



July 6, 2020

## ADDENDUM NO. 3

TO THE CONTRACT DOCUMENTS

**FOR**

DAVIDSON ELEMENTARY SCHOOL - SINGLE POINT ENTRY

**FOR THE**

SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT

777 North F Street

San Bernardino, CA 92410

DSA No. 04-118593

File No. 36-55

RCA Job No. 1-78-26

### **NOTICE TO BIDDERS**

This Addendum forms a part of the Contract and modifies the original documents DSA Approved on November 14, 2019. It is intended that all work affected by the following modifications shall conform with related provisions and general conditions of the contract of the original drawings and specifications. Modify the following items wherever appearing in any drawing or sections of the specifications. Acknowledge receipt of Addendum No. 3 in the space provided on the Bid Form. Failure to do so may subject bidder to disqualification.

### **GENERAL ITEMS**

- Item No. 3.1      General Items:
- 3.1.1      Hazardous Materials Inspection Report and Work Plan by EFI Global dated June 9, 2020 is available for bidder reference at <https://files.ruhnaclarke.com/public/7b17a5>. Contractor is to provide in its bid for abatement work identified in this report as a part of the bid for the project. This report issued on behalf of the San Bernardino City Unified School District has not been prepared by the Architect and as such we do not take responsibility or liability for the work described or required therein.

### **ATTACHMENTS**

None

**END OF ADDENDUM NO. 3**

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Roger Clarke, Principal

#C-21340

June 10, 2020

San Bernardino City Unified School District  
Facilities Management, Maintenance & Operations Department  
956 West 9<sup>th</sup> Street  
San Bernardino, CA 92411

**Subject:**            ***Limited Asbestos, Lead & Hazardous Materials Assessment Report, Rev. 02  
Davidson Elementary School  
2844 Davidson Avenue – San Bernardino, CA  
EFI Job Number: 045.02871***

## **1. Introduction**

The San Bernardino City Unified School District (referred to hereunder as the client) retained EFI Global to perform limited sampling of building materials suspected to contain asbestos and/or lead in addition to inventorying other hazardous materials and universal waste within the Main Office Area (i.e., Project Area). The Project Area includes the Principal's Office, the General Office Area / Clerk Area, a boy's restroom, a girl's restroom, staff restroom, and the main entry door area of the subject property, per the scope of work provided by the client in RFP 323.

The limited assessment was performed on May 6, 2020, by Heriberto Romero, a Cal/OSHA Certified Site Surveillance Technician (CSST, DOSH Cert No. 15-5572) and California Department of Health (CDPH) Lead Sampling Technician (LST, Cert. No. LRC-00002172), working under the supervision of Benjamin Curry, a DOSH Certified Asbestos Consultant (CAC, DOSH Cert No. 09-4549) and CDPH Lead Inspector / Assessor (LIA, Cert. No. LRC-00000208).

## **2. Asbestos Assessment**

The purpose of this assessment was to conduct bulk sampling in order to determine the presence or absence of Asbestos Containing Material (ACM) within the Project Area only. The scope of this assessment included a review of provided building records and/or previous investigation records, visually identifying homogeneous sample areas, collecting bulk samples from building materials suspected to contain asbestos (i.e., suspect building materials), recording the friability and condition of suspect building materials, interpreting the laboratory results, and producing a written report of findings and recommendations. EFI requested, but was not provided any documentation detailing previous asbestos investigation within the Project Area.

The sampling was performed in accordance with requirements of the following regulations:

- Asbestos Hazard Emergency Response Act (AHERA); 40 CFR 763 Subpart E
- Asbestos School Hazard Abatement Reauthorization Act (ASHARA); Section 206 of the Toxic Substance Control Act
- National Emissions Standards for Hazardous Air Pollutants (NESHAPS); 40 CFR 61 Subpart M.
- South Coast Air Quality Management District (SCAQMD) Rule 1403

This report is a record of activities performed, observations made, analytical results obtained, and recommendations to date.

## 2.1 Asbestos Results Summary

A total of 16 suspect materials were identified and sampled during this survey. The laboratory results indicate that one (1) of the materials sampled contains asbestos above the threshold limit of 1%, and is to be treated and disposed of as ACM. This material includes:

- Carpet Adhesive – Principal's Office (2% Chrysotile), samples: 2A-2C

The above material was found to be in good condition at the time of the assessment. Each of the other 15 building materials sampled during this assessment were found to be None Detected for asbestos content. Please refer to Table 1 for a list of ACM / ACCM Homogenous Materials, their locations, and approximate quantities. Analytical data can be found in Appendix II.

## 2.2 Methodology

All samples were collected using a clean knife, chisel or the appropriate tools. Each sample was extracted carefully so as not to disturb adjacent materials while still penetrating through all layers of the material sampled. Each sample was sealed in the appropriately sized plastic baggie and the bag then labeled with a unique identification number. The sample number, description and location were then recorded on a log and plotted on a floor plan of the structure or area. Sampling tools were cleaned after collecting each sample. Any excess dust or debris from the sample location was cleaned using a moistened cloth. Whenever possible, samples were collected from previously damaged portions of the material in order to minimize damage to the material.

A total of 43 samples were submitted to LA Testing in Huntington Beach, California. LA Testing is accredited under the NIST/NVLAP program for asbestos in bulk material by polarized light microscopy (PLM) and the State of California for asbestos analysis; NIST/NVLAP lab code 101384-0, California ELAP Certificate No. 1406.

The analyses of the samples in this report were performed using PLM in accordance with EPA method 600/R-93/116. The phase abundances provided are visually estimated and expressed as percent area. Total percentage of sample constituents may total greater than 100 due to trace amounts. The limit of detection for this analytical method is less than one percent. In multilayer samples, unless otherwise specified, the asbestos concentration is reported for the layer where asbestos is found. These results lie within the statistical limits of variability calculated for standard reference samples routinely analyzed in the laboratory. On a per sample basis, the accuracy and precision of the results depend on the type of sample and its asbestos content.

## 2.3 Regulatory Limits

Government agencies have promulgated different regulatory threshold levels to classify materials containing asbestos. The levels of asbestos content and the terms used to classify them differ. Listed below are the current regulatory agencies that have defined materials containing asbestos, along with the respective action levels, regulatory terminology and applicability:

Agency / Regulation	Regulatory Code	Action Level (% Weight)	Terminology	Applicability
Cal/OSHA	8 CCR Section 341.6(c)	> 0.1%	Asbestos-Containing Construction Material (ACCM)	Removal Work in California
Fed OSHA	29 CFR Section 1926.1101(b)	> 1.0%	Asbestos-Containing Material (ACM)	Removal Work in United States
NESHAP	40 CFR Part 61, Subpart M	> 1.0% and Friable	Regulated Asbestos-Containing Material (RACM)	Transport and Disposal of Waste in United States
SCAQMD	RULE 1403	>1.0%	Asbestos-Containing Material (ACM)	Removal Work, Transport and Disposal of Waste in SCAQMD District

## 2.4 Homogeneous Sample Materials Table

Homogeneous materials are defined as surfacing materials, thermal system insulation (TSI), or miscellaneous materials that are uniform in color and texture. Homogenous sample areas are the areas where homogenous materials are located. Multiple sample locations are selected within each homogenous sample area so as to be a true representation of each homogenous material. Typically, a minimum of three (3) samples must be collected from each homogeneous area when sampling materials that may have variable asbestos content because it was batch mixed or applied by different contractors. High asbestos content variability is especially true of surfacing materials (sprayed-on and troweled on materials like plaster, fireproofing, and acoustic ceiling plaster) and thermal system insulation (TSI) used to insulate pipes, boilers, tanks or ducts to prevent heat loss. As many as 9 samples may be collected of surfacing materials when they cover large surface areas.

It should be noted that materials that appear to be homogeneous may in fact be different materials, installed at different times and have different material content in terms of asbestos; only laboratory testing can determine whether they are really the same homogeneous area. Table 1 presents the homogenous materials identified during the assessment and the asbestos content of those identified materials. The homogenous materials found to contain asbestos are listed in bold type. The homogenous materials found to contain asbestos are listed in **bold** type with ACM highlighted in **yellow**.

