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## LIMITED LEAD-BASED PAINT INSPECTION REPORT

Conducted at:

**BEN LOMOND ELEMENTARY SCHOOL  
HVAC REPLACEMENT PROJECT  
621 EAST COVINA BOULEVARD  
COVINA, CALIFORNIA 91722**

Prepared for:


**MR. BRIAN JOHNSON  
ASSISTANT DIRECTOR OF MAINTENANCE & OPERATION, FACILITIES &  
TRANSPORTATION  
COVINA-VALLEY UNIFIED SCHOOL DISTRICT  
519 EAST BADILLO STREET  
COVINA, CALIFORNIA 91723**

Prepared by:


**EXECUTIVE ENVIRONMENTAL  
310 EAST FOOTHILL BOULEVARD, SUITE 200  
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Project Number EE 23-Z0172-0074  
May 17, 2023

Report assembled by:

  
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## LIMITED LEAD-BASED PAINT INSPECTION

**Project Number:** EE 23-Z0172-0074

**Client:** Covina-Valley Unified School District  
519 East Badillo Street  
Covina, California 91723

**Site Location:** Ben Lomond Elementary School  
HVAC Replacement Project  
621 East Covina Boulevard  
Covina, California 91722

**Site Use:** School Property

**Contact Person:** Mr. Brian Johnson  
Assistant Director of Maintenance & Operations, Facilities  
and Transportation  
Phone: (626) 974-7000, ext. 800145

**Inspection Date:** May 1 thru 2, 2023

**Inspected By:** Mr. Tim Galeana  
Certified Lead Professional, CDPH # 0395

**Report Assembled By:** Ms. Yesenia G. Galeana  
Technical Report Writer

**Report Generated/Reviewed By:** Mr. Tim Galeana  
Certified Lead Professional, CDPH # 0395

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### **I. EXECUTIVE SUMMARY**

Executive Environmental (EE) provided the services of a Certified Lead Professional (CLP) to conduct a limited lead-based paint inspection of Buildings B (MPR), C, D, G, H, I and J at Ben Lomond Elementary School located at 621 East Covina Boulevard, Covina, California. The inspection was conducted as a precursor to the upcoming HVAC Replacement Project. EE provided a California Department of Public Health Certified Lead Inspector to conduct the inspection. Regulated lead containing materials were detected during this inspection. EE's CLP conducted these services on May 1 thru 2, 2023. *This is considered to be a limited inspection. The inspection was limited to surfaces and components anticipated to be impacted by the HVAC Replacement project, as directed by the District Representative.*

### **II. SAMPLING PROTOCOL**

According to the United States Department of Housing and Urban Development's (HUD) guideline document, Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, and Section 1017 of Title X, Residential Lead-Based Paint Hazard

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Reduction Act of 1992, Public Law 102-550, paint found to have a lead concentration of at least 1.0 mg/cm<sup>2</sup> (milligrams per centimeter squared) by X-Ray Fluorescence (XRF) readings, or 0.5 percent (5000 parts per million) by weight, is regulated as lead-based paint.

Los Angeles County Childhood Lead Poisoning Prevention Program (CLPPP), established in 1991, further regulates that paint found to have a lead concentration greater than 0.7 milligrams per centimeter squared (mg/cm<sup>2</sup>) by XRF readings, or 0.06 weight-to-weight percent by Atomic Absorption Spectrometry (AAS) analysis, is considered to be lead-based paint. The Los Angeles County 0.7 mg/cm<sup>2</sup> action level was used for determining the lead content in this inspection because it is more stringent than the HUD Guidelines.

Any material containing any detectable level of lead is subject to the Occupational Safety and Health Administration's (OSHA) Lead Exposure in Construction Rule 29 Code of Federal Regulation (CFR) 1926.62 and California Code of Regulations Title 8, Section 1532.1 Lead (8CCR1532.1) and Title 8, Section 5198, Lead (8CCR5198). All work that disturbs this type of material must be performed in accordance with this and any other applicable standards.

All facilities built prior to 1979 for residential buildings and prior to 1993 for schools are suspect for lead-containing materials. Federal and state regulations recognize only the following methods of identification: analysis by an XRF instrument, paint bulk sample collection and analysis, or a combination of both. This inspection was conducted via XRF instrumentation. The parameters used to interpret the XRF results are outlined in the HUD guidelines and the XRF Performance Characteristics Sheets (PCS).

### III. SAMPLING METHODOLOGY

A visual inspection of Buildings B (MPR), C, D, G, H, I and J was conducted by EE's CLP to identify major site features and surfaces and/or components suspected of being coated with lead-based paint that may be impacted by the *HVAC Replacement project*. After identifying the materials suspected of being coated with a lead-based paint, EE grouped the components, substrates, and room equivalents into testing combinations. A testing combination is defined as the room equivalent, component, and substrate. A room equivalent is an identifiable part of a building (e.g., classrooms, restrooms, mechanical rooms, exterior). Color does not accurately indicate painting history and is not included when assigning testing combinations. If there was any reason to suspect that materials may have been installed or painted at different times, even though they appear uniform, they were assigned to separate testing combinations.

Following the visual inspection, screening for the presence of lead-based paint or ceramic glaze was performed on-site using a portable XRF instrument. The XRF has the ability to measure lead content in paint and ceramic glaze within the range of 0 to 50 milligrams per centimeter squared (mg/cm<sup>2</sup>). The on-site inspection capability of the XRF instrument typically reduces the number of paint-chip samples that may need to be collected and sent for laboratory analysis. The portable XRF instrument used in this inspection was manufactured by Heuresis.

The following specifications apply to the Viken Detection XRF (formerly Heuresis):

- Ability to report Positive and Negative determination at 1.0mg lead/cm<sup>2</sup> with 2-sigma confidence with measurement time of 1-3 nominal seconds on most lead paint samples.
- Detects lead at 0.1 mg/cm<sup>2</sup> with 2-sigma confidence with a measurement time of 1 second on most samples.
- Equipped with a <sup>57</sup>Co sealed source, 5mCi (185 MBq), radioactive source. Substrate effects are automatically corrected through a complex algorithm and calibration.

#### IV. SAMPLE ANALYSIS

According to local, state and federal standards, the following surfaces and/or components that were analyzed with the Viken Detection XRF (formerly Heuresis) XRF instrument during this inspection are considered to be a lead containing material.

<b>SAMPLE ANALYSIS DATA</b> Ben Lomond Elementary School 621 East Covina Boulevard Covina, California 91722				
Location	Component	Substrate	Estimated Quantity	XRF Result Mg/cm <sup>2</sup>
<b>Building C- Rooms 1 (C101) and 2 (C102)</b>				
Room 2 (C102), side B Room 1 (C101), side B	Ribbed conduit	Metal	12 Linear Feet	3.2, 2.6
Exterior at AC condenser, side B	Ribbed conduit	Metal	6 Linear Feet	0.9
<b>Building D- Rooms 3 thru 5 (D401 thru D403)</b>				
Room 5 (D401), side B Room 4 (D402), side B Room 3 (D403), side B	Ribbed conduit	Metal	18 Linear Feet	2.6, 2.0
Exterior at AC condenser, side B	Ribbed conduit	Metal	9 Linear Feet	0.7
<b>Building G - Rooms 8 thru 10 (G102 thru G103)</b>				
Room 8 (G103), side B Room 9 (G102), side B Room 10 (G101), side B	Ribbed conduit	Metal	18 Linear Feet	0.7, 2.0
Exterior at AC condensers, side B	Ribbed conduit	Metal	9 Linear Feet	1.1, 0.9

*Note: This table must be used in conjunction with the entire report.*

<b>SAMPLE ANALYSIS DATA</b> Ben Lomond Elementary School 621 East Covina Boulevard Covina, California 91722				
Location	Component	Substrate	Estimated Quantity	XRF Result Mg/cm <sup>2</sup>
<b>Building H - Rooms 11 thru 13 (H801 thru H803)</b>				
Room 13 (H801), side B Room 12 (H802), side B Room 11 (H803), side B	Ribbed conduit	Metal	10 Linear Feet	1.8, 2.8
Exterior at AC condenser, side B	Ribbed conduit	Metal	9 Linear Feet	0.7
<b>Building I- Rooms 14 thru 16 (I901 thru I903)</b>				
Room 15 (I902), side B Room 14 (I903), side B Room 16 (I901), side B	Ribbed conduit	Metal	18 Linear Feet	2.6, 2.6
Exterior at AC condenser, side B	Ribbed conduit	Metal	9 Linear Feet	2.4
<b>Building J - Rooms 17 thru 19 (J1001 thru J1003)</b>				
Room 17 (J1001), side B Room 19 (J1003), side B Room 18 (J1002), side B	Ribbed conduit	Metal	18 Linear Feet	2.5, 2.0
Exterior at AC condenser, side B	Ribbed conduit	Metal	9 Linear Feet	2.0
<b>Building B (MPR)<sup>A</sup></b>				
No regulated lead-based paint was identified on interior and exterior surfaces and/or components anticipated to be impacted by the HVAC Replacement Project.				

