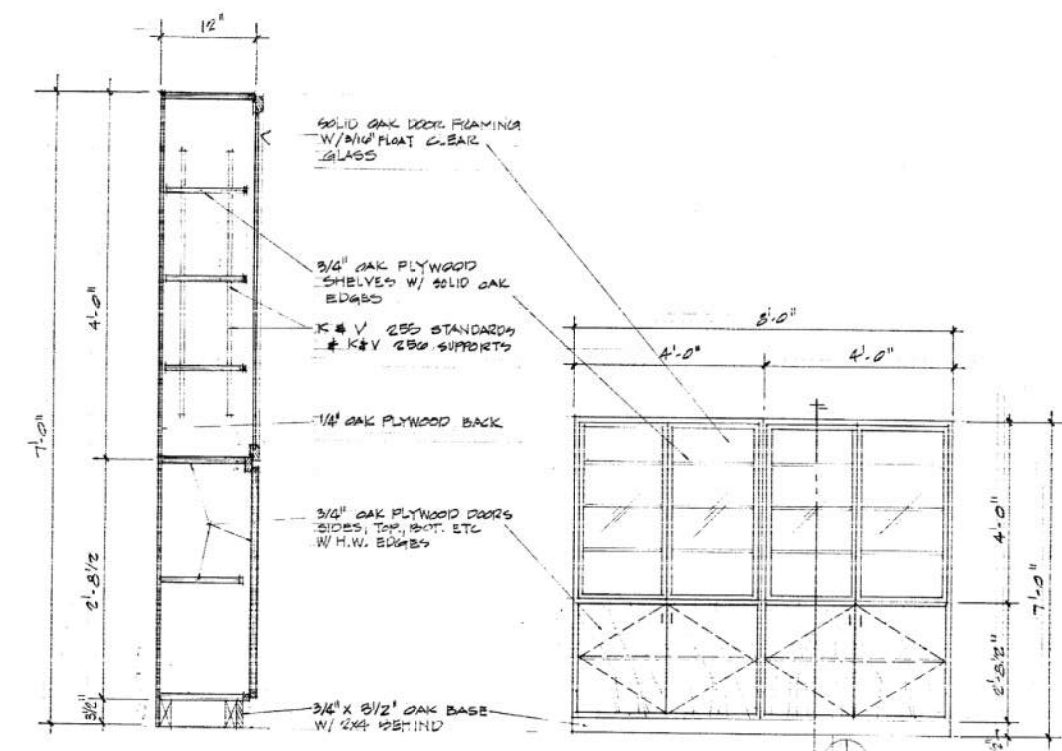
AB

63-23



A SECTION THRU CABINET
A-9 SCALE: 1"=1'-0"

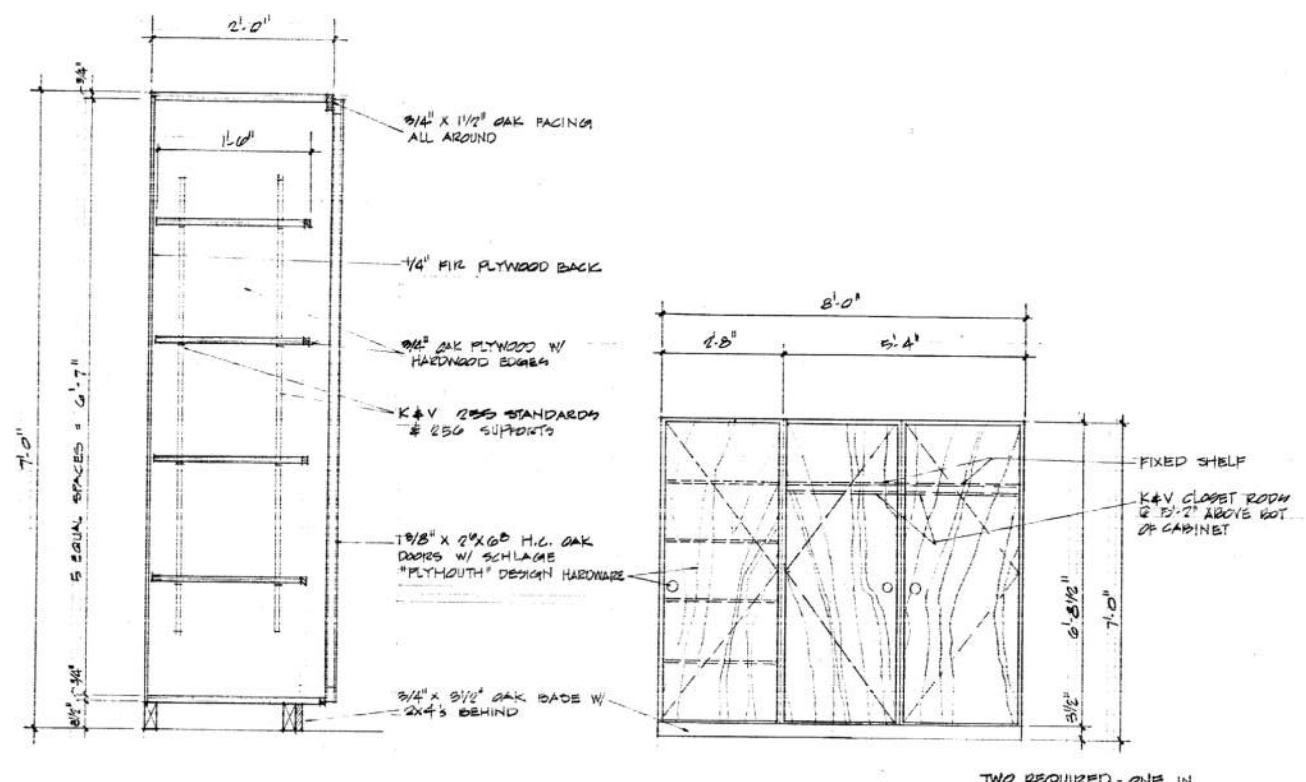
1 ELEVATION - CABINET IN ROOM 104
A-9 1/2"=1'-0" PART OF ALT. N°5



B SECTION THRU CABINET
A-9 SCALE: 1"=1'-0"

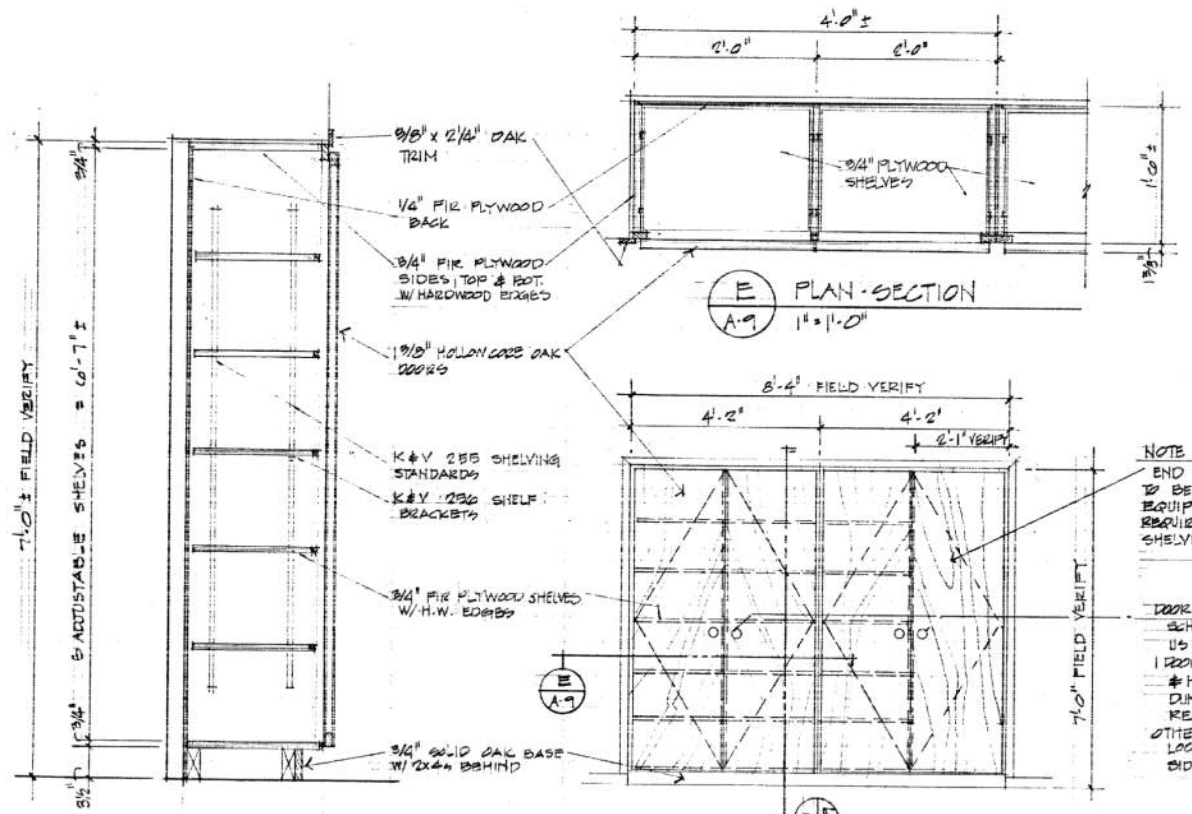
2 ELEVATION - CABINET IN ROOM 100
A-9 SCALE: 1/2"=1'-0" PART OF ALT. N°5

CABINET HARDWARE
ALL DOORS TO HAVE LOCKS & PULLS
LOCKS - NATIONAL - C.B. 23-220
PULLS - QUALITY - BIZ ALUM.