**Table 1: Homogenous Building Materials & Asbestos Content**

Homogenous Materials Number	Material Description	Location	Asbestos Content (% Weight)	Material Quantity *	Friability **	Condition
1	Textured Plaster Wall System	Principal's Office Office Area Boy's Restroom Entry Girl's Restroom Entry	None Detected	---	---	---
2	<b>Carpet Adhesives</b>	<b>Principal's Office Office Area</b>	<b>2% Chrysotile</b>	<b>625</b>	<b>Non-Friable</b>	<b>Good</b>

Homogenous Materials Number	Material Description	Location	Asbestos Content (% Weight)	Material Quantity *	Friability **	Condition
3	Cove base & Adhesives	Principal's Office Office Area	None Detected	---	---	---
4	1"x1" Green Speck Ceramic Floor Tile & grout	Staff Restroom	None Detected	---	---	---
5	4"x4" Yellow Ceramic Wall Tile & grout	Staff Restroom	None Detected	---	---	---
6	6"x6" Green Ceramic Wall Tile & grout	Staff Restroom	None Detected	---	---	---
7	4"x4" Green Ceramic Wall Tile & grout	Boy's Restroom	None Detected	---	---	---
8	4"x4" Gray Ceramic Wall Tile & grout	Boy's Restroom	None Detected	---	---	---
9	4"x4" White Ceramic Wall Tile & grout	Girl's Restroom	None Detected	---	---	---
10	4"x4" Red Ceramic Wall Tile & grout	Girl's Restroom	None Detected	---	---	---
11	2"x2" Gray Floor Tile & grout	Girl's Restroom	None Detected	---	---	---
12	Door Frame Putty	Boy's Restroom	None Detected	---	---	---
13	Plaster Wall System	Boy's Restroom Girl's Restroom	None Detected	---	---	---
14	Drywall & Joint Compound (Ceilings)	Girl's Restroom Boy's Restroom	None Detected	---	---	---
15	2'x4' Ceiling Tiles	Office Area Principal's Office	None Detected	---	---	---
16	Stucco & Finish Coat	Exterior	None Detected	---	---	---

\* All quantities are approximations and should be verified by an abatement contractor.

\*\* Non-friable materials may be rendered friable during removal by mechanical or other aggressive methods.

## 2.5 Asbestos Recommendations

If materials found to contain asbestos and/or presumed to contain asbestos may be impacted during renovation or demolition activities, by law, they must first be abated and properly disposed of by a licensed asbestos abatement contractor prior to such work. Contractors are licensed for asbestos-related work by the California Department of Industrial Relations (DIR) Department of Occupational Safety and Health (DOSH). A list of contractors with current licenses may be found at:

<https://www.dir.ca.gov/databases/doshacru/acrusearch.html>.

Any suspect materials, that are not identified above and may be impacted during work activities, must be presumed to contain asbestos until laboratory analysis of an adequate number of samples proves otherwise.

It is highly recommended that abatement monitoring be performed by the asbestos consultant if asbestos abatement is to be performed while non-abatement persons (employees, tenants, other building occupants, or general public) are present in adjacent areas. Abatement monitoring includes the collection of air samples in adjacent areas to demonstrate that asbestos fibers are not migrating out of the regulated areas. In addition to air sampling, the monitoring includes oversight of the abatement contractor to ensure that the work is being conducted in compliance with all applicable regulations and in accordance with the scope of work and abatement specifications. Such abatement monitoring services can reduce risk and limit the legal liabilities of the building owner.

### 3. Lead-Based Paint Assessment

A total of 17 paint chip samples were collected from the subject property for Flame Atomic Absorption analysis to evaluate for lead-based paint (LBP). The results are summarized in Section 3.1 and the analysis results and chain of custody are attached in Appendix III.

#### 3.1 Lead Results Summary

No painted components were found to contain lead concentrations above the regulatory threshold to be considered lead-based paint (LBP). The following painted components were found to contain lead concentrations below the regulatory level to be considered LBP, but above the detection limit of the laboratory analysis, and should be considered lead containing materials (LCM):

- **4"x4" Yellow Ceramic Wall Tiles – Staff Restroom – 270 mg/kg**
- **2"x4" Green Ceramic Wall Tiles – Staff Restroom – 560 mg/kg**
- **4"x4" Yellow Ceramic Wall Tiles – Staff Restroom – 270 mg/kg**
- **2"x4" Green Ceramic Wall Tiles – Staff Restroom – 560 mg/kg**
- **Blue Paint on Door – Staff Restroom - 0.34% by weight**
- **Blue Paint on Door Frame – Staff Restroom - 0.067% by weight**
- **White Paint on Walls – Office Area - 0.41% by weight**
- **Green Paint on Walls – Storage Room - 0.18% by weight**
- **Beige Paint on Walls – Boy's Restroom - 0.14% by weight**
- **White Paint on Walls – Girl's Restroom - 0.15% by weight**

Sampling for this inspection was representative and any components that were not tested but similar to those components that tested positive for LBP or LCM shall be considered and treated as lead laden.

None of the other painted components sampled are at or above the respective levels considered to be lead-based paint (LBP); however, paint may contain detectable levels of lead in the coatings which make work impacting those surfaces subject to the Cal / OSHA Lead in Construction Standard (Title 8 CCR 1532.1).

#### 3.2 Methodology

All paint chip samples were collected using a clean knife, chisel or the appropriate tools. Each sample was extracted carefully so as not to disturb adjacent materials while still penetrating through all layers of the surface coating sampled. Each sample was sealed in the appropriately sized plastic zip lock bag and the bag then labeled

with a unique identification number. The sample number, description and location were then recorded on a log and plotted on a floor plan of the Project Area. Sampling tools were cleaned after collecting each sample. Any excess dust or debris from the sample location was cleaned using a moistened cloth. Whenever possible, samples were collected from previously damaged portions of the material in order to minimize damage to the material.

### 3.3 Regulatory Limits

Government agencies have promulgated different regulatory threshold levels to classify Lead-Based Paint. Some of the established “levels” are quantified in different units of measurement. Listed below are the current regulatory agencies that have defined LBP, along with the respective action level:

<u>Agency</u>	<u>Ordinance #</u>	<u>Action level (mg / cm<sup>2</sup>)</u>	<u>Action level (ppm)</u>
<b>HUD / EPA</b>	24 CFR 35.86 & 40 CFR 745.103	1.0 mg / cm <sup>2</sup>	5,000 ppm
<b>L.A. County</b>	Title 11, 11.28.010	0.7 mg / cm <sup>2</sup>	Not Specified
<b>OSHA / CAL OSHA</b>	29 CFR 1926.62 & Title 8, 1532.1	Not Specified	600 ppm

The Federal threshold for lead-based paint, 0.5 percent by weight, is higher than the local Los Angeles County action level and the lower of the two thresholds is the one that everyone within Los Angeles County must adhere to. In recognition of the various action levels the testing results are classified as follows for this report:

For purposes of this survey, any material containing any detectable level of lead is subject to OSHA’s Lead Exposure in Construction Rule (29 CFR Part 1926) and Cal/OSHA Lead in Construction Standard (Title 8 CCR 1532.1). Any work that impacts these materials must be performed in accordance with these and any other applicable standards.

### 3.4 Lead Recommendations

Paint found not to contain lead concentrations considered to be LBP may still contain detectable levels of lead, which makes the work impacting those surfaces subject to the Cal/OSHA Lead in Construction Standard 1532.1. This standard requires that respiratory protection and containment is used when performing “trigger tasks” until results of personal air monitoring indicate that workers are not exposed to lead above the action level or permissible exposure level. Additionally, the demolition or removal of lead or components with lead coatings is subject to Title 17, Division 1, Chapter 8 of the California Code of Regulations.

Should the contractor choose not to remove the lead-based paint materials and demolish the structure in its entirety with the lead-paint components in place, it is recommended that the contractor stabilize the LBP components prior to demolition and then collect samples representative of the entire mass of the prospective waste stream. These samples should then be analyzed according to the United States Environmental Protection Agency (EPA) and the California Department of Toxic Substances Control (DTSC) prior to disposal facility acceptance.

### 4.0 Hazardous / Universal Waste

The purpose of this assessment was to perform an inspection and develop an inventory of light ballasts, PCB-suspect transformers and switchgear, any mercury containing electrical switches, compact fluorescent light bulbs and thermostats, and any other universal hazardous materials present within the Project Area.

## 4.1 Results

### Fluorescent Light Ballasts

Fluorescent light ballasts that contain PCBs are considered hazardous and are regulated by the California EPA DTSC. Ballasts manufactured prior to January 1, 1978, and that are not labeled “No PCBs” must be considered PCB containing unless testing proves otherwise.

EFI Global inspected select fluorescent light ballasts present within the Project Area. Each ballast observed had labels specifying that the ballasts contain “No PCBs”. If during any future renovation/demolition activities, fluorescent light ballasts devoid of the “No PCBs” labeling are encountered they must be disposed of as PCB containing unless tested to establish otherwise in accordance with Title 22, division 4.5 of the CCR “Universal Waste Rule.

### Fluorescent Light Bulbs

All fluorescent lights contain varying amounts of mercury. The U.S. Environmental Protection Agency (EPA) has tested fluorescent light bulbs for mercury based on the Toxicity Characteristic Leaching Procedure (TCLP). Each of the fluorescent light bulbs inspected by EFI showed markings with the “Hg” stamp.

### Mercury Containing Thermostats

No mercury containing thermostats or switches were observed.

### High Intensity Discharge (HID) Lamps

No HID Lamps were observed within the Project Area.

### Emergency Exit Signs

All emergency exit signs were labeled as being powered with LED lights and are therefore non-hazardous.

### PCB Containing Transformers

No transformers were observed.

### Other Hazardous Materials

No other hazardous materials were identified in the Project Area.

## 4.2 Recommendations

All fluorescent light bulbs located throughout the building should be removed, disposed of or recycled as Mercury containing waste. All light tubes should be handled and containerized properly, in a manner to prevent breaking and potentially releasing mercury.