Note: This table must be used in conjunction with the entire report.

## V. CONCLUSIONS/RECOMMENDATIONS

EE conducted a limited lead-based paint inspection of B (MPR), C, D, G, H, I and J at Ben Lomond Elementary School located at 621 East Covina Boulevard, Covina, California. The following conclusions and/or recommendations apply:

### **Limited Lead-Based Paint Inspection**

- Interior and exterior surfaces/components of B (MPR), C, D, G, H, I and J anticipated to be impacted by the HVAC Replacement Project were tested via the Viken Detection XRF for the presence of lead.

<sup>A</sup> NOTES: 1) HVAC equipment in both Mechanical rooms (B201 & B201B), ladder and wall vents (interior) not coated. 2) Walls of B201 B are continuous from B201.

- The items listed in the previous tables were identified as being a lead containing material.
- The painted surfaces/components tested were observed to be in intact during this inspection.
- A fully representative number of XRF readings were taken at the project site. The results of these assays are presented in the XRF Summary Results

It is recommended that all renovation, remodeling, construction, or demolition actions that might potentially disturb surfaces covered with lead-based paint and/or ceramic glaze be performed by properly trained and qualified personnel.

## **VI. DISCLAIMER/REPORT LIMITATIONS**

All reports and recommendations are based on conditions and practices observed and information made available to Executive Environmental (EE) by the client and the designated sites/facilities on the days sampling was conducted. This report does not purport to set forth all hazards, nor to indicate that other hazards do not exist. No responsibility is assumed by EE for the control or correction of conditions or practices existing at the facilities, or at any other premises surveyed by EE, for and on the behalf of the client. Services provided by EE shall be governed by the standard of practice for professional services measured at the time those services are rendered.

All information contained in this report is proprietary and limited to the scope of services, parameters of the analytical methods used and the conditions present at the time of this inspection. Any references to quantities are considered estimates and are not to be construed as actual.