C SECTION THRU CABINET
A-9 SCALE: 1"=1'-0"

3 ELEVATION - CABINETS IN ROOMS 270 & 278
A-9 SCALE: 1/2"=1'-0" PART OF ALT. N°5

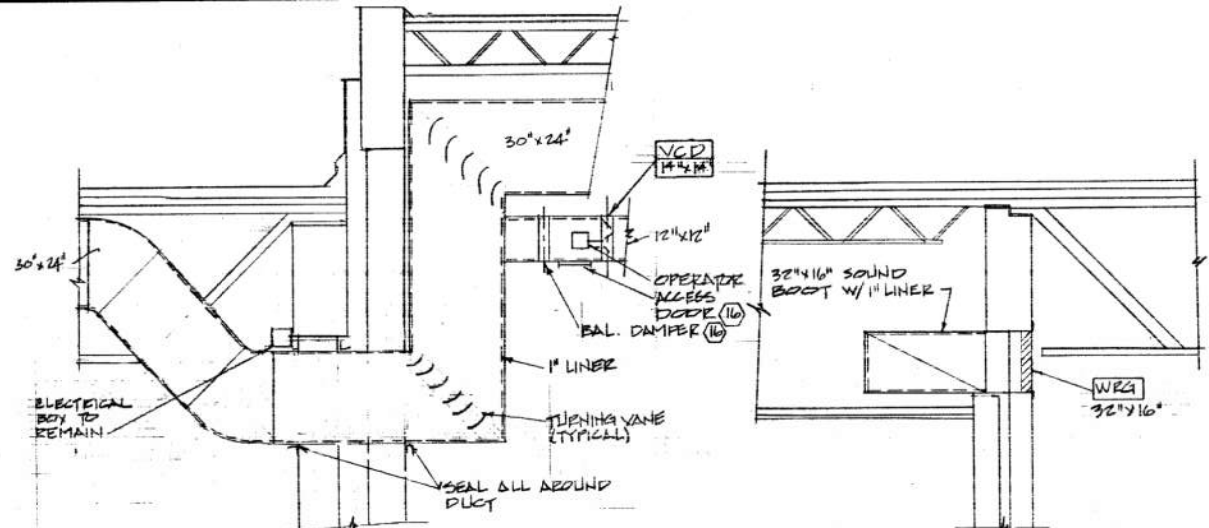


D SECTION THRU CABINET
A-9 SCALE: 1"=1'-0"

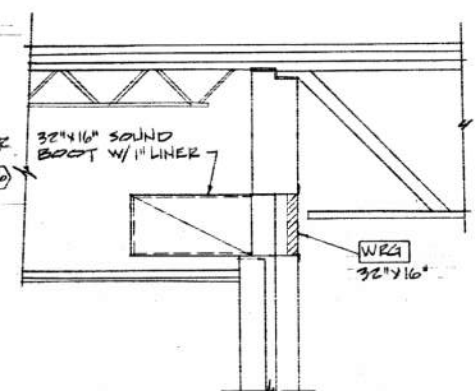
4 ELEVATION - CABINET IN ROOM 158
A-9 SCALE: 1/2"=1'-0" PART OF ALT. N°5

NOTE
END SECTION OF CABINET TO BE FOR OWNERS SOUND EQUIPMENT. VERIFY DIMENSION REQUIREMENT BEFORE CONSTRUCTION. SHELVES NOT REQUIRED.

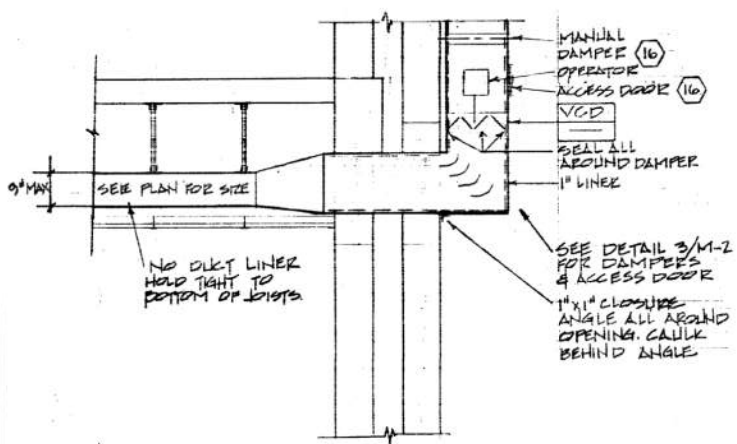
DOOR HARDWARE
SCHLAGE 'PLYMOUTH' DESIGN US 200 FINISH
1 DOOR LEAF TO HAVE BOOT & HEAD BOLT W/ SINGLE DIMMY TRIM & STRIKE TO RECEIVE DEADLATCH.
OTHER DOOR LEAF TO HAVE LOCKSET ON EXTERIOR SIDE ONLY USE 1" LOCK FINISH



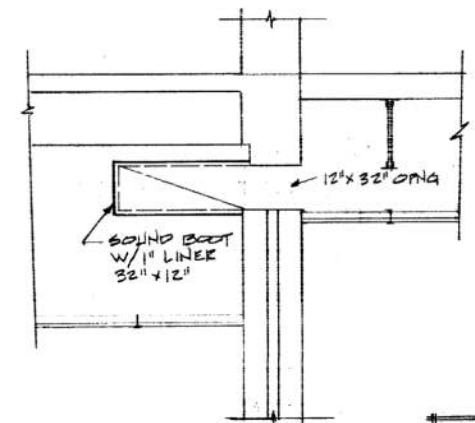
1 SECTION-SUPPLY AIR DUCT
1/2" = 1'-0"