California does not permit disposal of mercury containing light fixtures in landfills. Recycling information and schedules provided by the EPA and the Los Angeles Department of Public Works can be obtained online via the following websites:



- <http://www.epa.gov/bulbrecycling>
- <http://ladpw.org/epd/hhw/schedule.cfm>.

Of the random inspection performed, all ballasts were marked with the “No PCB” designation on the label. The removal and disposal of the ballasts that are not labeled to contain “No PCB” should follow all regulations outlined in the Toxic Substance Control Act (TSCA). Based on the amount of ballasts being removed and disposed of, the disposal of the ballasts may fall under the Small Capacitor Disposal Rule, which indicated that small amounts of “non-leaking” PCB ballasts may be disposed of in permitted landfills. However, if the ballasts are, at the time of removal and disposal leaking, the ballasts have to be disposed of as regulated PCB waste.

All electrical transformers should be disposed of by the contractor following all applicable regulations.

## 5.0 Limitations

The inspection and testing report is based on the condition of the subject property existing and apparent on the precise time and exact date of the inspection. Not all conditions may be apparent on the inspection and testing date due to weather conditions, inoperable systems, inaccessibility of areas of the subject property, or for other reasons.

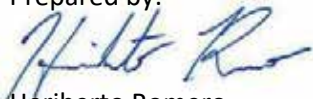
EFI Global has prepared this report for the exclusive use of its client. EFI Global, in performing its professional services, has applied scientific judgment that it believes is consistent with industry standards. EFI Global inspected structures and/or contents in a good faith effort to observe pertinent detail. Due to the limitations of time, access, and other variables, certain details may have been overlooked. EFI Global has relied in good faith upon the information and representations of others in the preparation of this report and the opinions expressed herein. Accordingly, EFI Global accepts no responsibility for deficiencies, omissions, misrepresentations, or fraudulent acts of persons interviewed.

EFI Global assumes no liability for any loss, injury, claim, or damage arising directly or indirectly from any use or reliance on this report or the opinions expressed herein. EFI Global makes no warranty, express or implied. This report is limited only to the samples taken and locations sampled. Additional sampling may be needed to further identify other pollutants or asbestos affected areas inside the property.

Since destructive investigation was not performed during the survey, the report may not reveal concealed asbestos-containing materials. Subsequently, additional investigation including construction documents review and/or destructive investigation is recommended as a precaution to prevent accidental exposure when construction or demolition is planned for this facility.

Thank you for the opportunity to work with you on this project. Please contact the undersigned at (310) 854-6300, if you have questions or if additional services are necessary.

Prepared by:



Heriberto Romero

DOSH Certified Site Surveillance Technician No.15-5572

CDPH Certifies Lead Sampling Technician No. LRC-00002172

Reviewed by:



Michael Pinkerton  
CDPH Certified Lead Inspector/Assessor No. LRC-00003397

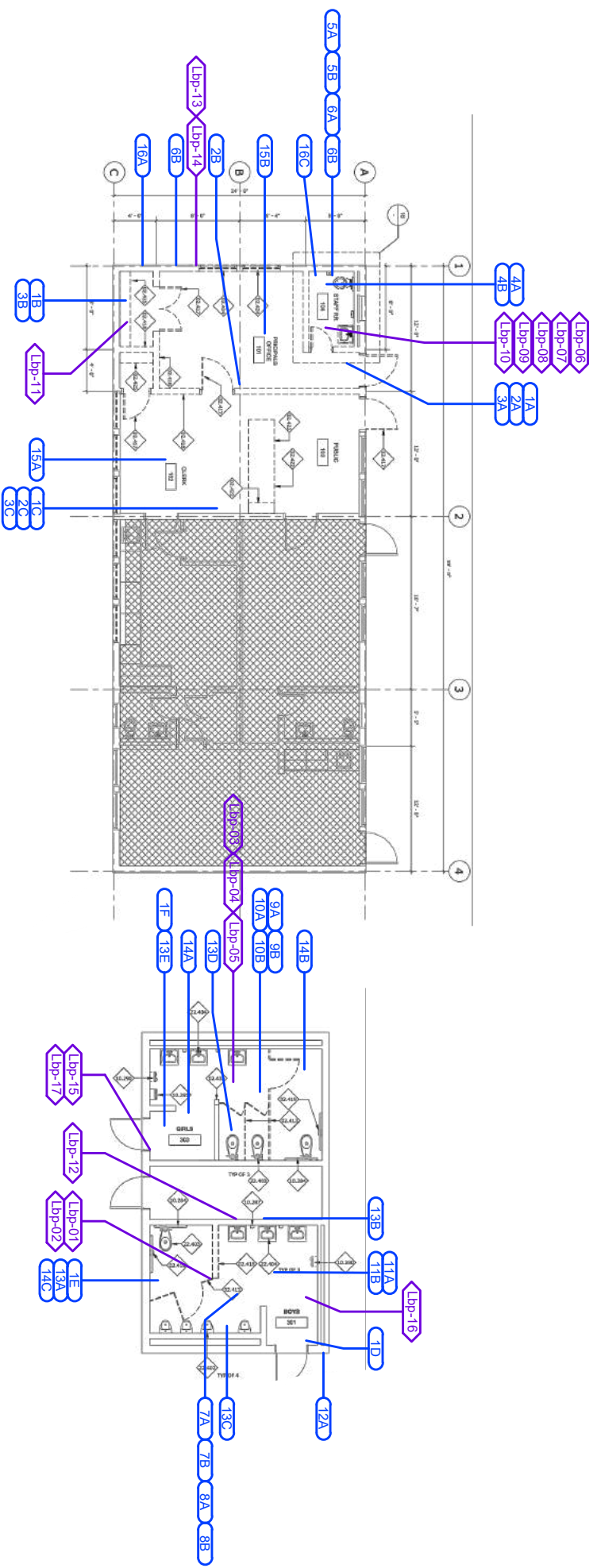


Brent Weisbrod  
DOSH Certified Asbestos Consultant No. 14-5186

APPENDICES:

- I. Site Diagrams
- II. Asbestos Analysis Results and Chains of Custody
- III. Lead Paint Chip Analysis Results and Chains of Custody
- IV. Personnel Certifications

**APPENDIX I**  
**Site Diagram**



**APPENDIX II**  
**Asbestos Analysis Results and Chain of Custody**



# LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / [gardengrovelab@lateesting.com](mailto:gardengrovelab@lateesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

**Attention:** Mike Pinkerton  
EFI Global, Inc.  
5261 West Imperial Highway  
Los Angeles, CA 90045

**Phone:** (310) 382-4482

**Fax:**

**Received Date:** 05/07/2020 3:30 PM

**Analysis Date:** 05/12/2020

**Collected Date:** 05/06/2020

**Project:** 045.02871 SBCUSD: Davidson

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

Sample	Description	Appearance	Non-Asbestos		Asbestos % Type
			% Fibrous	% Non-Fibrous	
1A-Skim Coat 332008538-0001	Principals office- hall W - plaster wall systems (textured)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1A-Plaster 332008538-0001A	Principals office- hall W - plaster wall systems (textured)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1B-Skim Coat 332008538-0002	Principals office- closet SE - plaster wall systems (textured)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1B-Plaster 332008538-0002A	Principals office- closet SE - plaster wall systems (textured)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1C-Skim Coat 332008538-0003	Clerk area N - plaster wall systems (textured)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1C-Plaster 332008538-0003A	Clerk area N - plaster wall systems (textured)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1D 332008538-0004	Boys restroom- W entrance ceiling - plaster wall systems (textured)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1E 332008538-0005	Boys restroom- E entrance ceiling - plaster wall systems (textured)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2A-Carpet Adhesive 1 332008538-0006	Principals office- under striped carpet hall W - carpet adhesives	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2A-Carpet Adhesive 2 332008538-0006A	Principals office- under striped carpet hall W - carpet adhesives	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2A-Carpet Adhesive 3 332008538-0006B	Principals office- under striped carpet hall W - carpet adhesives	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
2B-Carpet Adhesive 1 332008538-0007	Principals office- under striped carpet closet SE - carpet adhesives	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2B-Carpet Adhesive 2 332008538-0007A	Principals office- under striped carpet closet SE - carpet adhesives	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/12/2020 17:58:06



# LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / [gardengrovelab@lateesting.com](mailto:gardengrovelab@lateesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2C-Carpet Adhesive 1 332008538-0008	Clerk area- N - carpet adhesives	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2C-Carpet Adhesive 2 332008538-0008A	Clerk area- N - carpet adhesives	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
3A-Cove Base 332008538-0009	Principals office- hall W - covebase adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3A-Adhesive 1 332008538-0009A	Principals office- hall W - covebase adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3A-Adhesive 2 332008538-0009B	Principals office- hall W - covebase adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3B-Cove Base 332008538-0010	Principals office- closet area SE - covebase adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3B-Adhesive 332008538-0010A	Principals office- closet area SE - covebase adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3C-Cove Base 332008538-0011	Clerk area- N - covebase adhesive	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3C-Adhesive 332008538-0011A	Clerk area- N - covebase adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1F 332008538-0012	Girls restroom E entrance ceiling - plaster wall system	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4A-Floor Tile 332008538-0013	Staff restroom - N - floor tile (green speck) 1x1	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4A-Grout 332008538-0013A	Staff restroom - N - floor tile (green speck) 1x1	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4A-Mortar 332008538-0013B	Staff restroom - N - floor tile (green speck) 1x1	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4B-Floor Tile 332008538-0014	Staff restroom - NW - floor tile (green speck) 1x1	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4B-Grout 332008538-0014A	Staff restroom - NW - floor tile (green speck) 1x1	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4B-Mortar 332008538-0014B	Staff restroom - NW - floor tile (green speck) 1x1	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5A-Wall Tile 332008538-0015	Staff restroom - N - wall tile (yellow 4x4)	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5A-Grout 332008538-0015A	Staff restroom - N - wall tile (yellow 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5A-Mortar 332008538-0015B	Staff restroom - N - wall tile (yellow 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/12/2020 17:58:06



# LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / [gardengrovelab@lateesting.com](mailto:gardengrovelab@lateesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos % Type
			% Fibrous	% Non-Fibrous	
5B-Wall Tile 332008538-0016	Staff restroom - NW - wall tile (yellow 4x4)	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5B-Grout 332008538-0016A	Staff restroom - NW - wall tile (yellow 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5B-Mortar 332008538-0016B	Staff restroom - NW - wall tile (yellow 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6A-Wall Tile 332008538-0017	Staff restroom - N - wall tile (green 6x6)	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6A-Grout 332008538-0017A	Staff restroom - N - wall tile (green 6x6)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6A-Mortar 332008538-0017B	Staff restroom - N - wall tile (green 6x6)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6B-Wall Tile 332008538-0018	Staff restroom - NW - wall tile (green 6x6)	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6B-Grout 332008538-0018A	Staff restroom - NW - wall tile (green 6x6)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6B-Mortar 332008538-0018B	Staff restroom - NW - wall tile (green 6x6)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7A-Wall Tile 332008538-0019	Boys restroom - E - wall tile (green 4x4)	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7A-Grout 332008538-0019A	Boys restroom - E - wall tile (green 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7B-Wall Tile 332008538-0020	Boys restroom - W - wall tile (green 4x4)	Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7B-Grout 332008538-0020A	Boys restroom - W - wall tile (green 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8A-Wall Tile 332008538-0021	Boys restroom - E - wall tile (gray 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8A-Grout 332008538-0021A	Boys restroom - E - wall tile (gray 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8A-Mortar 332008538-0021B	Boys restroom - E - wall tile (gray 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8B-Wall Tile 332008538-0022	Boys restroom - W - wall tile (gray 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8B-Grout 332008538-0022A	Boys restroom - W - wall tile (gray 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8B-Mortar 332008538-0022B	Boys restroom - W - wall tile (gray 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/12/2020 17:58:06





# LA Testing

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / [gardengrovelab@lateesting.com](mailto:gardengrovelab@lateesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9A-Wall Tile 332008538-0023	Girls restroom - N - wall tile (white 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9A-Grout 332008538-0023A	Girls restroom - N - wall tile (white 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9B-Wall Tile 332008538-0024	Girls restroom - S - wall tile (white 4x4)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9B-Grout 332008538-0024A	Girls restroom - S - wall tile (white 4x4)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A-Wall Tile 332008538-0025	Girls restroom - N - wall tile (red 4x4)	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10A-Grout 332008538-0025A	Girls restroom - N - wall tile (red 4x4)	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10B-Wall Tile 332008538-0026	Girls restroom - S - wall tile (red 4x4)	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10B-Grout 332008538-0026A	Girls restroom - S - wall tile (red 4x4)	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A-Floor Tile 332008538-0027	Girls restroom - W - floor tile (gray 2x2)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A-Grout 332008538-0027A	Girls restroom - W - floor tile (gray 2x2)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11A-Mortar 332008538-0027B	Girls restroom - W - floor tile (gray 2x2)	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B-Floor Tile 332008538-0028	Boys restroom- S - floor tile (gray 2x2)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B-Grout 332008538-0028A	Boys restroom- S - floor tile (gray 2x2)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11B-Mortar 332008538-0028B	Boys restroom- S - floor tile (gray 2x2)	Gray/Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12A 332008538-0029	Boys restroom- S - door frame putty	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12B 332008538-0030	Girls restroom - W - door frame putty	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A-Skim Coat 332008538-0031	Boys restroom- S - plaster wall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13A-Plaster 332008538-0031A	Boys restroom- S - plaster wall system	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13B-Skim Coat 332008538-0032	Boys restroom- SW - plaster wall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/12/2020 17:58:06



# LA Testing

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<http://www.LATesting.com> / [gardengrovelab@lateesting.com](mailto:gardengrovelab@lateesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
13B-Plaster 332008538-0032A	Boys restroom- SW - plaster wall system	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13C-Skim Coat 332008538-0033	Boys restroom- E - plaster wall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13C-Plaster 332008538-0033A	Boys restroom- E - plaster wall system	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13D-Skim Coat 332008538-0034	Girls restroom- E - plaster wall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13D-Plaster 332008538-0034A	Girls restroom- E - plaster wall system	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13E-Skim Coat 332008538-0035	Girls restroom- S - plaster wall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13E-Plaster 332008538-0035A	Girls restroom- S - plaster wall system	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A-Joint Compound 332008538-0036	Girls restroom ceiling - S - drywall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A-Drywall 332008538-0036A	Girls restroom ceiling - S - drywall system	Brown/White Fibrous Heterogeneous	5% Cellulose 3% Glass	92% Non-fibrous (Other)	None Detected
14B-Joint Compound 332008538-0037	Girls restroom ceiling - N - drywall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14B-Drywall 332008538-0037A	Girls restroom ceiling - N - drywall system	Brown/White Fibrous Heterogeneous	5% Cellulose 4% Glass	91% Non-fibrous (Other)	None Detected
14C-Joint Compound 332008538-0038	Boys restroom ceiling- S - drywall system	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14C-Drywall 332008538-0038A	Boys restroom ceiling- S - drywall system	Brown/White Fibrous Heterogeneous	5% Cellulose 4% Glass	91% Non-fibrous (Other)	None Detected
15A 332008538-0039	Clerk area- E - ceiling tile 24x48	White/Yellow Fibrous Heterogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
15B 332008538-0040	Principals office-center - ceiling tile 24x48	White/Yellow Fibrous Heterogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
16A-Finish Coat 332008538-0041	Principals office exterior- SE - stucco	White/Beige Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
16A-Stucco 332008538-0041A	Principals office exterior- SE - stucco	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16B 332008538-0042	Principals office exterior- center - stucco	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16C 332008538-0043	Principals office exterior- W - stucco	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 05/12/2020 17:58:06



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<http://www.LATesting.com> / [gardengrovelab@latesting.com](mailto:gardengrovelab@latesting.com)

LA Testing Order: 332008538

Customer ID: 32ANDE85

Customer PO:

Project ID:

Analyst(s)

Alexis Rodriguez (89)

Michael DeCavallas, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by LA Testing Huntington Beach, CA NVLAP Lab Code 101384-0, CA ELAP 1406

Initial report from: 05/12/2020 17:58:06

# 332008538



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Laboratory

Chain of Custody

 Turn Around Time - (Circle)  
 \*Please select based on  
 laboratory being used

 3hr 6hr 24hr 48hr  
 Standard

72hr

EFI Global Project No.:	Project Name:	Sampling By:	Number of Samples:	Date(s) Collected:	Page No.:	Total Pages
045.02871	SBCUSD Davidson	Heriberto Romero	43	5/6/2020	1	5

Sample No.:	Sample Location & Comments	Start Flow Rate End Flow Rate	Start Time Stop Time	Total Volume Area/SOFT	Type of Analysis Sample Serial Number
	Please	%RH: Temp:			Analysis Type: Serial No.: PCM
	See	%RH: Temp:			Analysis Type: Serial No.: Bulk
	Attached	%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
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		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:

Relinquished By (Print & Sign) (Date & Time)	Received By (Print & Sign) (Date & Time)
Heriberto Romero <i>Heriberto Romero</i> 5/6/2020	<i>AE(w)</i> 5/7/20 1530
Relinquished By (Print & Sign) (Date & Time)	Received By (Print & Sign) (Date & Time)

Special Instructions:	Stop Positive:	E-mail to Additional Party:
	Yes No	Heriberto.Romero@EFIGLOBAL.COM <i>Michael Pinkerton</i>

5261 West Imperial Hwy Los Angeles, CA 90045, Ph (310) 854-6300, Fax (310) 854-0199





#332008538

## ASBESTOS FIELD BULK SAMPLE TABLE

PROJECT NUMBER: \_\_\_\_\_ PROJECT NAME: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_ DATE: \_\_\_\_\_ COMPLETED BY: H.R. \_\_\_\_\_

SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE LOCATION	APPROX. SQUARE FOOTAGE	CONDITION	HOMOGENEOUS APPLICATION
1 A	Plaster wall Systems (textured)	Principals office - Hall - w		F / NF G D SD	S / TSI / MISC
B		- Closet SE		F / NF G D SD	S / TSI / MISC
C		Clerk Area - SE N		F / NF G D SD	S / TSI / MISC
D		Boys Restroom - NW		F / NF G D SD	S / TSI / MISC
E		Entrance Ceiling - E		F / NF G D SD	S / TSI / MISC
2 A	Carpet Adhesives	Principals office - Carpet	650	F / NF G D SD	S / TSI / MISC
B		Closest SE		F / NF G D SD	S / TSI / MISC
C		Clerk area - N		F / NF G D SD	S / TSI / MISC
3 A	Covebase Adhesive	Principals office - Hall - w	50	F / NF G D SD	S / TSI / MISC
B		Closest - SE		F / NF G D SD	S / TSI / MISC
C		Clerk Area - N		F / NF G D SD	S / TSI / MISC
F	Plaster wall system	Girls Restroom - E (Entrance Ceiling)		F / NF G D SD	S / TSI / MISC



#332008538

## ASBESTOS FIELD BULK SAMPLE TABLE

PROJECT NUMBER: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_

DATE: \_\_\_\_\_

COMPLETED BY: H.R. \_\_\_\_\_

SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE LOCATION	APPROX. SQUARE FOOTAGE	CONDITION	HOMOGENEOUS APPLICATION
4A	Floor Tile (Green Speck)	Staff Restroom	48	F / NF G D SD	S / TSI / MISC
↓ B	↓	- NW		F / NF G D SD	S / TSI / MISC
5A	Wall Tile (Yellow)	- N	150	F / NF G D SD	S / TSI / MISC
↓ B	↓	- NW		F / NF G D SD	S / TSI / MISC
6A	(Green)	- N	150	F / NF G D SD	S / TSI / MISC
↓ B	↓	- NW		F / NF G D SD	S / TSI / MISC
7A	(Green 4x4)	Boys Restroom	35	F / NF G D SD	S / TSI / MISC
↓ B	↓	- W		F / NF G D SD	S / TSI / MISC
8A	(Gray 4x4)	- E	500	F / NF G D SD	S / TSI / MISC
↓ B	↓	- W		F / NF G D SD	S / TSI / MISC
9A	(White 4x4)	Girls Restroom - N	500	F / NF G D SD	S / TSI / MISC
↓ B	↓	- S		F / NF G D SD	S / TSI / MISC



efi global

#332008538

## ASBESTOS FIELD BULK SAMPLE TABLE

PROJECT NUMBER: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_

DATE: \_\_\_\_\_

COMPLETED BY: H.R. \_\_\_\_\_

SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE LOCATION	APPROX. SQUARE FOOTAGE	CONDITION	HOMOGENEOUS APPLICATION
10A	Wall Tile (Red 4x4)	Girls Restroom - N	35	F / NF G D SD	S / TSI / MISC
↓ B	↓	↓	↓	F / NF G D SD	S / TSI / MISC
11A	Floor Tile (Gray 2x2)	↓	850	F / NF G D SD	S / TSI / MISC
↓ B	↓	Boys Restroom - S		F / NF G D SD	S / TSI / MISC
12A	Door frame Putty	↓		F / NF G D SD	S / TSI / MISC
↓ B	↓	Girls Restroom - W		F / NF G D SD	S / TSI / MISC
13A	Plaster Wall System	↓		F / NF G D SD	S / TSI / MISC
↓ B	↓	Boys Restroom - S		F / NF G D SD	S / TSI / MISC
↓ C	↓	↓		F / NF G D SD	S / TSI / MISC
↓ D	↓	Girls Restroom - E		F / NF G D SD	S / TSI / MISC
↓ E	↓	↓		F / NF G D SD	S / TSI / MISC





#332008538

## ASBESTOS FIELD BULK SAMPLE TABLE

PROJECT NUMBER: \_\_\_\_\_ PROJECT NAME: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_ DATE: \_\_\_\_\_ COMPLETED BY: H.R. \_\_\_\_\_

SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE LOCATION	APPROX. SQUARE FOOTAGE	CONDITION	HOMOGENEOUS APPLICATION
14A	Drywall System	Girls Restroom Ceiling - S		F / NF G D SD	S / TSI / MISC
↓ B		↓ - S		F / NF G D SD	S / TSI / MISC
↓ C		Boys Restroom Ceiling - S		F / NF G D SD	S / TSI / MISC
15A	Ceiling Tile 24x48	Clerk Area - E		F / NF G D SD	S / TSI / MISC
↓ B		Principal's office - Center		F / NF G D SD	S / TSI / MISC
16A	Stucco	Exterior - SE		F / NF G D SD	S / TSI / MISC
↓ B		- Center		F / NF G D SD	S / TSI / MISC
↓ C		- W		F / NF G D SD	S / TSI / MISC
				F / NF G D SD	S / TSI / MISC
				F / NF G D SD	S / TSI / MISC
				F / NF G D SD	S / TSI / MISC



**APPENDIX III**  
**Lead Paint Chip Analysis Results and Chains of Custody**



# LA Testing

5431 Industrial Drive, Huntington Beach, CA 92649

Phone/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com>

[gardengrovelab@latestesting.com](mailto:gardengrovelab@latestesting.com)

LA Testing Order: 332008547

CustomerID: 32ANDE85

CustomerPO:

ProjectID:

Attn: **Heriberto Romero**  
**EFI Global, Inc.**  
**5261 West Imperial Highway**  
**Los Angeles, CA 90045**

Phone: (888) 705-6300  
Fax:  
Received: 05/07/20 3:30 PM  
Collected: 5/6/2020

Project: **045.02871 / SBCUSD Anderson**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Collected	Analyzed	Weight	RDL	Lead Concentration
LBP-9 332008547-0009	5/6/2020	5/11/2020	.2792 g	0.0080 % wt	0.34 % wt
	Site: Staff restroom - N				
LBP-10 332008547-0010	5/6/2020	5/11/2020	.2695 g	0.0080 % wt	0.067 % wt
	Site: Staff restroom - N				
LBP-11 332008547-0011	5/6/2020	5/11/2020	.2664 g	0.016 % wt	0.41 % wt
	Site: Principasl office - loiset - SE				
LBP-12 332008547-0012	5/6/2020	5/11/2020	.2641 g	0.0080 % wt	0.18 % wt
	Site: Storage room - W				
LBP-13 332008547-0013	5/6/2020	5/11/2020	.0907 g	0.022 % wt	<0.022 % wt
	Site: Exterior - E				
LBP-14 332008547-0014	5/6/2020	5/11/2020	.2563 g	0.0080 % wt	<0.0080 % wt
	Site: Exterior - E				
LBP-15 332008547-0015	5/6/2020	5/11/2020	.0794 g	0.025 % wt	<0.025 % wt
	Site: Girls restroom - E				
LBP-16 332008547-0016	5/6/2020	5/11/2020	.2825 g	0.0080 % wt	0.14 % wt
	Site: Boys restroom - S				
LBP-17 332008547-0017	5/6/2020	5/11/2020	.2743 g	0.0080 % wt	0.15 % wt
	Site: Girls restroom - W				

Michael Chapman, Laboratory Manager  
or other approved signatory

\*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the results, it will be noted on the report. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by LA Testing Huntington Beach, CA AIHA-LAP, LLC--ELLAP Accredited #101650, CA ELAP 1406

Initial report from 05/12/2020 09:23:22



## LA Testing

5431 Industrial Drive, Huntington Beach, CA 92649

Phone/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com>

[gardengrovelab@latestesting.com](mailto:gardengrovelab@latestesting.com)

LA Testing Order: 332008547

CustomerID: 32ANDE85

CustomerPO:

ProjectID:

Attn: **Heriberto Romero**  
**EFI Global, Inc.**  
**5261 West Imperial Highway**  
**Los Angeles, CA 90045**

Phone: (888) 705-6300  
Fax:  
Received: 05/07/20 3:30 PM  
Collected: 5/6/2020

Project: **045.02871 / SBCUSD Anderson**

### Test Report: Total Threshold Limit Concentration (7000B)

<i>Client SampleDescription</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight (g)</i>	<i>RDL</i>	<i>Lead Concentration</i>
LBP-1 332008547-0001	5/6/2020 Site: Boys restroom - W	5/11/2020	1.0129 g	40 mg/Kg	<40 mg/Kg
LBP-2 332008547-0002	5/6/2020 Site: Boys restroom - E	5/11/2020	1.0788 g	40 mg/Kg	<40 mg/Kg
LBP-3 332008547-0003	5/6/2020 Site: Girls restroom - S	5/11/2020	1.0956 g	40 mg/Kg	<40 mg/Kg
LBP-4 332008547-0004	5/6/2020 Site: Girls restroom - N	5/11/2020	1.0302 g	40 mg/Kg	<40 mg/Kg
LBP-5 332008547-0005	5/6/2020 Site: Girls restroom - S	5/11/2020	1.0769 g	40 mg/Kg	<40 mg/Kg
LBP-6 332008547-0006	5/6/2020 Site: Staff restroom - N	5/11/2020	1.201 g	40 mg/Kg	270 mg/Kg
LBP-7 332008547-0007	5/6/2020 Site: Staff restroom - NW	5/11/2020	1.0182 g	40 mg/Kg	560 mg/Kg
LBP-8 332008547-0008	5/6/2020 Site: Staff restroom - N	5/11/2020	1.1355 g	40 mg/Kg	<40 mg/Kg

Michael Chapman, Laboratory Manager  
or other approved signatory

Reporting limit is 40 mg/kg based on a 0.5 gram sample weight. This report relates only to those items tested. Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit.