## **APPENDIX A – XRF SUMMARY RESULTS**



Covina-Valley USD  
Ben Lomond Elementary School

Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
1	5/1/23			Calibrate					1	Positive	0.7
2	5/1/23			Calibrate					0.9	Positive	0.7
3	5/1/23			Calibrate					1	Positive	0.7
4	5/1/23	Building C	Room 1 (C101)	Wall	Plaster	A	Intact	Beige	0.3	Negative	0.7
5	5/1/23	Building C	Room 1 (C101)	Wall	Concrete	B	Intact	Beige	0.4	Negative	0.7
6	5/1/23	Building C	Room 1 (C101)	Wall	Plaster	C	Intact	Beige	0	Negative	0.7
7	5/1/23	Building C	Room 1 (C101)	Wall	Concrete	D	Intact	Beige	0.3	Negative	0.7
8	5/1/23	Building C	Room 1 (C101)	HVAC bracket	Metal	B	Intact	Beige	0	Negative	0.7
9	5/1/23	Building C	Room 1 (C101)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
10	5/1/23	Building C	Room 1 (C101)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
11	5/1/23	Building C	Room 1 (C101)	Window panel	Wood	B	Intact	Beige	0.1	Negative	0.7
12	5/1/23	Building C	Room 1 (C101)	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7
13	5/1/23	Building C	Room 2 (C102)	Wall	Plaster	A	Intact	Grey	0	Negative	0.7
14	5/1/23	Building C	Room 2 (C102)	Wall	Concrete	B	Intact	Grey	0.2	Negative	0.7
15	5/1/23	Building C	Room 2 (C102)	Wall	Plaster	C	Intact	Grey	0.1	Negative	0.7
16	5/1/23	Building C	Room 2 (C102)	Wall	Concrete	D	Intact	Grey	0.2	Negative	0.7
17	5/1/23	Building C	Room 2 (C102)	Thermostat conduit	Metal	B	Intact	Dark grey	0.3	Negative	0.7
18	5/1/23	Building C	Room 2 (C102)	HVAC bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
19	5/1/23	Building C	Room 2 (C102)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
20	5/1/23	Building C	Room 2 (C102)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
21	5/1/23	Building C	Room 2 (C102)	Window panel	Wood	B	Intact	White	0.1	Negative	0.7
22	5/1/23	Building C	Room 2 (C102)	Window frame	Metal	B	Intact	White	0.2	Negative	0.7
23	5/1/23	Building C	Room 2 (C102)	Ribbed conduit	Metal	B	Intact	White	3.2	Positive	0.7
24	5/1/23	Building C	Room 1 (C101)	Ribbed conduit	Metal	B	Intact	Grey (not painted)	2.6	Positive	0.7
25	5/1/23	Building C	Exterior	Wall	Stucco	A	Intact	Beige	0	Negative	0.7
26	5/1/23	Building C	Exterior	Wall	Texture coat on concrete	B	Intact	Beige	0.2	Negative	0.7
27	5/1/23	Building C	Exterior	Wall	Stucco	C	Intact	Beige	0.1	Negative	0.7
28	5/1/23	Building C	Exterior	Wall	Texture coat on concrete	D	Intact	Blue	0.1	Negative	0.7
29	5/1/23	Building C	Exterior at A/C condenser	Conduit	Metal	B	Intact	Beige	0.1	Negative	0.7
30	5/1/23	Building C	Exterior at A/C condenser	Conduit cover	Metal	B	Intact	Beige	0.1	Negative	0.7
31	5/1/23	Building C	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
32	5/1/23	Building C	Exterior at A/C condenser	Window panel	Wood	B	Intact	Beige	0.1	Negative	0.7
33	5/1/23	Building C	Exterior at A/C condenser	Vent	Metal	B	Intact	Beige	0.1	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
34	5/1/23	Building C	Exterior at A/C condenser	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7
35	5/1/23	Building C	Exterior at A/C condenser	Roof	Roofing material	Roof	Intact	Grey	0.2	Negative	0.7
36	5/1/23			Calibrate					1	Positive	0.7
37	5/1/23			Calibrate					1	Positive	0.7
38	5/1/23			Calibrate					1	Positive	0.7
39	5/1/23	Building D	Room 5 (D401)	Wall	Plaster	A	Intact	White	0.2	Negative	0.7
40	5/1/23	Building D	Room 5 (D401)	Wall	Concrete	B	Intact	White	0.1	Negative	0.7
41	5/1/23	Building D	Room 5 (D401)	Wall	Porcelain	C	Intact	White	0.1	Negative	0.7
42	5/1/23	Building D	Room 5 (D401)	Wall	Concrete	D	Intact	White	0.3	Negative	0.7
43	5/1/23	Building D	Room 5 (D401)	HVAC bracket	Metal	B	Intact	White	0.1	Negative	0.7
44	5/1/23	Building D	Room 5 (D401)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
45	5/1/23	Building D	Room 5 (D401)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
46	5/1/23	Building D	Room 5 (D401)	Window panel	Wood	B	Intact	White	0	Negative	0.7
47	5/1/23	Building D	Room 5 (D401)	Window frame	Metal	B	Intact	White	0.3	Negative	0.7
<b>48</b>	<b>5/1/23</b>	<b>Building D</b>	<b>Room 5 (D401)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2.6</b>	<b>Positive</b>	<b>0.7</b>
49	5/1/23	Building D	Room 4 (D402)	Wall	Plaster	A	Intact	Beige	0	Negative	0.7
50	5/1/23	Building D	Room 4 (D402)	Wall	Concrete	B	Intact	Black	0.3	Negative	0.7
51	5/1/23	Building D	Room 4 (D402)	Wall	Plaster	C	Intact	Beige	0.1	Negative	0.7
52	5/1/23	Building D	Room 4 (D402)	Wall	Concrete	D	Intact	Black	0.3	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
53	5/1/23	Building D	Room 4 (D402)	HVAC bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
54	5/1/23	Building D	Room 4 (D402)	HVAC support pole	Metal	Upper	Intact	Beige	0	Negative	0.7
55	5/1/23	Building D	Room 4 (D402)	12" ceiling tile	Acoustic	Upper	Intact	White	0	Negative	0.7
56	5/1/23	Building D	Room 4 (D402)	Window panel	Wood	B	Intact	Beige	0.1	Negative	0.7
57	5/1/23	Building D	Room 4 (D402)	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7
<b>58</b>	<b>5/1/23</b>	<b>Building D</b>	<b>Room 4 (D402)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2</b>	<b>Positive</b>	<b>0.7</b>
59	5/1/23	Building D	Exterior	Wall	Stucco	A	Intact	Beige	0.1	Negative	0.7
60	5/1/23	Building D	Exterior	Wall	Texture coat on concrete	B	Intact	Beige	0.2	Negative	0.7
61	5/1/23	Building D	Exterior	Wall	Stucco	C	Intact	Beige	0	Negative	0.7
62	5/1/23	Building D	Exterior	Wall	Texture coat on concrete	D	Intact	Blue	0.2	Negative	0.7
63	5/1/23	Building D	Exterior at A/C condenser	Electrical box	Metal	B	Intact	Beige	0	Negative	0.7
64	5/1/23	Building D	Exterior at A/C condenser	Conduit	Metal	B	Intact	Beige	0.1	Negative	0.7
65	5/1/23	Building D	Exterior at A/C condenser	Conduit cover	Metal	B	Intact	Beige	0.1	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
66	5/1/23	Building D	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0	Negative	0.7
67	5/1/23	Building D	Exterior at A/C condenser	Condensation line	Metal	B	Intact	Blue	0.2	Negative	0.7
68	5/1/23	Building D	Exterior at A/C condenser	Window panel	Wood	B	Intact	Beige	0.1	Negative	0.7
69	5/1/23	Building D	Exterior at A/C condenser	Vent	Metal	B	Intact	Beige	0.1	Negative	0.7
70	5/1/23	Building D	Exterior at A/C condenser	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7
71	5/1/23	Building D	Exterior	Roof	Roofing material	Roof	Intact	Grey	0.1	Negative	0.7
72	5/1/23	Building C	Exterior	Condensation line	Metal	B	Intact	Blue	0	Negative	0.7
73	5/1/23	Building G	Room 8 (G103)	Wall	Plaster	A	Intact	Beige	0.1	Negative	0.7
74	5/1/23	Building G	Room 8 (G103)	Wall	Concrete	B	Intact	Beige	0.3	Negative	0.7
75	5/1/23	Building G	Room 8 (G103)	Wall	Plaster	C	Intact	Beige	0.1	Negative	0.7
76	5/1/23	Building G	Room 8 (G103)	Wall	Concrete	D	Intact	Beige	0.3	Negative	0.7
77	5/1/23	Building G	Room 8 (G103)	HVAC bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
78	5/1/23	Building G	Room 8 (G103)	HVAC support pole	Metal	Upper	Intact	White	0	Negative	0.7
79	5/1/23	Building G	Room 8 (G103)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
80	5/1/23	Building G	Room 8 (G103)	Window panel	Wood	B	Intact	Beige	0.1	Negative	0.7
81	5/1/23	Building G	Room 8 (G103)	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
82	5/1/23	Building G	Room 8 (G103)	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.7	Positive	0.7
83	5/1/23	Building G	Room 9 (G102)	Wall	Plaster	A	Intact	White	0	Negative	0.7
84	5/1/23	Building G	Room 9 (G102)	Wall	Concrete	B	Intact	White	0.1	Negative	0.7
85	5/1/23	Building G	Room 9 (G102)	Wall	Plaster	C	Intact	Blue	0	Negative	0.7
86	5/1/23	Building G	Room 9 (G102)	Wall	Concrete	D	Intact	White	0.1	Negative	0.7
87	5/1/23	Building G	Room 9 (G102)	Thermostat conduit	Metal	A	Intact	White	0.2	Negative	0.7
88	5/1/23	Building G	Room 9 (G102)	Thermostat box	Metal	A	Intact	White	0.2	Negative	0.7
89	5/1/23	Building G	Room 9 (G102)	HVAC bracket	Metal	B	Intact	White	0.1	Negative	0.7
90	5/1/23	Building G	Room 9 (G102)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
91	5/1/23			Calibrate					-5	NULL	0.7
92	5/1/23			Calibrate					0.4	Negative	0.7
93	5/1/23			Calibrate					0.8	Positive	0.7
94	5/1/23			Calibrate					0.9	Positive	0.7
95	5/1/23			Calibrate					0.8	Positive	0.7
96	5/1/23			Calibrate					0.8	Positive	0.7
97	5/1/23			Calibrate					0.8	Positive	0.7
98	5/1/23			Calibrate					0.9	Positive	0.7
99	5/1/23			Calibrate					0.8	Positive	0.7
100	5/1/23			Calibrate					0.9	Positive	0.7
101	5/1/23	Building G	Room 9 (G102)	12" ceiling tile	Acoustic tile	Upper		White	0	Negative	0.7
102	5/1/23	Building G	Room 9 (G102)	Window panel	Wood	B	Intact	White	0	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
103	5/1/23	Building G	Room 9 (G102)	Window frame	Metal	B	Intact	White	0.1	Negative	0.7
<b>104</b>	<b>5/1/23</b>	<b>Building G</b>	<b>Room 9 (G102)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2</b>	<b>Positive</b>	<b>0.7</b>
105	5/1/23	Building G	Exterior	Wall	Stucco	A	Intact	Beige	0	Negative	0.7
106	5/1/23	Building G	Exterior	Wall	Texture coat on concrete	B	Intact	Beige	0.3	Negative	0.7
107	5/1/23	Building G	Exterior	Wall	Stucco	C	Intact	Beige	0	Negative	0.7
108	5/1/23	Building G	Exterior	Wall	Texture coat on concrete	D	Intact	Blue	0.3	Negative	0.7
109	5/1/23	Building G	Exterior at A/C condenser	Electrical box	Metal	B	Intact	Red	0.1	Negative	0.7
110	5/1/23	Building G	Exterior at A/C condenser	Conduit	Metal	B	Intact	Beige	0.1	Negative	0.7
111	5/1/23	Building G	Exterior at A/C condenser	Conduit cover	Metal	B	Intact	Beige	0.1	Negative	0.7
112	5/1/23	Building G	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0	Negative	0.7
113	5/1/23	Building G	Exterior at A/C condenser	Condensation line	Metal	B	Intact	Blue	0	Negative	0.7
114	5/1/23	Building G	Exterior at A/C condenser	Window panel	Wood	B	Intact	Beige	0.2	Negative	0.7
115	5/1/23	Building G	Exterior at A/C condenser	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
116	5/1/23	Building G	Exterior at A/C condenser	Vent	Metal	B	Intact	Beige	0.2	Negative	0.7
117	5/1/23	Building G	Exterior	Roof	Roofing material	Roof	Intact	Grey	0.2	Negative	0.7
118	5/1/23			Calibrate					1	Positive	0.7
119	5/1/23			Calibrate					1	Positive	0.7
120	5/1/23			Calibrate					1	Positive	0.7
121	5/2/23			Calibrate					1	Positive	0.7
122	5/2/23			Calibrate					1	Positive	0.7
123	5/2/23			Calibrate					1	Positive	0.7
124	5/2/23	Building H	Room 13 (H801)	Wall	Plaster	A	Intact	Beige	0.1	Negative	0.7
125	5/2/23	Building H	Room 13 (H801)	Wall	Concrete	B	Intact	Beige	0.3	Negative	0.7
126	5/2/23	Building H	Room 13 (H801)	Wall	Plaster	C	Intact	Beige	0.1	Negative	0.7
127	5/2/23	Building H	Room 13 (H801)	Wall	Concrete	D	Intact	Beige	0.3	Negative	0.7
128	5/2/23	Building H	Room 13 (H801)	HVAC bracket	Metal	B	Intact	Beige	0	Negative	0.7
129	5/2/23	Building H	Room 13 (H801)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
130	5/2/23	Building H	Room 13 (H801)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
131	5/2/23	Building H	Room 13 (H801)	Window panel	Wood	B	Intact	Beige	0	Negative	0.7
132	5/2/23	Building H	Room 13 (H801)	Window frame	Metal	B	Intact	Beige	0.3	Negative	0.7
<b>133</b>	<b>5/2/23</b>	<b>Building H</b>	<b>Room 13 (H801)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>1.8</b>	<b>Positive</b>	<b>0.7</b>
134	5/2/23	Building H	Room 12 (H802)	Wall	Plaster	A	Intact	Beige	0	Negative	0.7
135	5/2/23	Building H	Room 12 (H802)	Wall	Concrete	B	Intact	Beige	0.2	Negative	0.7