2 SECTION-RETURN AIR GRILLE
1/2" = 1'-0"



3 SECTION-SUPPLY AIR DUCT
1/2" = 1'-0"

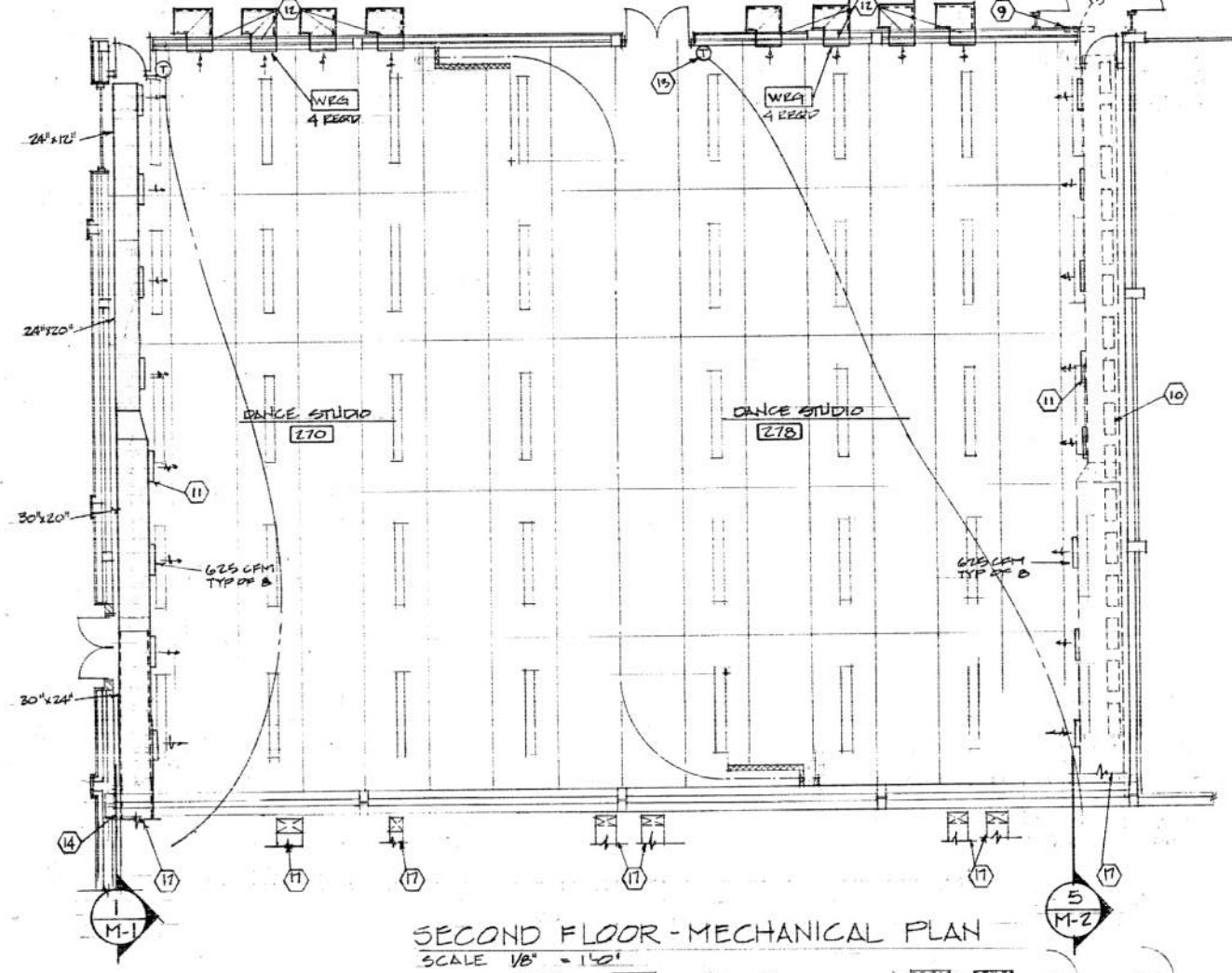


4 SECTION-RETURN AIR OPENING
1/2" = 1'-0"

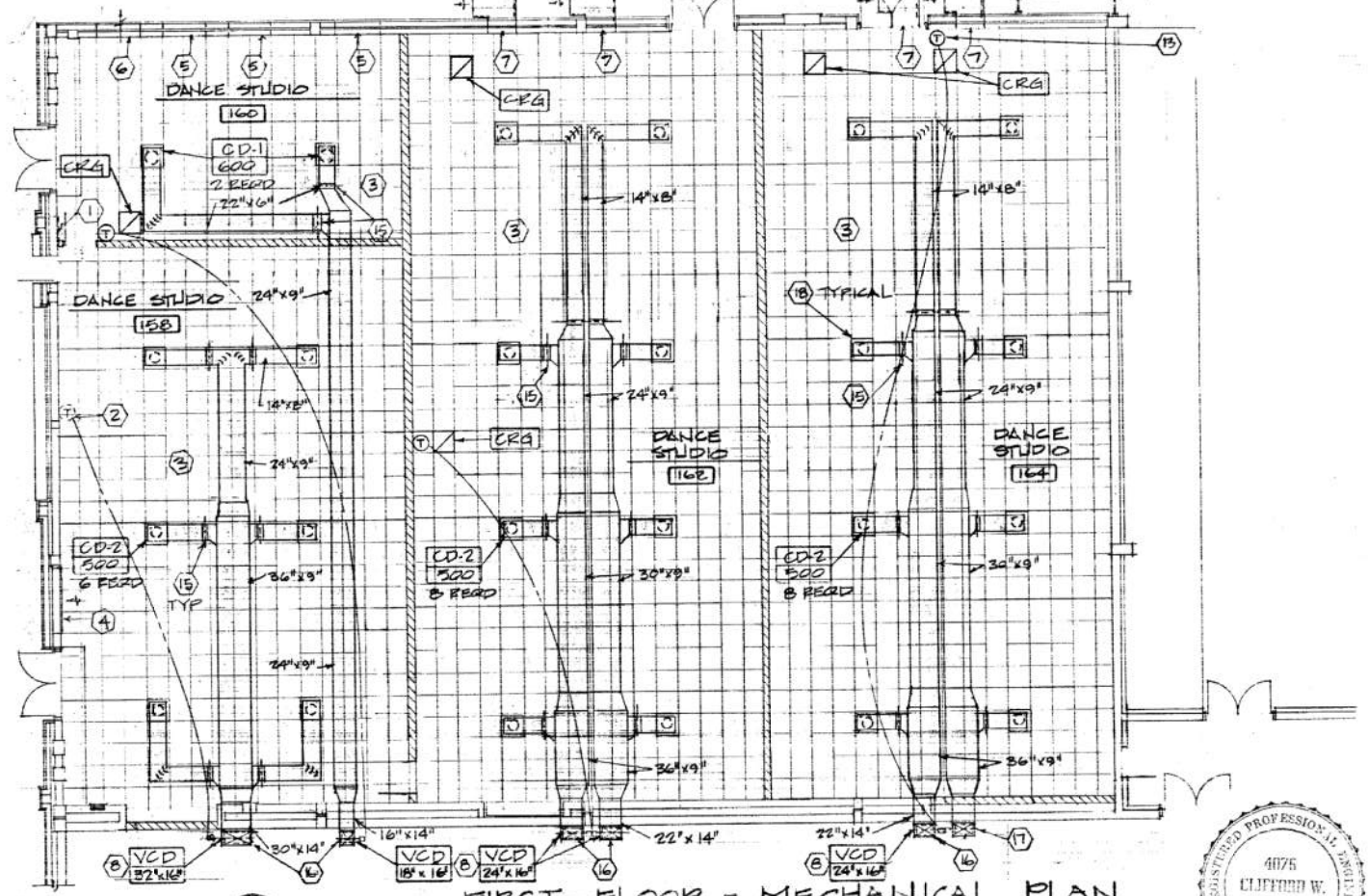
DUCTWORK CONSTRUCTION: ALL DUCTWORK BETWEEN THE EXISTING SUPPLY FAN AND THE VOLUME CONTROL DAMPERS (VCD) SHALL BE CONSTRUCTED AND SEALED (CLASS B) IN ACCORDANCE WITH SMACNA STANDARDS FOR 2" S.P.

REFERENCE NOTES

- 1 REMOVE EXISTING 72" x 36" GRILLE. RETURN TO OWNER.
- 2 REUSE EXISTING THERMOSTAT. CONNECT TO VALV DAMPER.
- 3 RETURN AIR THEN LIGHT FIXTURES.
- 4 RETURN GRILLE TO REMAIN.
- 5 REMOVE RETURN GRILLE. RETURN TO OWNER. OPENING TO BE CLOSED.
- 6 REMOVE RETURN GRILLE. RETURN TO OWNER. 48" x 12" OPENING TO REMAIN.
- 7 NEW 32" x 12" RETURN OPENING WITH SOUND BOOT. SEE SECTION 4/M-1.
- 8 PROVIDE NEW WALL OPENINGS FOR DUCTWORK. SEAL AROUND DUCT. SEE SECTION 3/M-1.
- 9 REMOVE EXISTING WALL THERMOSTAT AND CABINET HEATER. RETURN TO OWNER. CAP PIPING BELOW FLOOR.
- 10 REMOVE DRUM DIFFUSERS. CAP OPENING AND REPAIR INSULATION. REUSE DIFFUSERS AS SHOWN.
- 11 INSTALL NEW DIFFUSERS IN DUCT. REPAIR INSULATION.
- 12 NEW OPENING FOR RETURN GRILLE. 32" x 16" SEE DETAIL 2/M-1.
- 13 CONCEAL TUBING IN WALL AND ABOVE CEILING.
- 14 NEW OPENING IN WALL FOR DUCT. SEAL ALL AROUND. SEE SECTION 1/M-1.
- 15 BALANCING DAMPER W/LOCKING QUADRANT AT TAKEOFF. SEE DETAIL 1/M-2.
- 16 PROVIDE A BALANCING DAMPER AND INSPECTION DOOR (RUSKIN CD-35 / RUSKIN ADH-1 12" x 12") AT EACH VOLUME CONTROL DAMPER (VCD). SEE DETAIL 3/M-1. ANCHOR DUCTWORK TIGHT TO WALL.
- 17 SEE SHEET M-3 FOR CONTINUATION OF DUCTWORK.
- 18 SEE DIFFUSER DETAIL 2/M-2.