Samples analyzed by LA Testing Huntington Beach, CA Method SW 846 7000B replaces EPA 7420 for lead analysis and is an equivalent method. AIHA-LAP, LLC--ELLAP Accredited #101650; CA ELAP 1406

Initial report from 05/12/2020 09:23:22



# efi global

## Laboratory

### Chain of Custody

Turn Around Time - (Circle)

\*Please select based on laboratory being used

3hr

6hr

24hr

48hr



Standard

#332008547

EFI Global Project No.:	Project Name:	Sampling By:	Number of Samples:	Date(s) Collected:	Page No.:	Total Pages
045.02811	SBUSD Anderson	Heriberto Romero	17	5/6/2020	1	3

Sample No.:	Sample Location & Comments	Start Flow Rate End Flow Rate	Start Time Stop Time	Total Volume Area/SQFT	Type of Analysis Sample Serial Number
	Please	%RH: Temp:			Analysis Type: NIOSH 7082 Serial No.: Lead by FAAS
	Gas	%RH: Temp:			Analysis Type: Serial No.:
	Attached	%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:
		%RH: Temp:			Analysis Type: Serial No.:

Relinquished By (Print & Sign) (Date & Time)	Received By (Print & Sign) (Date & Time)
Heriberto Romero Relinquished By (Print & Sign) (Date & Time)	Michael P. Pinkerton Received By (Print & Sign) (Date & Time)

Special Instructions:	Stop Positive:	Yes	No	E-mail to Additional Party:
				Heriberto.Romero@EFIGLOBAL.COM Michael.Pinkerton@

5261 West Imperial Hwy Los Angeles, CA 90045, Ph (310) 854-6300, Fax (310) 854-0199



ASBESTOS FIELD BULK SAMPLE TABLE

PROJECT NUMBER: 045 02871 PROJECT NAME: \_\_\_\_\_  
PROJECT LOCATION: Davidson DATE: 5/6/2020 COMPLETED BY: H.R.

SAMPLE NUMBER	SAMPLE DESCRIPTION	SAMPLE LOCATION	APPROX. SQUARE FOOTAGE	CONDITION	HOMOGENEOUS APPLICATION
LBP- 1	wall tile (Green 2x4)	Boys Restroom - W		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
2	(Gray 4x4)	↓ - E		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
3	(Red 4x4)	Girls Restroom - S		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
4	↓ (White 4x4)	- N		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
5	Floor Tile (White 2x2)	↓ - S		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
6	wall tile (yellow 4x4)	Staff Restroom - N		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
7	↓ (Green 2x4)	- W		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
8	Floor Tile (Green 2x2)	↓ - N		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
9	Paint chip Door (blue)	- N		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
10	Door Frame (blue)	- N		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
11	↓ wall (white)	Principals Office - Closet - SE		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>
12	↓ wall (Green)	Storage Room - W		<del>E / NF G D SD</del>	<del>S / TSI / MISC</del>

#332008547





PROJECT NAME:

PROJECT LOCATION: Davidson DATE: 5/6/2020 COMPLETED BY: H.R.

Page 3 Of 3

**No additional lead samples were collected during this time period.**

**APPENDIX IV**  
**Personnel Certifications**



DEPARTMENT OF INDUSTRIAL RELATIONS  
Division of Occupational Safety and Health  
Asbestos Certification & Training Unit  
2424 Arden Way, Suite 495  
Sacramento, CA 95825-2417

(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> [acru@dir.ca.gov](mailto:acru@dir.ca.gov)



511255572T

405

409

April 20, 2020

Heriberto Romero  
1818 E. 84th Street  
Los Angeles CA 90001

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. To maintain your certification, you must abide by the rules printed on the back of the certification card.

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please notify our office via U.S. Postal Service or other carrier of any changes in your mailing or work address within 15 days of the change.

Sincerely,

Jeff Ferrell  
Senior Safety Engineer

Attachment: Certification Card

cc: File

Renewal - Card Attached 08/2019





STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH



# LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



**Heriberto Romero**

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00002172

EXPIRATION DATE:

7/19/2020

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at [www.cdph.ca.gov/programs/clppb](http://www.cdph.ca.gov/programs/clppb) or calling (800) 597-LEAD.

DEPARTMENT OF INDUSTRIAL RELATIONS  
Division of Occupational Safety and Health  
Asbestos Certification & Training Unit  
2424 Arden Way, Suite 495  
Sacramento, CA 95825-2417  
(916) 574-2993 Office (916) 483-0572 Fax  
<http://www.dir.ca.gov/dosh/asbestos.html> [acru@dir.ca.gov](mailto:acru@dir.ca.gov)



907074549C

328

EFI Global  
Benjamin P Curry  
5261 West Imperial Highway  
Los Angeles CA 90045

June 20, 2019

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. To maintain your certification, you must abide by the rules printed on the back of the certification card.

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please contact our office at the above address or email with any changes in your contact/ mailing information within 15 days of the change.

Sincerely,

Jeff Ferrell  
Senior Safety Engineer

Attachment: Certification Card

cc: File

Renewal - Card Attached (Revised 01/10/2019)





STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH



## LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



**Benjamin Curry**

CERTIFICATE TYPE:

Lead Inspector/Assessor  
Lead Supervisor

NUMBER:

LRC-00000208  
LRC-00000207

EXPIRATION DATE:

4/5/2021  
4/5/2021

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at [www.cdph.ca.gov/programs/clppb](http://www.cdph.ca.gov/programs/clppb) or calling (800) 597-LEAD.

## ASBESTOS ABATMENT SPECIFICATIONS

*Prepared For*

San Bernardino City Unified School District  
Facilities Management, Maintenance & Operations Department  
956 West 9th Street  
San Bernardino, CA 92411

*Site Location*

Davidson Elementary School  
2844 Davidson Avenue  
San Bernardino, CA

*Date: June 9, 2020*



## SECTION 02 82 00 ASBESTOS REMEDIATION

### *PART 1 – GENERAL*

#### **1.0 SCOPE OF WORK**

##### **1.1. Scope of Work**

The scope of work for the abatement project will involve the abatement of Asbestos Containing Materials (ACM) prior to renovation activities at the subject property. The ACMs listed in the tables below are contained in the attached EFI Global Limited Asbestos, Lead & Hazardous Materials Assessment Report, version 2.0, dated June 9, 2020, prepared for the San Bernardino City Unifies School District, for Davidson Elementary School, located at 2833 Davidson Avenue, San Bernardino, CA. This report details the specific materials that require special handling under this specification.

Note that the quantities listed in the below table are estimates only. It is the Contractor's responsibility to quantify materials that are to be impacted by the scheduled renovation activities, as outlined in the construction contract documents prior to bid submittal, as part of the Contractor's due diligence, and prior to initiating renovation activities.

Specific contractor responsibilities include, but are not limited to the following:

- The Contractor is responsible for the protection and decontamination of fixtures and equipment remaining in the work area, prior to, and after abatement.
- The Contractor shall furnish all labor, materials, services, insurance, equipment, and decontamination facilities to carry out the complete removal, and disposal of all ACMs identified in these specifications that are to be impacted by the renovation activities.
- Work shall be performed in accordance with all applicable regulations, codes, ordinances, and standards of governing authorities having jurisdiction and the requirements specified herein. Where applicable state or local standards are more stringent than federal standards, the Abatement Contractor shall adhere to the most stringent standards.
- The Contractor shall extend full cooperation to the Owner in all matters involving the use of the Owner's facilities. At no time shall the Contractor cause or allow there to be caused conditions that may cause risk or hazard to the general public or conditions that might impair safe use of the facility. The use of the facility's electricity, water or like utilities by the Contractor shall be coordinated through the Owner.
- In addition, the Contractor shall furnish all labor, material, supervision, construction tools, and equipment necessary to perform the following work:
  - Removal of all identified ACM prior to renovation activities.
  - Provision and maintenance of environmental and occupational safety protective measures, equipment, and procedures at the work site, including appropriate engineering controls.
  - Cleaning of the work site to completely remove all visually apparent asbestos and reduce airborne asbestos fiber concentrations.
  - If, in the course of removal of ACMs from the site, the Contractor discovers any other ACMs or PACMs other than those described in plans, reports, and / or specifications, the Contractor shall

notify the Owner and/or Consultant in writing, and after receiving the Owner's approval, the Contractor will remove and dispose of such item(s).