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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
136	5/2/23	Building H	Room 12 (H802)	Wall	Plaster	C	Intact	Beige	0	Negative	0.7
137	5/2/23	Building H	Room 12 (H802)	Wall	Concrete	D	Intact	Beige	0.3	Negative	0.7
138	5/2/23	Building H	Room 12 (H802)	HVAC bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
139	5/2/23	Building H	Room 12 (H802)	HVAC support pole	Metal	Upper	Intact	Beige	0.2	Negative	0.7
140	5/2/23	Building H	Room 12 (H802)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
141	5/2/23	Building H	Room 12 (H802)	Window panel	Wood	B	Intact	Beige	0	Negative	0.7
142	5/2/23	Building H	Room 12 (H802)	Window frame	Metal	B	Intact	Beige	0.2	Negative	0.7
<b>143</b>	<b>5/2/23</b>	<b>Building H</b>	<b>Room 12 (H802)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2.8</b>	<b>Positive</b>	<b>0.7</b>
144	5/2/23	Building H	Exterior	Wall	Stucco	A	Intact	Beige	0.1	Negative	0.7
145	5/2/23	Building H	Exterior	Wall	Texture coat on concrete	B	Intact	Beige	0.3	Negative	0.7
146	5/2/23	Building H	Exterior	Wall	Stucco	C	Intact	Beige	0	Negative	0.7
147	5/2/23	Building H	Exterior	Wall	Texture coat on concrete	D	Intact	Beige	0.2	Negative	0.7
148	5/2/23	Building H	Exterior at A/C condenser	Electrical box	Metal	B	Intact	Red	0	Negative	0.7
149	5/2/23	Building H	Exterior at A/C condenser	Conduit	Metal	B	Intact	Red	0.1	Negative	0.7
150	5/2/23	Building H	Exterior at A/C condenser	Conduit cover	Metal	B	Intact	Beige	0.1	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
151	5/2/23	Building H	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0.2	Negative	0.7
152	5/2/23	Building H	Exterior at A/C condenser	Window panel	Wood	B	Intact	Beige	0	Negative	0.7
153	5/2/23	Building H	Exterior at A/C condenser	Vent	Metal	B	Intact	Beige	0.1	Negative	0.7
154	5/2/23	Building H	Exterior at A/C condenser	Window frame	Metal	B	Intact	Beige	0.3	Negative	0.7
155	5/2/23	Building H	Exterior at A/C condenser	Conduit	Metal	B	Intact	Beige	0.1	Negative	0.7
156	5/2/23	Building H	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.1	Negative	0.7
157	5/2/23	Building H	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.5	Negative	0.7
158	5/2/23	Building H	Exterior	Roof	Roofing material	Roof	Intact	Grey (not painted)	0.1	Negative	0.7
159	5/2/23	Building G	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	1.1	Positive	0.7
160	5/2/23	Building G	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.3	Negative	0.7
161	5/2/23	Building G	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.6	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
162	5/2/23	Building G	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.9	Positive	0.7
163	5/2/23	Building C	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.9	Positive	0.7
164	5/2/23	Building D	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.2	Negative	0.7
165	5/2/23	Building D	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.3	Negative	0.7
166	5/2/23	Building D	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.7	Positive	0.7
167	5/2/23	Building H	Exterior at A/C condenser	Ribbed conduit	Metal	B	Intact	Grey (not painted)	0.7	Positive	0.7
168	5/2/23	Building I	Room 15 (I902)	Wall	Plaster	A	Intact	Green	0	Negative	0.7
169	5/2/23	Building I	Room 15 (I902)	Wall	Concrete	B	Intact	White	0.2	Negative	0.7
170	5/2/23	Building I	Room 15 (I902)	Wall	Plaster	C	Intact	White	0.1	Negative	0.7
171	5/2/23	Building I	Room 15 (I902)	Wall	Concrete	D	Intact	White	0.1	Negative	0.7
172	5/2/23	Building I	Room 15 (I902)	Thermostat conduit	Metal	A	Intact	Green	0.1	Negative	0.7
173	5/2/23	Building I	Room 15 (I902)	Thermostat box	Metal	A	Intact	Green	0.3	Negative	0.7
174	5/2/23	Building I	Room 15 (I902)	HVAC bracket	Metal	B	Intact	White	0	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
175	5/2/23	Building I	Room 15 (1902)	HVAC support pole	Metal	Upper	Intact	White	0.1	Negative	0.7
176	5/2/23	Building I	Room 15 (1902)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0	Negative	0.7
177	5/2/23	Building I	Room 15 (1902)	Window panel	Wood	B	Intact	White	0	Negative	0.7
178	5/2/23	Building I	Room 15 (1902)	Window frame	Metal	B	Intact	White	0.3	Negative	0.7
<b>179</b>	<b>5/2/23</b>	<b>Building I</b>	<b>Room 15 (1902)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>White</b>	<b>2.6</b>	<b>Positive</b>	<b>0.7</b>
180	5/2/23	Building I	Room 14 (1903)	Wall	Plaster	A	Intact	White	0	Negative	0.7
181	5/2/23	Building I	Room 14 (1903)	Wall	Concrete	B	Intact	White	0.1	Negative	0.7
182	5/2/23	Building I	Room 14 (1903)	Wall	Plaster	C	Intact	Blue	0.1	Negative	0.7
183	5/2/23	Building I	Room 14 (1903)	Wall	Concrete	D	Intact	White	0.4	Negative	0.7
184	5/2/23	Building I	Room 14 (1903)	HVAC bracket	Metal	B	Intact	White	0.1	Negative	0.7
185	5/2/23	Building I	Room 14 (1903)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
186	5/2/23	Building I	Room 14 (1903)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
187	5/2/23	Building I	Room 14 (1903)	Window panel	Wood	B	Intact	White	0	Negative	0.7
188	5/2/23	Building I	Room 14 (1903)	Window frame	Metal	B	Intact	White	0.2	Negative	0.7
<b>189</b>	<b>5/2/23</b>	<b>Building I</b>	<b>Room 14 (1903)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>White</b>	<b>2.6</b>	<b>Positive</b>	<b>0.7</b>
190	5/2/23	Building I	Exterior	Wall	Stucco	A	Intact	Beige	0.4	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
191	5/2/23	Building I	Exterior	Wall	Texture coat on concrete	B	Intact	Beige	0.3	Negative	0.7
192	5/2/23	Building I	Exterior	Wall	Stucco	C	Intact	Beige	0	Negative	0.7
193	5/2/23	Building I	Exterior	Wall	Texture coat on concrete	D	Intact	Blue	0.3	Negative	0.7
194	5/2/23	Building I	Exterior	Electrical box	Metal	B	Intact	Red	0	Negative	0.7
195	5/2/23	Building I	Exterior at A/C condenser	Conduit	Metal	B	Intact	Beige	0.2	Negative	0.7
196	5/2/23	Building I	Exterior at A/C condenser	Condensation line	Metal	B	Intact	Blue	0.2	Negative	0.7
197	5/2/23	Building I	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0.1	Negative	0.7
198	5/2/23	Building I	Exterior at A/C condenser	Conduit cover bracket	Metal	B	Intact	Beige	0.2	Negative	0.7
199	5/2/23	Building I	Exterior at A/C condenser	Window panel	Wood	B	Intact	Beige	0	Negative	0.7
200	5/2/23	Building I	Exterior at A/C condenser	Window frame	Metal	B	Intact	Beige	0.1	Negative	0.7
201	5/2/23	Building I	Exterior at A/C condenser	Vent	Metal	B	Intact	Beige	0.1	Negative	0.7
<b>202</b>	<b>5/2/23</b>	<b>Building I</b>	<b>Exterior at A/C condenser</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>B</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2.4</b>	<b>Positive</b>	<b>0.7</b>

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
203	5/2/23	Building H	Exterior at A/C condenser	Condensation line	Metal	B	Intact	Blue	0.2	Negative	0.7
204	5/2/23	Building J	Room 17 (J1001)	Wall	Concrete	A	Intact	Grey	0.2	Negative	0.7
205	5/2/23	Building J	Room 17 (J1001)	Wall	Plaster	B	Intact	Grey	0	Negative	0.7
206	5/2/23	Building J	Room 17 (J1001)	Wall	Concrete	C	Intact	White	0.3	Negative	0.7
207	5/2/23	Building J	Room 17 (J1001)	Wall	Plaster	D	Intact	White	0	Negative	0.7
208	5/2/23	Building J	Room 17 (J1001)	HVAC bracket	Metal	A	Intact	Beige	0.1	Negative	0.7
209	5/2/23	Building J	Room 17 (J1001)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
210	5/2/23	Building J	Room 17 (J1001)	12" ceiling tile	Acoustic tile	Upper	Intact	White	0.1	Negative	0.7
211	5/2/23	Building J	Room 17 (J1001)	Window panel	Wood	A	Intact	Beige	0.1	Negative	0.7
212	5/2/23	Building J	Room 17 (J1001)	Window frame	Metal	A	Intact	Beige	0.3	Negative	0.7
<b>213</b>	<b>5/2/23</b>	<b>Building J</b>	<b>Room 17 (J1001)</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>A</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2.5</b>	<b>Positive</b>	<b>0.7</b>
214	5/2/23	Building J	Room 19 (J1003)	Wall	Concrete	A	Intact	Beige	0.3	Negative	0.7
215	5/2/23	Building J	Room 19 (J1003)	Wall	Plaster	B	Intact	Beige	0.1	Negative	0.7
216	5/2/23	Building J	Room 19 (J1003)	Wall	Concrete	C	Intact	Beige	0.4	Negative	0.7
217	5/2/23	Building J	Room 19 (J1003)	Wall	Plaster	D	Intact	Beige	0	Negative	0.7
218	5/2/23	Building J	Room 19 (J1003)	HVAC bracket	Metal	A	Intact	Beige	0.1	Negative	0.7
219	5/2/23	Building J	Room 19 (J1003)	Window panel	Wood	A	Intact	Beige	0	Negative	0.7
220	5/2/23	Building J	Room 19 (J1003)	Window frame	Metal	A	Intact	Beige	0.2	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
221	5/2/23	Building J	Room 19 (J1003)	Ribbed conduit	Metal	A	Intact	Grey (not painted)	2	Positive	0.7
222	5/2/23	Building J	Room 19 (J1003)	HVAC support pole	Metal	Upper	Intact	Beige	0.1	Negative	0.7
223	5/2/23	Building J	Room 19 (J1003)	12" ceiling tile	Acoustic tile	Upper	Intact	Beige	0.1	Negative	0.7
224	5/2/23	Building J	Exterior	Wall	Texture coat on concrete	A	Intact	Beige	0.2	Negative	0.7
225	5/2/23	Building J	Exterior	Wall	Stucco	B	Intact	Beige	0.1	Negative	0.7
226	5/2/23	Building J	Exterior	Wall	Texture coat on concrete	C	Intact	Blue	0.4	Negative	0.7
227	5/2/23	Building J	Exterior	Wall	Stucco	D	Intact	Beige	0.1	Negative	0.7
228	5/2/23	Building J	Exterior at A/C condenser	Electrical box	Metal	A	Intact	Beige	0.1	Negative	0.7
229	5/2/23	Building J	Exterior at A/C condenser	Conduit	Metal	A	Intact	Beige	0.1	Negative	0.7
230	5/2/23	Building J	Exterior at A/C condenser	Conduit cover	Metal	A	Intact	Beige	0.1	Negative	0.7
231	5/2/23	Building J	Exterior at A/C condenser	Conduit cover bracket	Metal	A	Intact	Beige	0.1	Negative	0.7
232	5/2/23	Building J	Exterior at A/C condenser	Condensation line	Metal	A	Intact	Blue	0.2	Negative	0.7
233	5/2/23	Building J	Exterior at A/C condenser	Window panel	Wood	A	Intact	Beige	0	Negative	0.7