SECOND FLOOR - MECHANICAL PLAN
SCALE 1/8" = 1'-0"



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



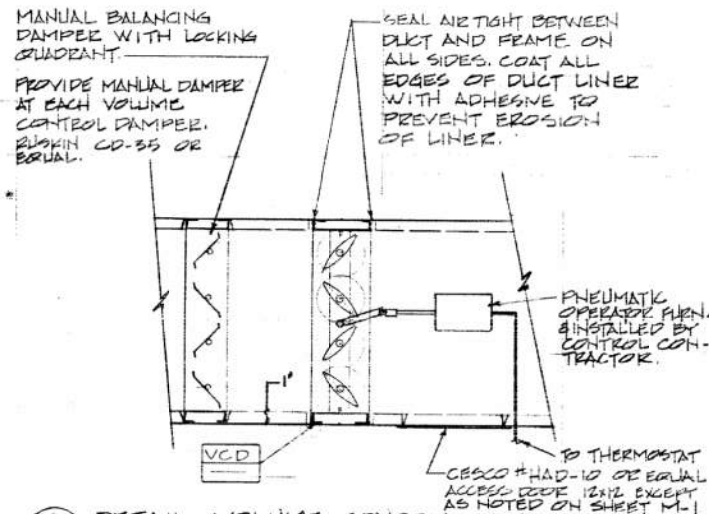
Drawn By
C. EILEY
DWB
5/2/85
W. O. No.

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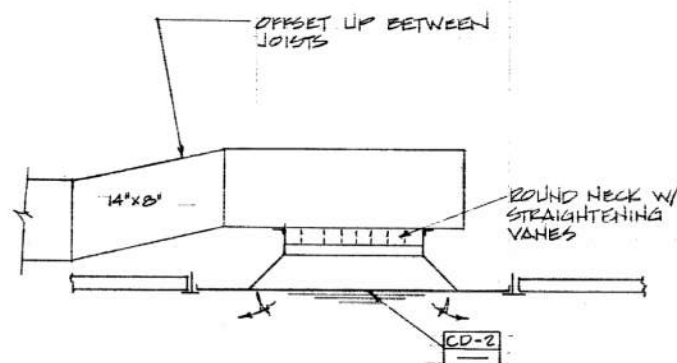


MECHANICAL FLOOR PLANS
REMODEL - RM. 158
RICHARDS R.E. BUILDING

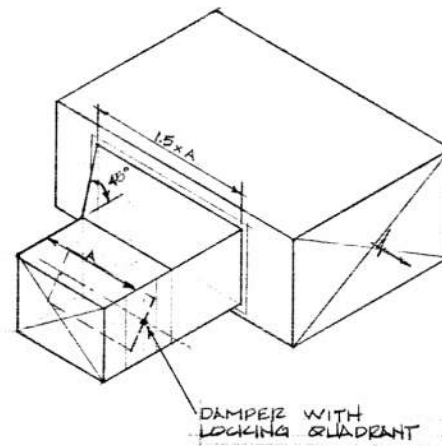
M-1



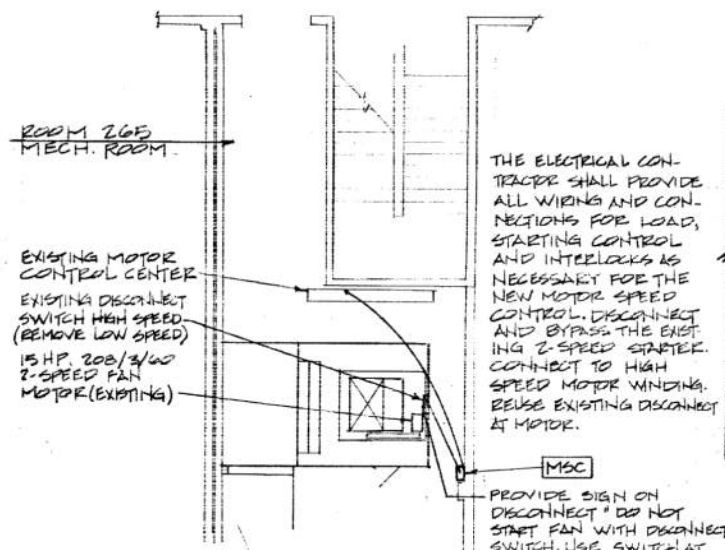
3 DETAIL - VOLUME CONTROL DAMPER
M-2 NO SCALE



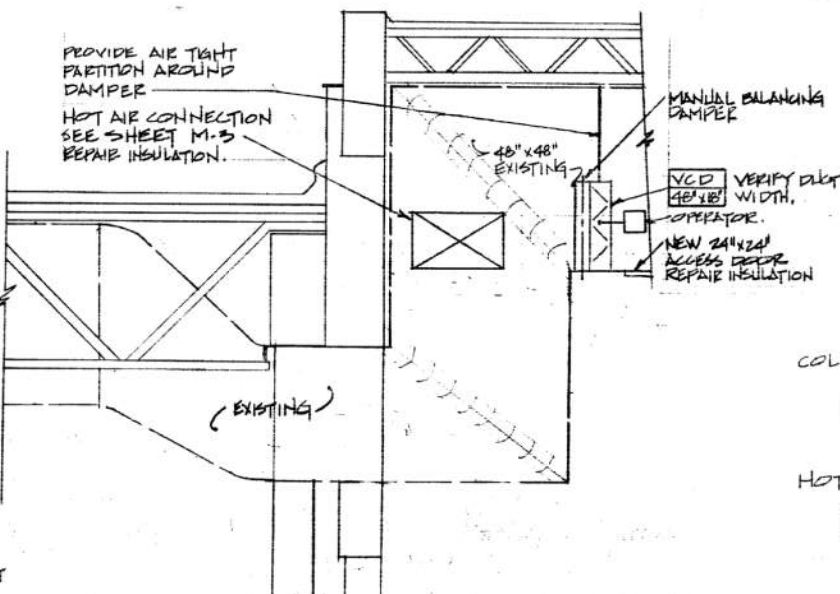
2 DETAIL - DIFFUSER
M-2 NO SCALE



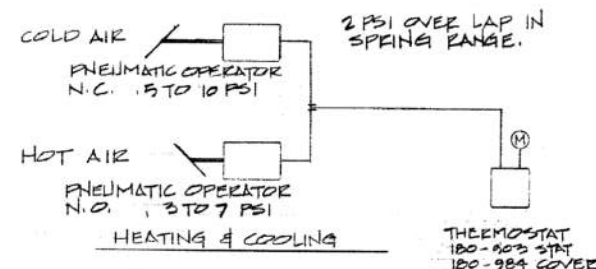
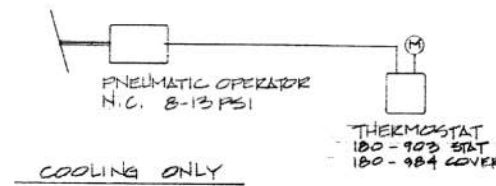
1 DETAIL - DUCT TAKEOFF
M-2



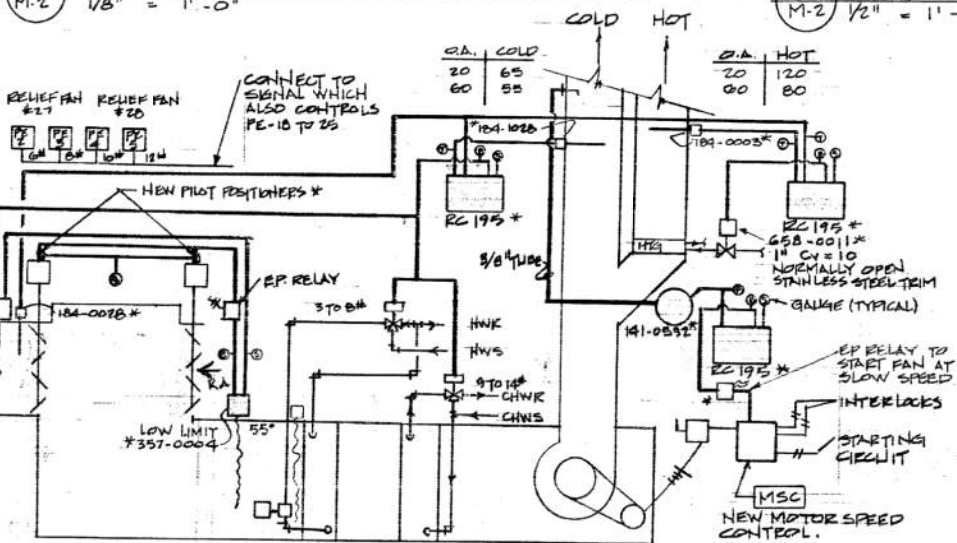
6 PLAN - FAN ROOM # 265
M-2 1/8" = 1'-0"