- With respect to available utilities, the Contractor shall coordinate access and use all utilities as needed for the duration of the project with the Owner. If utilities are unavailable, the Abatement Contractor will be required to provide the utilities at the Abatement Contractor's own cost.
- The Abatement Contractor shall obtain all necessary permits from the Owner, City of San Bernardino, and other local agencies, and the South Coast Air Quality Management District (SCAQMD), and any other authorities having jurisdiction.
- Packaging, transport, and disposal of all asbestos to a disposal site approved by the applicable federal, state, and local authorities shall be the sole responsibility of the Contractor, including any certifications or statements of non-friability requires by the landfill.
- Cooperation with the Owner and/or Consultant with regards to air monitoring and observation of procedures.

Below are summary tables of specific materials that require special handling under this specification:

**Table 1: Homogenous Building Materials & Asbestos Content**

Homogenous Materials Number	Material Description	Location	Asbestos Content (% Weight)	Material Quantity *	Friability **	Condition
1	Textured Plaster Wall System	Principal's Office Office Area Boy's Restroom Entry Girl's Restroom Entry	None Detected	---	---	---
2	<b>Carpet Adhesives</b>	<b>Principal's Office Office Area</b>	<b>2% Chrysotile</b>	<b>625</b>	<b>Non-Friable</b>	<b>Good</b>
3	Cove base & Adhesives	Principal's Office Office Area	None Detected	---	---	---
4	1"x1" Green Speck Ceramic Floor Tile & grout	Staff Restroom	None Detected	---	---	---
5	4"x4" Yellow Ceramic Wall Tile & grout	Staff Restroom	None Detected	---	---	---
6	6"x6" Green Ceramic Wall Tile & grout	Staff Restroom	None Detected	---	---	---
7	4"x4" Green Ceramic Wall Tile & grout	Boy's Restroom	None Detected	---	---	---
8	4"x4" Gray Ceramic Wall Tile & grout	Boy's Restroom	None Detected	---	---	---
9	4"x4" White Ceramic Wall Tile & grout	Girl's Restroom	None Detected	---	---	---
10	4"x4" Red Ceramic Wall Tile & grout	Girl's Restroom	None Detected	---	---	---
11	2"x2" Gray Floor Tile & grout	Girl's Restroom	None Detected	---	---	---



Homogenous Materials Number	Material Description	Location	Asbestos Content (% Weight)	Material Quantity *	Friability **	Condition
12	Door Frame Putty	Boy's Restroom	None Detected	---	---	---
13	Plaster Wall System	Boy's Restroom Girl's Restroom	None Detected	---	---	---
14	Drywall & Joint Compound (Ceilings)	Girl's Restroom Boy's Restroom	None Detected	---	---	---
15	2'x4' Ceiling Tiles	Office Area Principal's Office	None Detected	---	---	---
16	Stucco & Finish Coat	Exterior	None Detected	---	---	---

\* All quantities are approximations and should be verified by an abatement contractor.

\*\* Non-friable materials may be rendered friable during removal by mechanical or other aggressive methods.

## 1.2. DEFINITIONS

1. Abatement – Procedures to control fiber release from Asbestos Containing Materials (ACM) or Asbestos Containing Construction Materials (ACCM). Includes removal, encapsulation, enclosures, repair, demolition, and renovation activities but does not include asbestos related disturbance.
2. Aggressive Method – Means removal or disturbance of building material by sampling, abrading, grinding, or method that breaks, crumbles, or disintegrates intact ACM.
3. AHERA – Asbestos Hazard Emergency Response Act, 40 CFR, Part 763, Subpart E, and subsequent amendments.
4. Air filtration and ventilation system – A portable exhaust system, equipped with HEPA filtration, and capable of maintaining a constant air flow into a regulated area from adjacent areas and exhausted outside the regulated area.
5. Amended Water – Water to which a surfactant (wetting agent) has been added.
6. Area Sampling – Means sampling of asbestos fiber concentrations which approximates the concentrations of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.
7. ANSI – American National Standards Institute.
8. Asbestos – Means the asbestos form varieties of chrysotile, crocidolite, amosite, anthophyllite, tremolite and actinolite.
9. Asbestos Containing Construction Material (ACCM) – Means any manufactured construction material which contains more than one tenth of one percent (0.1%) asbestos by weight.
10. Asbestos Containing Material (ACM) – Means any material containing more than one-percent (1%) asbestos.

11. Asbestos Containing Waste (Non-Hazardous) – Non-friable asbestos containing material including, but not limited to: floor covering, roofing materials and cementitious materials requiring disposal.
12. Asbestos Containing Waste (Hazardous) – Friable asbestos containing materials and asbestos contaminated objects and debris requiring disposal.
13. Asbestos Related Disturbance – is the drilling, coring, removal or similar disturbance of ACCM or ACM not to exceed three (3) square feet in any one opening and not to disturb 100 square feet or greater cumulatively on any one project (contract).
14. ASTM – American Society for Testing and Materials.
15. Authorized Person – means any person authorized by the employer and required by work duties to be present in regulated areas
16. Building ID Number or Code – A six digit alphanumeric identification code assigned to each building on site. (not applicable to this project)
17. Bulk Samples – Samples of building or other materials collected for analysis to determine the presence and quantities of asbestos.
18. Class I, II, III, and IV asbestos work has the meaning as defined in California Code of Regulations Title 8, Section 1529.
19. Class I Asbestos Work – Activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM
20. Class II Asbestos Work – Activities involving the removal of ACM which is not TSI or Surfacing Material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tiles, and sheeting, roofing and siding shingles, and construction mastics.
21. Class II Asbestos Work – Repair and Maintenance operations where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed.
22. Clean Room – An uncontaminated area of room, which is a part of the worker Decontamination Enclosure System with provisions for storage of worker's street clothes and clean protective equipment.
23. Closely Resemble – Means the major workplace conditions, which have contributed to the levels of historic asbestos exposure, are no more protective than the conditions of the current workplace.
24. Competent Person – Has the same meaning as defined in the California Code of Regulations Title 8, as it relates to "Competent Person."
25. Controlled Disturbance – an activity by which a contractor disturbs an asbestos containing material or an asbestos containing construction material using the work practices allowed for in this specification and in compliance with regulatory limitations.
26. Critical Barrier – One or more layers of plastic sealed over all openings into a work area or any other similarly places barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.
27. Curtained Doorway – A device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway,

securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs may be submitted for review.

28. Decontamination – The process of eliminating asbestos contamination from building surfaces, objects, and property, by cloths, mops, or other utensils dampened with water and disposed of afterwards as asbestos contaminated waste.
29. Decontamination Enclosure System – Means an enclosed area, which is adjacent and connected to the regulated area, consisting of an Equipment Room, Shower Room, and Clean Room for the decontamination of workers, materials, and equipment contaminated with asbestos.
30. Demolition – The wrecking or taking out of any load supporting structural member of a facility together with any related handling operations.
31. Disturbance – Means contact that releases fibers from ACM or PACM or debris containing ACM or PACM.
32. DOSH – Division of Occupational Safety & Health or Cal/OSHA.
33. DOT – Department of Transportation
34. DTSC – Department of Toxic Substances Control.
35. Encapsulating Material – A liquid material applied to asbestos containing materials which controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging agent) or by penetrating into the material and binding its components together (penetrating encapsulating material).
36. Encapsulation – The application of an encapsulating material to asbestos containing materials to prevent the release of asbestos fibers into the air.
37. Enclosure – The construction or application of an airtight, impermeable, permanent barrier around asbestos containing material to control the release of asbestos fibers into the air.
38. Equipment Room – A room within the worker decontamination enclosure system with provisions for storage of used clothing and equipment and for controlled transfer of materials and equipment into and out of the regulated area.
39. Facility Component – Means any part of a facility including equipment.
40. Fixed Object – A piece of equipment, furniture, or improvement in the work area, which cannot be removed from the work area.
41. Friable Asbestos – Asbestos containing material which, when dry, can be crumbled, pulverized or reduced to a powder by hand pressure or as defined by current regulations.
42. Glove Bag Technique – A method with limited applications for removing small amounts of asbestos containing material from short piping runs, valves, joints, elbows, and other non-planar surfaces in a work area. The glove bag assembly is a manufactured or fabricated device consisting of a glove bag (typically constructed of 6 mil fire-retardant polyethylene sheeting) two inward projecting long sleeve gloves, an internal tool pouch, and labeled for asbestos waste. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all Asbestos fibers released during the process. All workers who are permitted to perform the glove bag technique shall be thoroughly trained, experienced, and skilled in this method.