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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
234	5/2/23	Building J	Exterior at A/C condenser	Window frame	Metal	A	Intact	Beige	0.2	Negative	0.7
235	5/2/23	Building J	Exterior at A/C condenser	Vent	Metal	A	Intact	Beige	0	Negative	0.7
<b>236</b>	<b>5/2/23</b>	<b>Building J</b>	<b>Exterior at A/C condenser</b>	<b>Ribbed conduit</b>	<b>Metal</b>	<b>A</b>	<b>Intact</b>	<b>Grey (not painted)</b>	<b>2</b>	<b>Positive</b>	<b>0.7</b>
237	5/2/23	Building J	Exterior at A/C condenser	Roof	Roofing material	Roof	Intact	Grey	0.1	Negative	0.7
238	5/2/23			Calibrate					1	Positive	0.7
239	5/2/23			Calibrate					1	Positive	0.7
240	5/2/23			Calibrate					0.9	Positive	0.7
241	5/2/23	Building B (MPR)	Mechanical room (B201)	Wall	Plaster	A	Intact	Beige	0	Negative	0.7
242	5/2/23	Building B (MPR)	Mechanical room (B201)	Wall	Plaster	B	Intact	Beige	0	Negative	0.7
243	5/2/23	Building B (MPR)	Mechanical room (B201)	Wall	Plaster	C	Intact	Beige	0	Negative	0.7
244	5/2/23	Building B (MPR)	Mechanical room (B201)	Wall	Plaster	D	Intact	Beige	0	Negative	0.7
245	5/2/23	Building B (MPR)	Mechanical room (B201)	Ceiling	Wood	Upper	Intact	Beige	0.1	Negative	0.7
246	5/2/23	Building B (MPR)	Mechanical room (B201)	Ceiling beam	Wood	Upper	Intact	Beige	0.1	Negative	0.7
247	5/2/23	Building B (MPR)	Mechanical room (B201)	Conduit	Metal	B	Intact	Beige	0.3	Negative	0.7
248	5/2/23	Building B (MPR)	Mechanical room (B201B)	Ceiling	Plaster	Upper	Intact	Beige	0	Negative	0.7



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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
249	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Wood	A	Intact	Beige	0.2	Negative	0.7
250	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Drywall	A	Intact	Beige	0	Negative	0.7
251	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Acoustic tile	B	Intact	Beige	0.1	Negative	0.7
252	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Wood	C	Intact	Beige	0.1	Negative	0.7
253	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Drywall	C	Intact	Beige	0.1	Negative	0.7
254	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Wood	D	Intact	Beige	0.2	Negative	0.7
255	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Wall	Acoustic tile	D	Intact	Beige	0.1	Negative	0.7
256	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Ceiling	Acoustic tile	Upper	Intact	Beige	0	Negative	0.7
257	5/2/23	Building B (MPR)	Multi-purPositivee room ( B206)	Vent	Metal	Upper	Intact	White	0.1	Negative	0.7
258	5/2/23	Building B (MPR)	Exterior	Wall	Stucco	A	Intact	Beige	0.1	Negative	0.7
259	5/2/23	Building B (MPR)	Exterior	Wall	Stucco	B	Intact	Beige	0	Negative	0.7
260	5/2/23	Building B (MPR)	Exterior	Wall	Stucco	C	Intact	Beige	0.1	Negative	0.7
261	5/2/23	Building B (MPR)	Exterior	Wall	Stucco	D	Intact	Beige	0	Negative	0.7
262	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent (small)	Wood	A	Intact	Blue	0.2	Negative	0.7
263	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent trim	Wood	A	Intact	Blue	0.1	Negative	0.7
264	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent trim	Metal	A	Intact	Blue	0.2	Negative	0.7

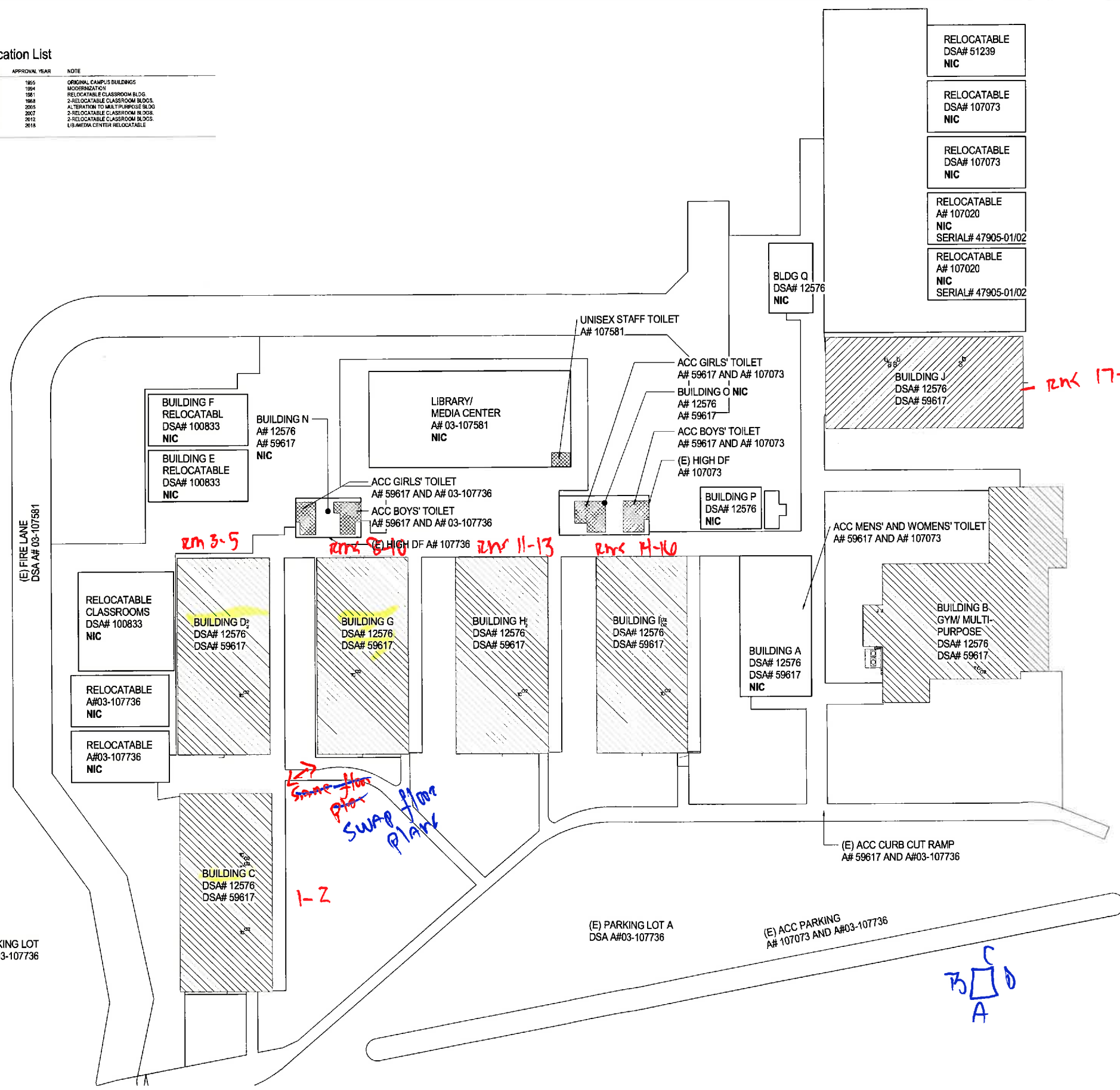
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Reading #	Date	Building	Location	Component	Substrate	Side	Condition	Color	Concentration	Result	Action Level
265	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent (large)	Metal	A	Intact	Beige	0.2	Negative	0.7
266	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent trim	Wood	A	Intact	Beige	0.1	Negative	0.7
267	5/2/23	Building B (MPR)	Exterior at Mechanical room	Wall vent trim	Metal	A	Intact	Beige	0.2	Negative	0.7
268	5/2/23	Building B (MPR)	Exterior at Mechanical room	Roof	Roofing material	Roof	Intact	Grey	0.3	Negative	0.7
269	5/2/23			Calibrate					1.1	Positive	0.7
270	5/2/23			Calibrate					1	Positive	0.7
271	5/2/23			Calibrate					1	Positive	0.7