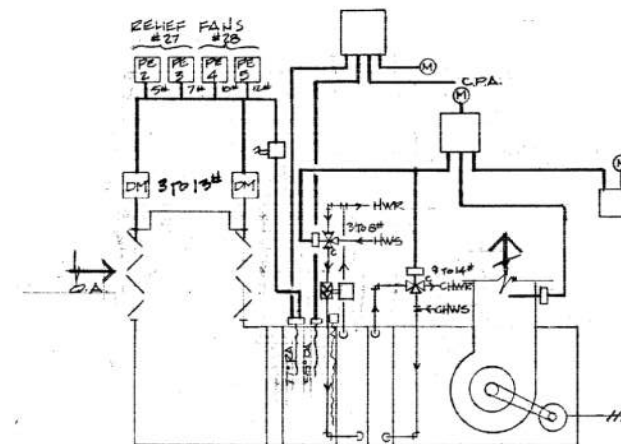
5 SECTION - SUPPLY AIR DUCT
M-2 1/2" = 1'-0"



4 THERMOSTAT CONTROL
M-2 NO SCALE



8 NEW CONTROL DIAGRAM
M-3



7 EXISTING CONTROL DIAGRAM.
M-3

EQUIPMENT SCHEDULE

- CD-1 CEILING DIFFUSER: 14"Ø NECK W/STRAIGHTENING VANE 23 3/4" x 23 3/4" OFF-WHITE FACE FOR T-BAR. 4-WAY THROW. (KREJGER 1400 FRAME 23 W/RS4-15 OR T&B DML4 W/TF GRID.)
- CD-2 CEILING DIFFUSER: 12"Ø NECK W/STRAIGHTENING VANE 23 3/4" x 23 3/4" OFF-WHITE FACE FOR T-BAR. 4-WAY THROW. (KREJGER 1400 FRAME 23 W/RS4-15 OR T&B DML4 W/TF GRID.)
- CRA CEILING RETURN GRILLE: 22" x 22" NECK, 23 3/4" x 23 3/4" OFF-WHITE FINISH FOR T-BAR. (KREJGER 500 OR T&B T100A)
- WRA WALL RETURN GRILLE: 32" x 16", 2" FLANGE FRAME, 11/16" BLADES AT FIXED 40°. COLOR AS SELECTED (KREJGER 500 OR T&B T700A)
- VCD VOLUME CONTROL DAMPER: (RUSKIN CD-50) OFFSET BLADE WITH EDGE AND JAMB SEALS TO LIMIT LEAKAGE TO 6 CFM / FT² AT 4" W.G. EXTRUDED ALUMINUM. SIZE SHOWN IS O.D. OF DUCT. I.D. OF DUCT IS MINUS 2" WITH 1" LINER OPERATOR FURNISHED AND INSTALLED BY CONTROL CONTRACTOR. DAMPER FRAME IS 5" WIDE BY 1" TO EQUAL 1" LINER.
- HWC HOT WATER COIL: 42' FINNED LENGTH, 24' FINNED HEIGHT, 2 ROW, 8 FINS/INCH MAX. .035" COPPER TUBE WALL THICKNESS. 1.9" W.G. AIR P.D. 30 FT. WATER P.D. TO HEAT 4200 CFM FROM 60°F TO 120°F WITH 190°F EWT, 168°F LWT, 20 GPM, 0 FEEDS. (PAGE 82 HW 24x42)
- MSC MOTOR SPEED CONTROL: FOR 15 HP, 208/3/60 MOTOR (EXISTING MOTOR IS WESTINGHOUSE 2 SPEED 1725/1175 RPM 286-U FRAME 208-220/3/60) PARAMETRICS FLOW ECONOMIZER #H30005 WITH 3-15 PSI INPUT, HAND-OFF-AUTO, MANUAL, POTENTIOMETER, AUXILIARY CONTACTS (2), AUTO-RESTART, OVER & UNDER VOLTAGE PROTECTION, INSTANTANEOUS OVER CURRENT TRIP, POWER FACTOR CORRECTION TO .95 OR BETTER.

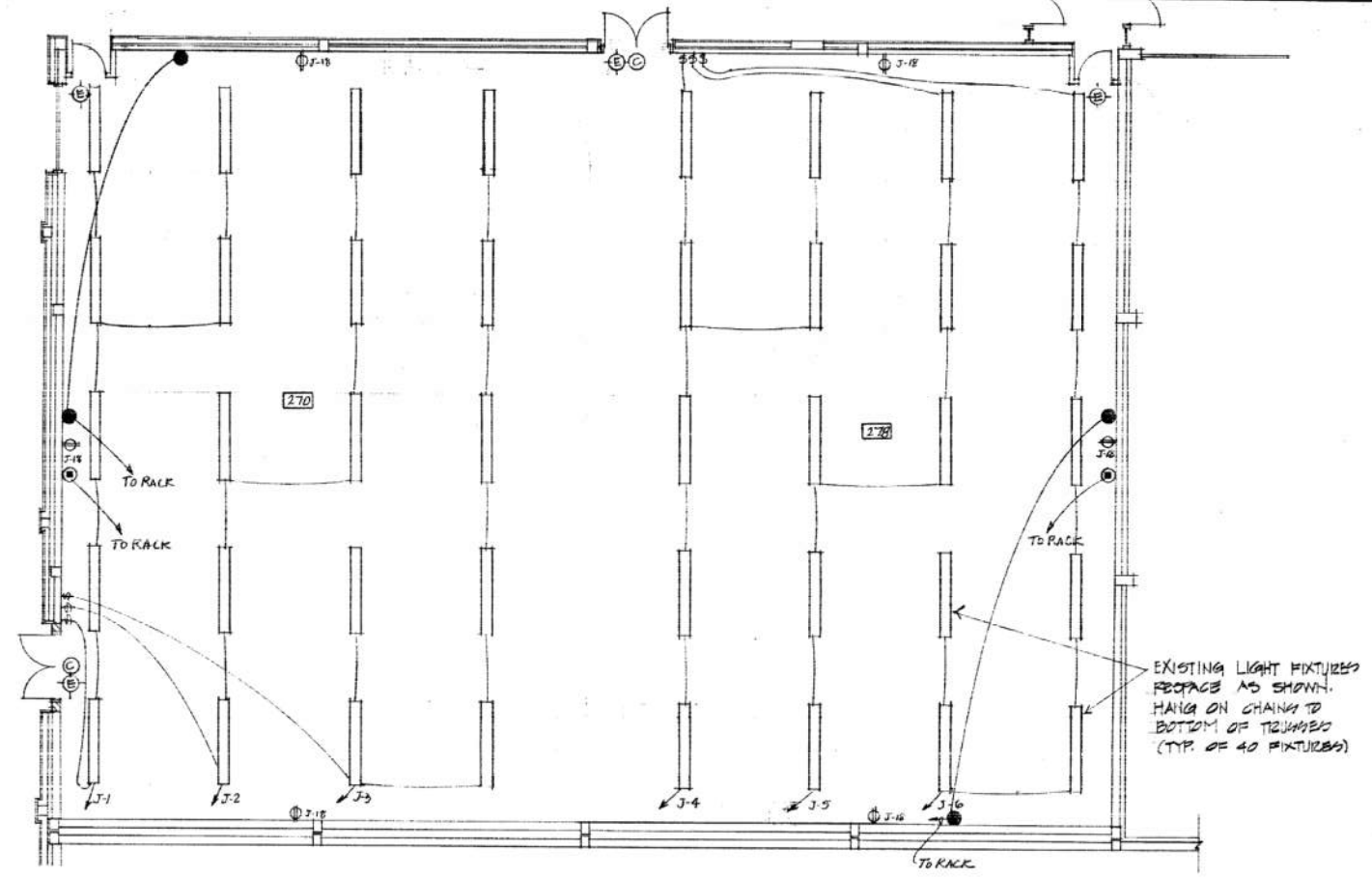
CONTROL SEQUENCE:

- ROOM CONTROL: A WALL MOUNTED DIRECT ACTING PNEUMATIC THERMOSTAT SHALL MODULATE THE VAV COOLING DAMPER IN THE INTERIOR SPACES OR THE VAV COOLING AND VAV HEATING DAMPER IN THE EXTERIOR SPACES TO MAINTAIN SPACE TEMPERATURE. SEE DIAGRAM 4/M.2.
- HEATING COIL CONTROL: A RECEIVER-CONTROLLER WITH INPUTS FROM OUTSIDE AND COIL DISCHARGE SHALL MODULATE THE HOT WATER VALVE TO MAINTAIN DISCHARGE AIR TEMPERATURE AS SCHEDULED.
- DISCHARGE STATIC PRESSURE CONTROL: A RECEIVER CONTROLLER WITH AN INPUT FROM A DUCT STATIC PRESSURE SENSOR SHALL PROVIDE A 3 TO 15 PSI SIGNAL TO THE MOTOR SPEED CONTROLLER TO MAINTAIN A STABLE NON-CYCLING FAN DISCHARGE PRESSURE. SET THE DUCT STATIC PRESSURE AT THE LOWEST PRESSURE WHICH WILL PROVIDE FULL AIR DELIVERY TO THE OCCUPIED SPACES.
- EXHAUST FAN CONTROL: CONNECT THE FOUR PE SWITCHES WHICH CONTROL THE EXHAUST FANS TO THE SAME SIGNAL WHICH CONTROLS THE EXHAUST FANS THAT ARE CONNECTED TO THE DUAL-DUCT SYSTEM. ALL OF THESE EXHAUST FANS REMOVE AIR FROM A COMMON AIR PLENUM.
- COLD DUCT TEMPERATURE CONTROL: A RECEIVER-CONTROLLER WITH INPUTS FROM OUTSIDE AND DISCHARGE AIR SHALL MODULATE THE CHILLED WATER VALVE, PREHEAT HOT WATER VALVE, AND THE OUTSIDE AND RETURN AIR DAMPERS IN SEQUENCE TO MAINTAIN DISCHARGE AIR TEMPERATURE AS SCHEDULED. A LOW LIMIT CONTROL LOCATED IN THE MIXED AIR SHALL PREVENT A MIXED AIR TEMPERATURE BELOW 55° F. AN ECONOMIZER CONTROL SHALL CLOSE THE OUTSIDE AIR DAMPER AND OPEN THE RETURN AIR DAMPER WHEN THE OUTSIDE AIR IS ABOVE 78° F. PROVIDE PILOT POSITIONERS ON THE OUTSIDE AND RETURN AIR DAMPERS TO MODULATE THE OUTSIDE AIR DAMPER CLOSED BEFORE THE HOT WATER VALVE BEGINS TO OPEN.
- MOTOR STARTING & INTERLOCKS: ALL INTERLOCKS INCLUDING THE 35° F. LOW LIMIT THERMOSTAT SHALL BE CONNECTED TO THE NEW MOTOR SPEED CONTROLLER. THE MOTOR STARTING CIRCUIT FROM THE JC-80 SHALL ALSO BE CONNECTED TO THE MOTOR SPEED CONTROLLER. THE FAN SHALL AUTOMATICALLY RESTART AFTER POWER LAMPS OR INTERRUPTIONS.

PANEL "J" (Existing) TYPE: RAR 3 # 4 WIRE 120/208 VOLTS
MOUNTING: FLOOR SURFACE DIN: W B D FREQ: TOP 225 AMP MAIN LUCS BREAKER

CIRCUIT NAME	CIRC.	BREAKER	AMP. POLE	NO. OUTLETS	WIRE SIZE	LOAD	WIRE SIZE	NO. OUTLETS	BREAKER	CIRC.	CIRCUIT NAME	
				LF'S C.O. WISC.	#	#	LF'S C.O. WISC.	POLE AMP				
Lights room 270	1	30	1	7	#10	3150	#10	7	1	30	2	Lights room 270
Lights room 270	2	30	1	6	#10	2700	#10	7	1	30	4	Lights room 270
Lights room 278	3	30	1	7	#10	3150	#10	7	1	30	6	Lights room 278
Lights room 278	4	30	1	15	#10	2700	#10	6	1	30	8	Lights room 278
Lights room 156	5	30	1	16	#10	1596	#10	24	1	30	10	Lights room 156
Lights room 156	6	30	1	16	#10	1064	#10	4	1	30	12	Plugs room 156
Lights room 156	7	30	1	16	#10	800	#10	4	1	20	14	water coolers room 156
Plugs rms 156, 162, 164	8	20	1	3	#12	1200	#12	2	1	20	16	sound cab. room 156
Plugs room 164	9	20	1	4	#12	800	#12	16	1	20	18	Lights room 156
Lights room 164	10	20	1	16	#12	1064	#12	8	1	20	20	Outlets first floor
Outlets 2nd floor	11	20	1	8	#12	1060	#12	8	1	20	22	Space
Space	12	20	1								24	Space
Space	13	20	1								26	Space
Space	14	20	1								28	Space
Space	15	20	1								30	Space
Space	16	20	1								32	Space
Space	17	20	1								34	Space
Space	18	20	1								36	Space
Space	19	20	1								38	Space
Space	20	20	1								40	Space
Space	21	20	1								42	Space
Space	22	20	1									
Space	23	20	1									
Space	24	20	1									
Space	25	20	1									
Space	26	20	1									
Space	27	20	1									
Space	28	20	1									
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Space	37	20	1									
Space	38	20	1									
Space	39	20	1									
Space	40	20	1									
Space	41	20	1									
Space	42	20	1									

TOTAL PER # 11724 9578 10618
TOTAL AMPS / # 98.1 79.8 86.8
TOTAL LOAD AMPS
WIRE SIZE # 14/0 THW
CONDUIT SIZE 3"



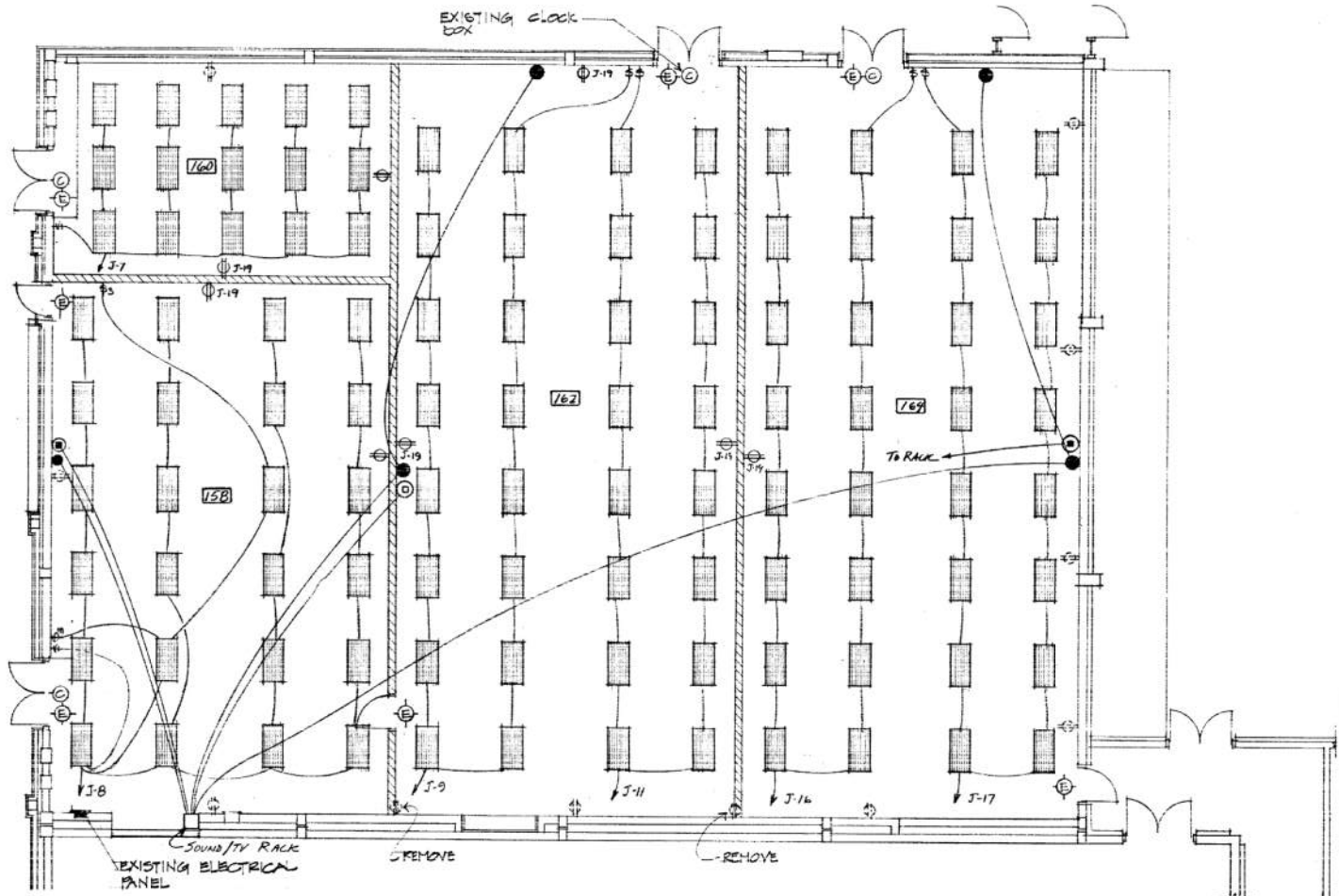
SECOND FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