**APPENDIX B – SITE DRAWING**

DSA Certification List

APPLICATION #	FILE #	APPROVAL YEAR	NOTE
03-12876	19-25	1995	ORIGINAL CAMPUS BUILDINGS MODERNIZATION
03-59617	19-25	1994	RELOCATABLE CLASSROOM BLDG.
03-10833	19-25	1991	2-RELOCATABLE CLASSROOM BLDGS.
03-48745	19-25	1988	A-1 TERRITORY TO MULTI-PURPOSE BLDG.
03-10833B	19-25	2005	2-RELOCATABLE CLASSROOM BLDGS.
03-107023	19-25	2007	2-RELOCATABLE CLASSROOM BLDGS.
03-148577	56-9	2012	LIB MEDIA CENTER RELOCATABLE
03-107581	19-25	2018	LIB MEDIA CENTER RELOCATABLE



**SITE LEGEND**

- [White Box] EXISTING BUILDING NOT IN SCOPE
- [Hatched Box] EXISTING BUILDING - SCOPE OF WORK UNDER THIS DSA APPLICATION
- [Dotted Box] (E) RESTROOMS - NOT IN SCOPE

**DLR Group**  
© DLR Group

REGISTERED ARCHITECT  
JESSE MILLER  
No. C 10114  
1001-0023  
STATE OF CALIFORNIA

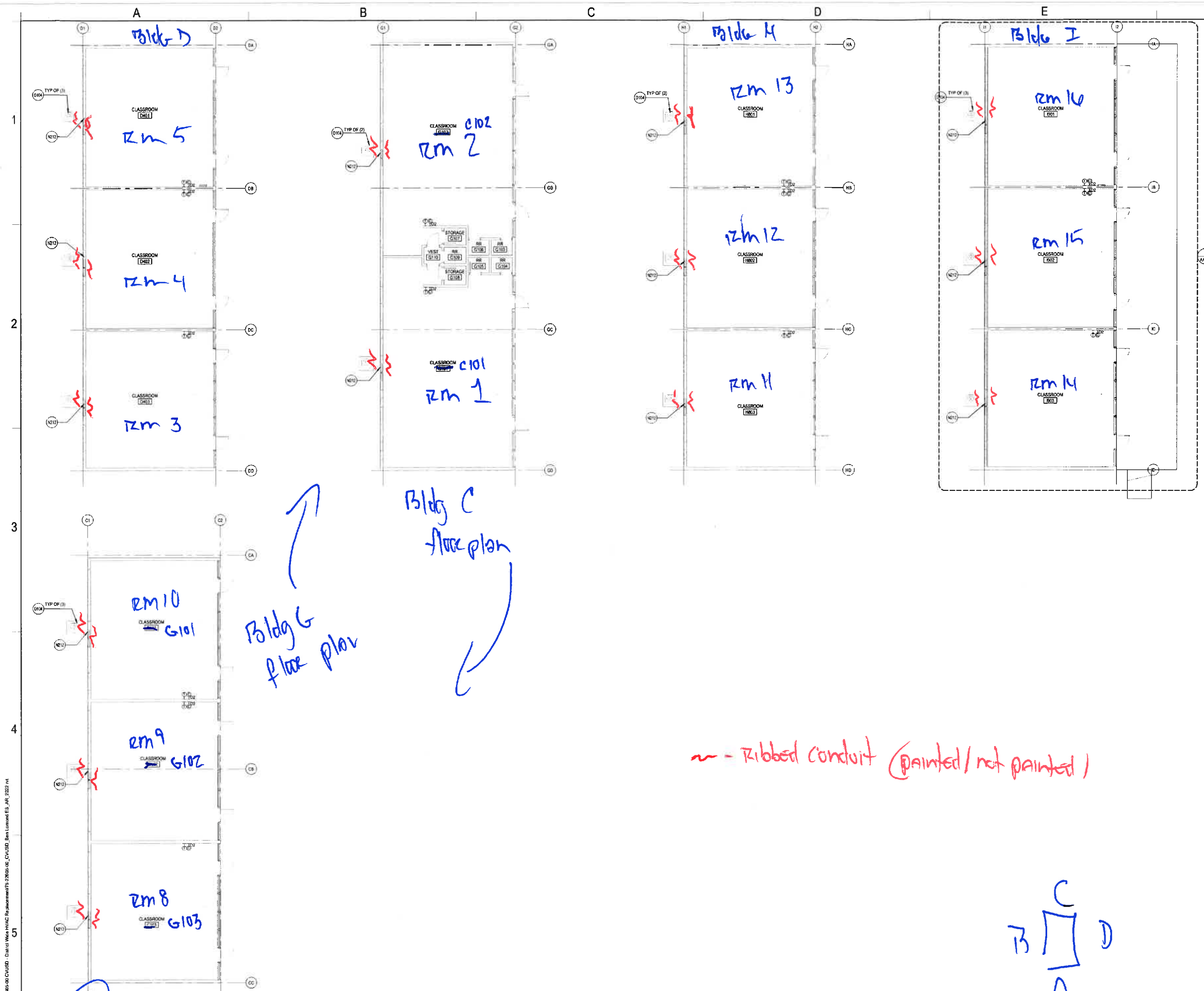
**USG**

**BEN LOMOND ELEM. SCHOOL**  
COVID-19 COVID VALLEY DISTRICT WIDE HVAC REPLACEMENT  
621 E. COVINA BLVD. COVINA, CA 91722

100%  
CONSTRUCTION  
DOCUMENT  
06/05/2022  
REVISIONS

75-22665  
DSA A#03-12223  
DSA File # 19-25  
ARCHITECTURAL  
SITE PLAN

Autodesk Docs/75-22665-00 CVUSD - District Wide HVAC Replacement/75-22665-00 CVUSD\_Ben Lomond ES\_AR\_2022.rvt  
 01/17/2023 9:11:39 AM



BUILDINGS C, D, G, H AND I FLOOR PLANS  
SCALE: 1/8" = 1'-0"

Autodesk Docs/75-22665-00 CIVUSD - District Wide HVAC Replacement/75-22665-00 CIVUSD - Ben Lomond ES - AR - 2022.rvt  
 2/7/2023 9:10:01 AM

REFERENCE KEYNOTES

- KEYNOTES
- 0164 REMOVE (E) MECHANICAL EQUIP. EQUIP. COND. PADS & ITS ASSOCIATED PARTS. SEE MECHANICAL & PLUMBING DRAWINGS. CONTRACTORS TO PATCH AND REPAIR AREA OF DEMO WITH (M) ASPHALT, (N) CONCRETE OR (L) LANDSCAPING TO MATCH ADJACENT SURFACE.
  - 0212 REPLACES (E) HURL PANEL AT CONDENSER UNIT PENETRATIONS WITH CLADDING TO MATCH ADJACENT PAINT FRAME TO MATCH ADJACENT

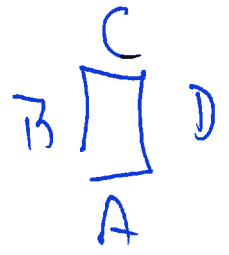
GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL REMAIN U.N.D. NOT USED.
2. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED PICTURES, MARKER BOARDS, TAGS, BORDERS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS.
3. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
4. NOT USED.
5. SCRUB GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO EXPOSE SURFACES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
6. MAINTAIN (E) SEISMIC BRACING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

DEMOLITION GENERAL NOTES

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL:
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNERS OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, FLOORING, FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
  - I. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
  - J. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE RESISTANT-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
  - P. NOT USED.
  - Q. WHERE PLASTER/TUDD WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH FINISH BY SAWCUTTING ADJACENT PLASTER FINISH A MINIMUM OF 1'-0" BEYOND DEMOLITION.

~ - Ribbed conduit (Painted/ not painted)

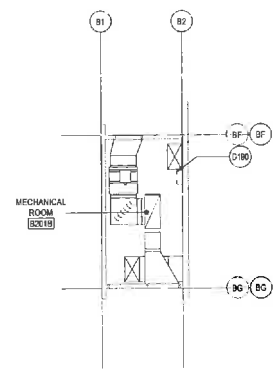


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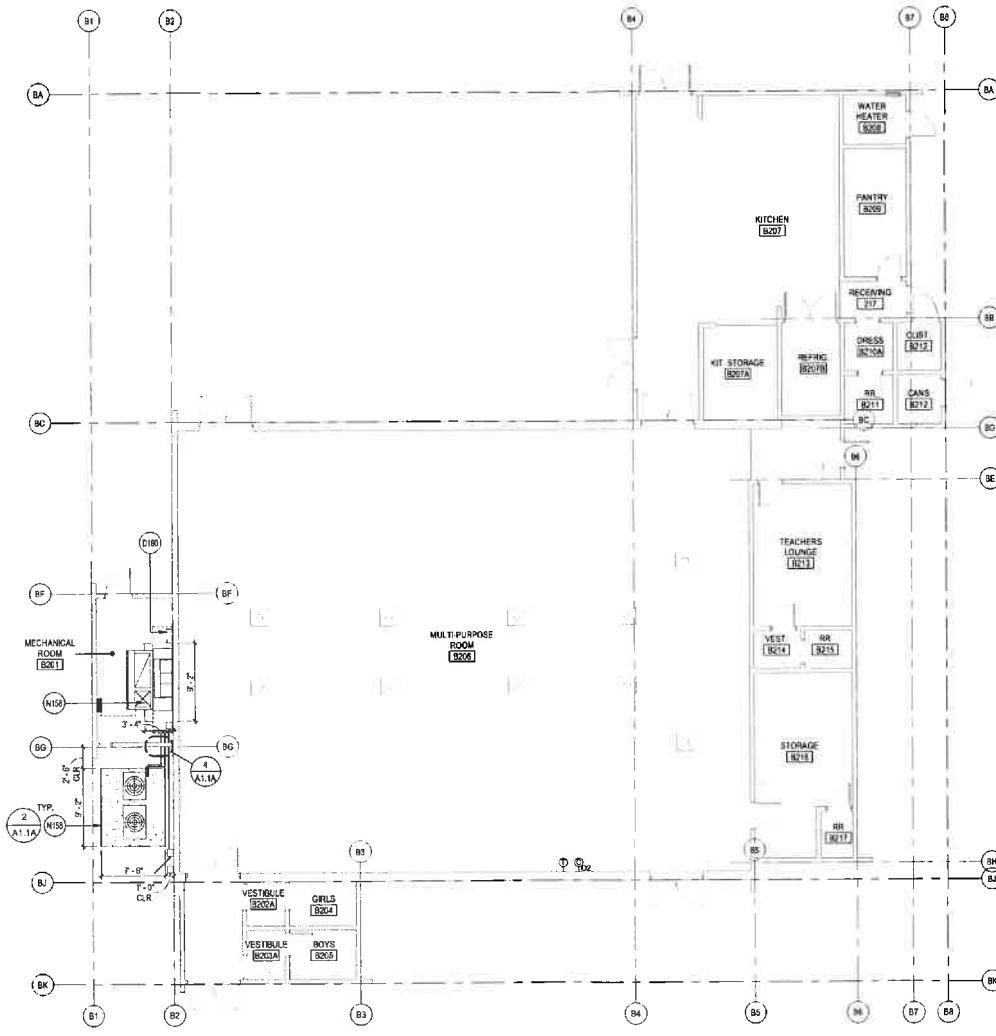
100% CONSTRUCTION DOCUMENT  
 05/09/2022  
 REVISIONS

75-22665  
 DSA ARJ-122228  
 DSA File #: 19-25  
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 AND I FLOOR PLANS

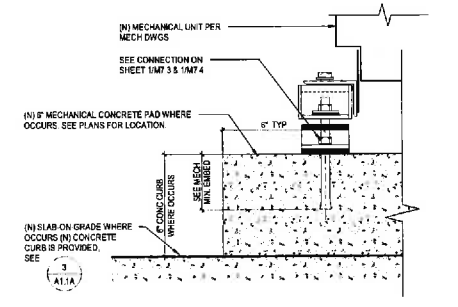
A1.1C



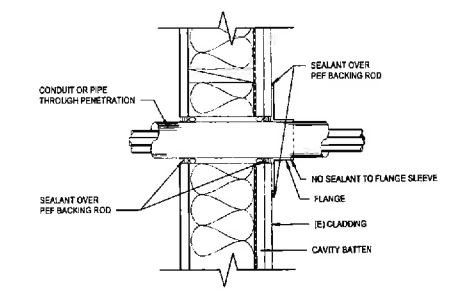
**BLDG B - MEZZANINE LEVEL**  
SCALE: 1/4" = 1'-0"



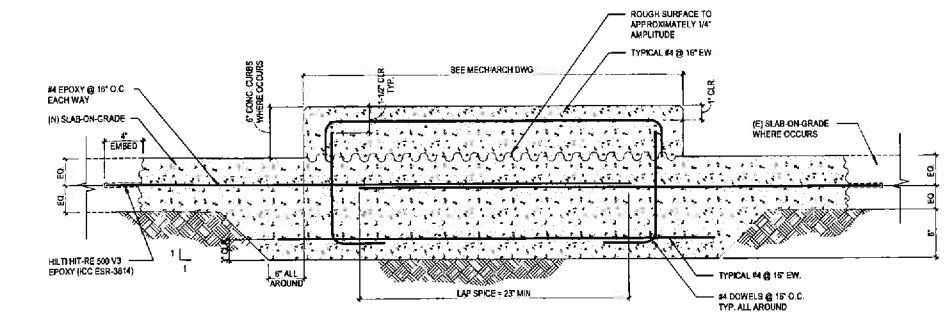
**BUILDING A AND B FLOOR PLANS - MPR**  
SCALE: 1/8" = 1'-0"



**MECH. ANCHORAGE AT CONC. CURB**  
SCALE: 3/4" = 1'-0"



**EXTERIOR WALL PENETRATION**  
SCALE: 1/2" = 1'-0"



**TYPICAL MECH. EQUIPMENT CONCRETE PAD AT (E) SLAB-ON-GRADE**  
SCALE: 1 1/2" = 1'-0"

*Handwritten notes:*  
A, B, C, D  
no L30

**REFERENCE KEYNOTES**

- KEYNOTES**
- D180 REMOVE (E) LADDER
  - N158 NEW MECHANICAL EQUIPMENT ON NEW 8" THK. TOP LEVEL ED CONCRETE PAD & PLACED 6" FROM EDGE OF PAD. SEE MECH DWGS.

**GENERAL ARCHITECTURAL NOTES**

1. ALL INTERIOR CMU WALLS SHALL REMAIN U N O
2. NOT USED
3. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILL WORK, WALL MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS WHERE OCCURS.
4. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
5. NOT USED
6. SCRUB GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL THOROUGHLY AROUND ALL PENETRATIONS.
7. MAINTAIN (E) BRICK BACKING FOR SUSPENDED CEILING OR AS SHOWN ON THE DRAWINGS.

**DEMOLITION GENERAL NOTES**

- DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.
- THE CONTRACTOR SHALL
- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PRECAUTIONS SHALL BE MADE FOR USER'S SAFETY.
  - B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
  - C. CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER A ONE-HOUR ENCLOSURE TO ISOLATE ANY DEMOLITION/CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER AND CODE OFFICIAL. HAVING JURISDICTION. COORDINATE LOCATIONS WITH THE OWNER AND MAINTAIN MEANS OF EGRESS THROUGHOUT THE WORK.
  - D. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
  - E. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
  - F. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILING, SOFFITS, MARKERBOARDS, AND OTHER ITEMS AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
  - G. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
  - H. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
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  - K. VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
  - L. PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM DEMOLITION OR RE-Routing OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS AS REQUIRED TO MAINTAIN FIRE-RATED ASSEMBLIES. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
  - M. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
  - N. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SPECIFICATIONS AND SCOPE OF WORK.
  - O. AVOID ANY DISTURBANCE OF SOILS WITHIN THE ZONE OF INFLUENCE AROUND EXISTING FOOTINGS AND FLOOR SLABS AS DIRECTED BY GEOTECHNICAL INSPECTOR.
  - P. NOT USED
  - Q. WHERE PLASTERED WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY SCRETTING ADJACENT PLASTER FINISH A MINIMUM OF 1/4" BEYOND DEMOLITION.