- 1- CLOCKS - RUN 3/4" C FROM EXISTING CLOCK BOX TO NEAREST NEW CLOCK BOX ON FIRST FLOOR. RUN 3/4" C TO CLOCK BOX ON 2ND FLOOR. PULL 4 # 14 WIRES IN EACH CONDUIT BETWEEN CLOCKS. ALL CLOCKS TO HAVE SECOND HANDS.
- 2- EXIT LIGHTS - EXIT SIGNS TO BE "DAY BRIGHT" CAT. NO. 811G SINGLE FACE 11 WATTS (WALL MOUNT) RUN 3/4" CONDUIT TO NEAREST EXIT LIGHT BY DOOR 160. RUN 3/4" CONDUIT TO EACH EXIT LIGHT ON EACH FLOOR PARALLEL ALL WITH 2 # 10 THW WIRE. ALL TO BE ON CIRCUIT E-2.
- 3- FLUORESCENT LIGHT FIXTURES - ALL LIGHT FIXTURES ON THE FIRST FLOOR SHALL BE SIM. TO "LITHONIA" 2'x4' SERIES HEAT REMOVAL GRID TROPPERS 2'x4' FOR 2'x40 LAMPS CAT. NO. 2'x4' 240 A12 WITH WATT SAVER BALLAST ACRYLIC PRISMATIC LENS.
- 4- REFER TO (E-2) FOR WIRING TO SPEED CONTROL FOR FAN MOTOR.
- 5- CONNECT EXIT LIGHTS IN PARALLEL WITH EXISTING EXIT LIGHT CIRCUIT IN BUILDING.

LEGEND OF SYMBOLS

- (E) - NEW CONVENIENCE DUPLEX RECEPTACLE
- (E) - EXISTING DUPLEX RECEPTACLE
- (C) - NEW WALL MOUNTED CLOCK OUTLET BOX
- (E) - NEW LIGHTED EXIT SIGN
- (F) - NEW FLUORESCENT LIGHT FIXTURES
- (F) - EXISTING FLUORESCENT LIGHT FIXTURES
- (S) - NEW SINGLE POLE LIGHT SWITCH
- (S) - NEW 4-WIRE 3 WAY LIGHT SWITCH
- (M) - NEW BOX FOR MICROPHONE JACK USE HANDY BOX & 3/4" CONDUIT - JACK FURN. BY OWNER
- (T) - NEW BOX FOR TELEVISION OUTLET USE HANDY BOX & 3/4" CONDUIT - OUTLET FURNISHED BY OWNER



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

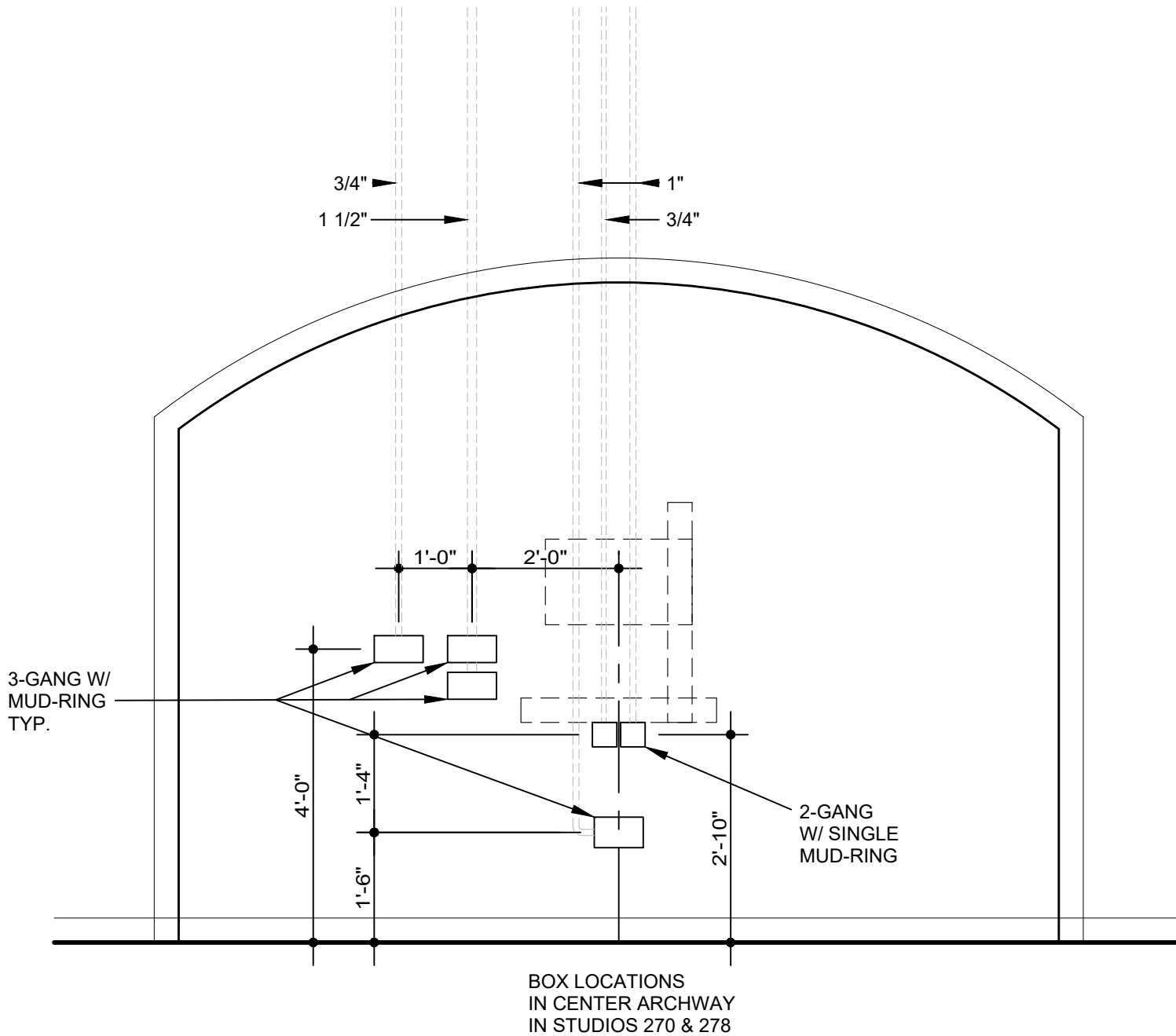
Brigham Young University
Planning and Architecture Department
240 BRWB Brigham Young University Provo, Utah 84602

Drawn By: N.J. Date: APR. 1955
W.O. No.

ELECTRICAL FLOOR PLANS
REMODEL ROOM 156
RICHARDS F.E. BUILDING

E1

ALL DIMENSIONS ARE FROM FINISH FLOOR & CENTERLINE OF ARCHWAY



FACILITIES PLANNING

240 BRWB PROVO, UTAH 84602
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DATE: APRIL 08, 2024

DESIGNER: K. MARTIN

DRAWN BY: KAM

ADA CHECK:

CODE CHECK:

STRUCTURAL:

ENGINEERING:

PLANNING DIR:

**BRIGHAM YOUNG
 UNIVERSITY**

RB - RENOVATE DANCE STUDIOS 270 & 278
 DANCE DEPARTMENT

RICHARDS BUILDING - 270 & 278

**TEACHING STATION
 BOX LOCATIONS**

WORK ORDER & SHEET NO.