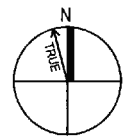
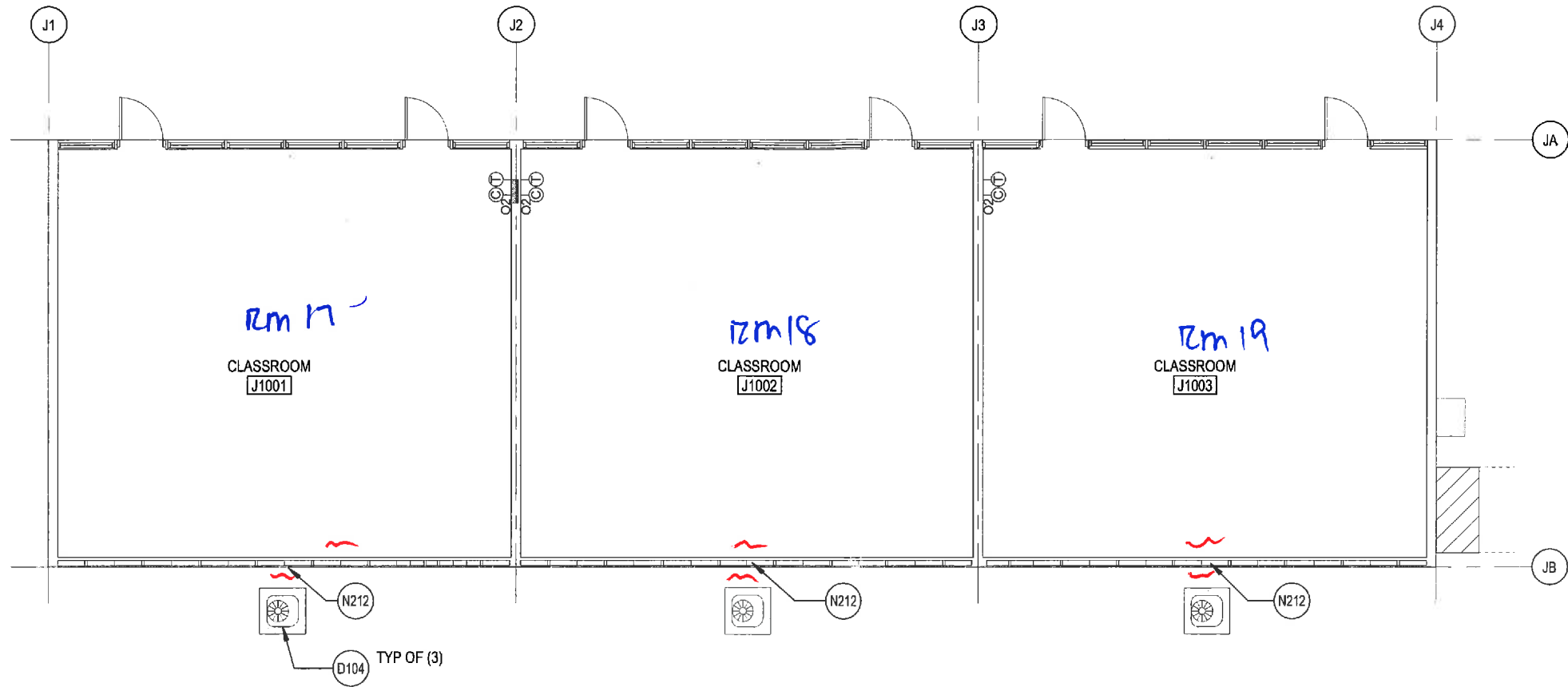


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COVID-19 COVINA VALLEY DISTRICT WIDE HVAC REPLACEMENT  
831 E. COVINA BLVD COVINA, CA 91722

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05/05/2022  
REVISIONS

75-22905  
DSA A003-122226  
DSA File #: 19-25  
**BUILDING B FLOOR PLANS**

**A1.1A**



**BUILDING J FLOOR PLANS**

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

~ Ribbed conduit

Handwritten diagram showing a square with vertices labeled A, B, C, and D.

**APPENDIX C – LEAD HAZARD EVALUATION REPORT**



### LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** 05/01-02/23

**Section 2 — Type of Lead Hazard Evaluation (Check one box only)**

Lead Inspection     Risk assessment     Clearance Inspection     Other (specify) \_\_\_\_\_

**Section 3 — Structure Where Lead Hazard Evaluation Was Conducted**

Address [number, street, apartment (if applicable)] <b>621 East Covina Blvd.</b>		City <b>Covina</b>	County <b>Los Angeles</b>	Zip Code <b>91722</b>
Construction date (year) of structure <b>N/A</b>	Type of structure <input type="checkbox"/> Multi-unit building <input checked="" type="checkbox"/> School or daycare <input type="checkbox"/> Single family dwelling <input type="checkbox"/> Other _____		Children living in structure? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

**Section 4 — Owner of Structure (if business/agency, list contact person)**

Name <b>Covina Valley USD (Brian Johnson)</b>		Telephone number <b>626-363-3875</b>		
Address [number, street, apartment (if applicable)] <b>519 East Badillo Street</b>		City <b>covina</b>	State <b>CA</b>	Zip Code <b>91723</b>

**Section 5 — Results of Lead Hazard Evaluation (check all that apply)**

No lead-based paint detected     Intact lead-based paint detected     Deteriorated lead-based paint detected  
 No lead hazards detected     Lead-contaminated dust found     Lead-contaminated soil found     Other \_\_\_\_\_

**Section 6 — Individual Conducting Lead Hazard Evaluation**

Name <b>Tim Galeana</b>		Telephone number <b>626-441-7050</b>		
Address [number, street, apartment (if applicable)] <b>310 East Foothill Blvd. Suite 200</b>		City <b>Arcadia</b>	State <b>CA</b>	Zip Code <b>91006</b>
CDPH certification number <b>LRC-0395</b>	Signature 		Date <b>05/17/2023</b>	

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

**Section 7 — Attachments**

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector  
 Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:  
 California Department of Public Health  
 Childhood Lead Poisoning Prevention Branch Reports  
 850 Marina Bay Parkway, Building P, Third Floor  
 Richmond, CA 94804-6403  
 Fax: (510) 620-5656

**APPENDIX D – XRF PERFORMANCE CHARACTERISTICS SHEET**

## Performance Characteristic Sheet

**EFFECTIVE DATE:** December 1, 2015

**MANUFACTURER AND MODEL:**

Make: *Heuresis*  
Models: *Model Pb200i*  
Source: *<sup>57</sup>Co, 5 mCi (nominal – new source)*

### FIELD OPERATION GUIDANCE

**OPERATING PARAMETERS:**

Action Level mode

**XRF CALIBRATION CHECK LIMITS:**

0.8 to 1.2 mg/cm <sup>2</sup> (inclusive)
---

**SUBSTRATE CORRECTION:**

Not applicable

**INCONCLUSIVE RANGE OR THRESHOLD:**

ACTION LEVEL MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

## BACKGROUND INFORMATION

### EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in November 2015, with two separate instruments running software version 2.1-2 in Action Level test mode. The actual source strength of each instrument on the day of testing was approximately 2.0 mCi; source ages were approximately one year.

### OPERATING PARAMETERS

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

### XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

### SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm<sup>2</sup> for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm<sup>2</sup> at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm<sup>2</sup>. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm<sup>2</sup> NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1\text{st} + 2\text{nd} + 3\text{rd} + 4\text{th} + 5\text{th} + 6\text{th Reading})/6 - 1.02 \text{ mg/cm}^2$$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

### EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below. Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

**TESTING TIMES:**

In the Action Level paint test mode, the instrument takes the longest time to complete readings close to the Federal standard of 1.0 mg/cm<sup>2</sup>. The table below shows the mean and standard deviation of actual reading times by reading level for paint samples during the November 2015 archive testing. The tested instruments reported readings to one decimal place. No significant differences in reading times by substrate were observed. These times apply only to instruments with the same source strength as those tested (2.0 mCi). Instruments with stronger sources will have shorter reading times and those with weaker sources, longer reading times, than those in the table.

<b>Mean and Standard Deviation of Reading Times in Action Level Mode by Reading Level</b>		
<b>Reading (mg/cm<sup>2</sup>)</b>	<b>Mean Reading Time (seconds)</b>	<b>Standard Deviation (seconds)</b>
< 0.7	3.48	0.47
0.7	7.29	1.92
0.8	13.95	1.78
0.9 – 1.2	15.25	0.66
1.3 – 1.4	6.08	2.50
≥ 1.5	3.32	0.05

**CLASSIFICATION OF RESULTS:**

XRF results are classified as **positive** if they are **greater than or equal** to the stated threshold for the instrument (1.0 mg/cm<sup>2</sup>), and *negative* if they are *less than* the threshold.

**DOCUMENTATION:**

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at <http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997>.

This XRF Performance Characteristic Sheet (PCS) was developed by QuanTech, Inc., under a contract with the XRF manufacturer.