**M9372
 D1.0**

CONSTRUCTION DOCS - SHOPS

TEACHING STATION BOX LOCATIONS

SCALE: 1/2" = 1'-0"

Specification - Section 10 22 26 (10650) Operable Partitions Acousti-Seal®

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Electrically operated, continuously hinged partitions.
- B. Related Sections include the following:
 - 1. Division 03 Sections for concrete tolerances required.
 - 2. Division 05 Sections for primary structural support, including pre-punching of support members by structural steel supplier per operable partition supplier's template.
 - 3. Division 06 Sections for wood framing & supports, and all blocking at head and jambs as required.
 - 4. Division 09 Sections for wall and ceiling framing at head and jambs.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified in writing by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.
- B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure and classified in accordance with ASTM E413 to attain no less than the STC rating specified. Provide a complete and unedited written test report by the testing laboratory upon request.
- C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 *Standard Practice for Architectural Application and Installation of Operable Partitions*.
- D. The operable wall must be manufactured by a certified ISO-9001-2015 company or an equivalent quality control system.

1.4 REFERENCE STANDARDS

- A. ASTM International
 - 1. ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
 - 2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 3. ASTM C1036 - Standard Specification for Flat Glass.
 - 4. ASTM C1048 - Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
 - 5. ASTM E84 - Surface Burning Characteristics of Building Materials.
 - 6. ASTM E413 - Classification for Rating Sound Insulation
- B. Health Product Declaration Collaborative
 - 1. Health Product Declaration Open Standard v2.1
- C. International Standards Organization
 - 1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labeling).
 - 2. ISO 14025:2011-10, Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.
 - 3. ISO 14040:2009-11, Environmental Management - Life Cycle Assessment - Principles and Framework.
 - 4. ISO 14044:2006-10, Environmental Management - Life Cycle Assessment - Requirements and Guidelines.

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5. ISO 21930 – Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services.

D. Other Standards

1. ADA – Americans with Disabilities Act.
2. UL 508A – Standard for Industrial Control Panels
3. NFPA 70 – National Electrical Code
4. ANSI Z97.1 - Safety Glazing Materials Used in Buildings.
5. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
6. NEMA LD3 - High Pressure Decorative Laminates.

1.5 SUBMITTALS

- A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.
- B. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.
- C. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.
- D. Samples: Color samples demonstrating full range of finishes available by architect. Verification samples will be available in same thickness and material indicated for the work.
- E. Reports: Provide a complete and unedited written sound test report indicating test specimen matches product as submitted.
- F. Create spaces that are healthy for occupants.
 1. Furnish products and materials with Health Product Declaration (HPD), Manufacturer Inventory, or other material health disclosure documentation. Products without an HPD or other disclosure documentation are not acceptable.
- G. Furnish materials that generate the least amount of pollution.
 1. Furnish products and materials that have third party verified environmental product declarations (EPD's). Consider products and materials that have optimized environmental performance (reduced life cycle impacts). Products without an EPD or other disclosure documentation are not acceptable.
- H. Buy American: Folding door to be manufactured in the United States in compliance with applicable U.S. Federal Trade Commission (FTC) and U.S. Customs Service and Border Protections regulations and be labeled "Made in America".

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.
- B. Protect panels during delivery, storage, and handling to comply with manufacturer's direction and as required to prevent damage.

1.7 WARRANTY

- A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.
- B. Warranty period: Two (2) years.
- C. Suspension System Warranty – Steel track and trolleys:
 1. OP-01: Ten (10) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS, PRODUCTS, AND OPERATION

- A. Manufacturers: Subject to compliance with requirements, provide product by the following:
 - 1. Modernfold, Inc.
- B. Doors to be manufactured in the U.S.A.
- C. Products: Subject to compliance with the requirements, provide the following product:
 - 1. OP-01: Acousti-Seal Legacy - Electric Panel: Electrically operated continuously hinged operable partition.
- D. No substitution allowed to Modernfold campus standards.

2.2 OPERATION

- A. OP-01: Acousti-Seal Legacy - Electric Panel: Series of continuously hinged flat panels, electrically operated, top supported with operable floor seals.
- B. Final Closure:
 - 1. OP-01: Side Jamb with overlapping trail panel.
- C. Partition shall be operated by:
 - 1. OP-01: Motor unit shall be reversible, continuous duty, and class A insulated. Motor unit shall have NEMA MG 1 service factor, high starting torque, thermal overload protection, and open/drip proof enclosure. Motor assembly shall have wiring compliant with NFPA 70, 24-volt controls, compliant with UL 508A, and speed of 28 feet/minute. The drive unit motor shall be equipped with outboard limit switches to prevent over-extension. A positive chain drive attached to the lead panel shall pull the partition across the opening. Cable, belt, or other friction type drives will not be accepted.
- D. Electric motor shall consist of:
 - 1. OP-01: A 208-volt, 3-phase

2.3 PANEL CONSTRUCTION

- A. OP-01: Nominal 3-inch (76mm) thick panels in manufacturer's standard 48-inch (1220mm) widths. All panel horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
- B. Panel skin shall be:
 - 1. OP-01: Roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Aluminum framed panels not acceptable. Mechanically fastened panels not acceptable. Acoustical ratings of panels with this construction minimum:
 - a. 50 STC
- C. Hinges for Panels, Closure Panels, Pass Doors, and Pocket Doors shall be:
 - 1. OP-01: Concealed laminated hinge with antifriction segments mounted between each heat-treated link. Hinge to be attached directly to panel frame. Welded internal hinge bracket shall support the hinge and allow for adjustment of hinge plates. Concealed hinges mounted into panel edge or vertical astragal are not acceptable. Low profile and/or piano hinges not acceptable substitution, must be fully invisible safety hinge.
- D. Panel Trim: No vertical trim required or allowed on edges of panels; minimal groove appearance at panel joints.
- E. Panel Weights:
 - 1. OP-01: 50 STC - 8 lbs./square foot

2.4 PANEL FINISH

- A. Panel finish shall be:
 - 1. OP-01: Reinforced vinyl with woven backing weighing not less than 20 ounces (567 grams) per lineal yard.
- B. Panel Trim: Exposed panel trim of one consistent color:

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1. OP-01: To Be Advised

2.5 SOUND SEALS

- A. Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic or aluminum astragals or astragals in only one panel edge are not acceptable.
- B. Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.
- C. Horizontal bottom floor seals shall be:
 1. OP-01: Modernfold Floating Bottom Seal. Floating operable seals provide nominal 3.50 (89mm) operating clearance with an operating range of +.50" (15mm) to -3" (76mm) and shall provide continuous floor contact as panels are positioned without the need for tools or cranks.

2.6 SUSPENSION SYSTEM

- A. OP-01: #14 Suspension System (Aluminum track not acceptable, Nylon rollers not acceptable)
 1. Suspension Tracks: Minimum 7-gauge, 0.18-inch (4.57mm) roll formed steel. Static loading of track with brackets at 48-inch (1220mm) centers shall show no failure of track or brackets at 5,000 pounds (2550kg) point loading at mid-span. Track shall be supported by adjustable steel hanger brackets connected to structural support pairs of 0.50-inch (13mm) diameter threaded rods. Brackets must support the load bearing surface of the track.
 - a. Exposed track soffit: Steel, removable for service and maintenance, attached to track bracket without exposed fasteners, and pre-painted off-white.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Comply with ASTM E557, operable partition manufacturer's written installation instructions, Drawings and approved Shop Drawings.
- B. Install operable partitions and accessories after other finishing operations, including painting have been completed.
- C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
- D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.
- E. Supplier to provide proof of active Modernfold service department and minimum 10 current years of representation of current product line.

3.2 CLEANING AND PROTECTION

- A. Clean partition surfaces upon completing installation of operable partitions to remove dust, dirt, adhesives, and other foreign materials according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions in a manner acceptable to the manufacturer and Installer that ensure operable partitions are without damage or deterioration at time of Substantial Completion.

3.3 ADJUSTING

- A. Adjust operable partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.

3.4 EXAMINATION

- A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

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3.5 DEMONSTRATION

- A. Demonstrate proper operation and maintenance procedures to Owner's representative.
- B. Provide Operation and Maintenance Manual to Owner's representative.

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215 West New Road
Greenfield, IN 46140
Toll Free: 800.869.9685
email: info@modernfold.com
www.modernfold.com

BRIGHAM YOUNG UNIVERSITY

ADDENDUM RECEIPT

DATE: April 9, 2024

PROJECT: RB Renovate Dance Studios 270 & 278

PROJ. #: WO# M9372

We acknowledge receipt of Addendum Number 1.

COMPANY: _____

BY: _____

TITLE: _____

PLEASE EMAIL SIGNED RECEIPT TO construction@byu.edu