43. Hazardous Waste – Means friable asbestos generated and prepared for waste disposal. Does not include non-friable material or materials containing one-percent or less of asbestos as determined by PLM and/or the point counting method.
44. HEPA Filter – Means a filtering system capable of trapping and retaining at least 99.97% of all mono-dispersed particles 0.3 microns in diameter or larger. For respirators this shall include NIOSH rated P-100 cartridges only.
45. HEPA Vacuum - Vacuum system furnished with HEPA filtration.
46. High Volume Vacuum – A vacuum system with the capacity to collect material through a four (4) inch diameter hose a minimum distance of 150 feet. This system shall be furnished with HEPA filter at the air exhaust port and water applicators within the hopper.
47. HVAC – Heating, Ventilation, and Air Conditioning System.
48. Lockdown – A material applied to surfaces where asbestos has been completely removed. The manufacturer shall determine the concentration of this material.
49. Member – A component part of a structure complete in itself.
50. Movable Object – A portable piece of equipment or furniture in the work area, which can be removed from the work area.
51. NESHAP – National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).
52. NIOSH – National Institute for Occupational Safety and Health.
53. Outside Air – Air outside of buildings and structures.
54. Owner's Environmental Consultant – Refers to the firm, company or individual designated by the Owner (Orange County Sanitation District).
55. PCM – Phase Contrast Microscopy as it relates to clearance air, personnel exposure assessment, and ambient air monitoring. This procedure must follow the NIOSH Method 7400. .
56. PLM – Polarized Light Microscopy used for bulk sample analysis with dispersion staining for the determination and quantifying of asbestos in bulk samples of building materials.
57. Regulated Area – Designated rooms, spaces or areas of the project in which asbestos abatement actions are to be performed or which may become contaminated as a result of abatement activities. A contained work area is a work area, which has been sealed and furnished with a decontamination enclosure system. A non-contained work area is an isolated or controlled access work area, which has not been sealed or furnished with a decontamination enclosure system.
58. Removal – Means all operations where all ACM and/or presumed ACM is removed or stripped from structures or substrates including demolition.
59. Renovation – Means the modifying of any existing structure, facility, or portion thereof.
60. SCAQMD – South Coast Air Quality Management District.

61. Shower Room – A room between the clean room and the equipment room in the worker decontamination enclosure system furnished with hot and cold running water controllable at the tap, and suitably arranged for complete showering during decontamination.
62. Staging Area – Areas near the waste transfer airlock where containerized asbestos waste is temporarily placed prior to permanent removal from the work area.
63. Surfactant – A chemical wetting agent added to water.
64. TEM – Transmission Electron Microscopy as defined for asbestos clearance air sampling. This procedure must follow the NIOSH Method 7402.
65. TSI – Thermal System Insulation as defined in AHERA.
66. USEPA or EPA – United States Environmental Protection Agency
67. Visible Emissions – Any emissions from a known or suspected asbestos containing material that is visually discernible.
68. Waste Transfer Airlock – A decontamination system provided for transferring containerized waste from inside to outside of the work area.

### 1.3. NOTIFICATIONS

Notification of asbestos abatement activities shall be provided by Contractor as requires and in accordance with all applicable federal, state, and local agencies prior to the start of abatement activities.

### 1.4. REGULATORY COMPLIANCE

Regulatory Requirements shall include, but not be limited to:

**OSHA:** U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), including but not limited to:

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite: Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 1101 of the Code of Federal Regulations

Respiratory Protection: Title 29, Part 1910, Section 134 of the Code of Federal Regulations

Construction Industry: Title 29, Part 1926.1101 of the Code of Federal Regulations

Access to Employee Exposure and Medical Records: Title 29, Part 1910, Section 2 of the Code of Federal Regulations

Hazard Communication: Title 29, Part 1910, Section 1200 of the Code of Federal Regulations

Specifications for Accident Prevention Signs and Tags: Title 29, Part 1910, Section 145 of the Code of Federal Regulations

**DOT:** U.S. Department of Transportation (DOT), including, but not limited to:

Hazardous Substance: Title 29, Part 171 and 172 of the Code of Federal Regulations

**EPA:** U.S. Environmental Protection Agency (EPA), including but not limited to:

Asbestos Hazard Emergency Response Act (AHERA), 15 U.S.S. Section 2641

Asbestos Abatement Projects: Worker Protection Rule, Title 40 Part 763, Subpart G of the Code of Federal Regulations

National Emission Standard for Hazardous Air Pollutants (NESHAPS): National Emission Standard for Asbestos, Title 40, Part 61, Subparts A and B and Subpart M (Revised Subpart B) of the Code of Federal Regulations

**Cal-OSHA:** Title 8, Article 4, California Code of Regulations Construction Industry Safety Orders, Section 1529 “Asbestos” or current revised California regulations.

**SCAQMD:** South Coast Air Quality Management District, Rule 1403 and Rule 222

**OCS:** Orange County Sanitation District:

1. OCS Safety Standards
2. RG, Environmental Control
3. Section 01140, Work Restrictions
4. Section 01155, Measurement and Payment
5. Section 01300, Contractors Construction Schedule and Reports
6. Section 02050, Demolition

## 2.0 CONTRACTOR SUBMITTALS

### 2.1. Manufacturer’s Product Data

- HEPA-Filtered Negative Air Equipment
- HEPA-Filtered Vacuum Equipment
- Respirators
- Pressure Differential Monitor
- Surfactants
- Encapsulants

### 2.2. Plan for Removal and Demolition of Asbestos

The Abatement Contractor shall prepare and submit a detailed job specific plan of the work procedure to be used in the removal and demolition of materials containing asbestos at least two-weeks prior to the start of work. A generalized “boiler-plate” type of plan will not be accepted.

- The plan shall be prepared and signed by the Contractor and Contractor’s Competent Person
- Such plan shall include a sketch showing the location, size, and details of asbestos control areas, location and details of the change room, layout of the change room, details and location of waste container pass out airlock system, and locations of the HEPA-filtered negative air equipment, if applicable.
- The plan shall also include interface of trades involved in the construction, sequencing of the asbestos-related work, disposal plan, type of wetting agent and removal encapsulants to be used, respirators, protective equipment, pressure differential monitoring devices, and a detailed description of the method to be employed in order to control pollution.
- The plan shall include copies of emergency, security, and contingency plans as follows:
  - A plan to provide emergency and fire evacuation for removing workers from the work zone. A copy of this plan shall be filed with the local fire and/or ambulance unit.



- A plan for maintaining security of the work zone. The security plan shall provide a means for preventing accidental or unauthorized entry.
  - A contingency plan addressing emergency, equipment failures, and barrier failure. This plan shall include telephone numbers of representatives of the Contractor to be contacted in emergencies.
- The plan shall be approved by the Owner and/or Consultant prior to the start of asbestos abatement work.
- Prior to beginning work, the Owner and/or Consultant and Contractor shall meet and discuss in detail the asbestos plan, including work procedures and safety precautions.

## 2.3 Administrative and Contractor Closeout Submittals

### 2.3.1. Notification of Equipment Rental

If rental equipment is to be used during asbestos handling and disposal, written notification concerning the intended use of the equipment will be furnished to the rental agency, with a copy to the Owner and/or Consultant.

### 2.3.2. Landfill Delivery Records

Within three days after delivery of ACM to the landfill, submit detailed delivery tickets and hazardous waste manifests, prepared, signed, and dated by an agent of the landfill, certifying the amount of materials delivered to the landfill.

### 2.3.3. Waste Disposal Site Approval

Submit the recommended waste disposal site to the Owner and/or Consultant for approval prior to the start of the project. Submit written evidence to the Owner and/or Consultant prior to disposal, that the waste disposal site is approved for asbestos disposal by the EPA and other applicable authorities. At job completion, these records shall be inserted into the job binder and transmitted to the Owner and/or Consultant.

### 2.3.4. Personnel Training Certificates

Prior to the start of ACM abatement activities, the Contractor shall submit to the Owner and/or Consultant a declaration certifying that all of the Contractor's employees have been adequately trained in accordance with CCR Title 8, Section 1529. The Contractor shall also submit proof that all personnel who will be permitted to enter contaminated work areas have been adequately trained in accordance with CCR Title 8, Section 1529 for certification as an Asbestos Worker or Supervisor for Class I and II asbestos abatement projects.

### 2.3.5. Medical Examination and Certification

Prior to the start of ACM abatement activities, the Contractor shall submit proof that all personnel who will be permitted to enter contaminated work areas had had medical examinations in accordance with CCR Title 8, Section 1529 and 29 CFR 1910.134. In addition, the Contractor shall provide a written certification signed by a licensed physician that all workers and supervisors have met or exceeded all of the medical prerequisites listed herein and in CCR Title 8, Section 1529 and 29 CFR 1910.134.

### 2.3.6. Testing Laboratory

The Contractor shall submit:

- The name, address, and telephone number of each testing laboratory selected for the sampling, analysis, and reporting of airborne concentrations of asbestos fibers along with evidence that each laboratory selected holds the appropriate state license and/or permits;
- Certification that each laboratory is American Industrial Hygiene Association (AIHA) accredited; and

- Persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry and have been successfully participated in the laboratory in the Proficiency Analytical Testing Program.

#### *2.3.7. Personal Air Sampling Results*

The Contractor shall have performed complete fiber counting for personal air sampling and provide results to the Owner and/or Consultant for review within 48 hour of sample collection. The Contractor will notify the Owner and/or Consultant immediately of any airborne levels of asbestos fibers in excess of the PEL.

#### *2.3.8. Pressure Differential Recordings*

If utilized, the Contractor shall review and report the pressure differential recordings within 4 hours from the end of each work day, and immediately report to the Owner and/or Consultant variance in the minimum permissible pressure differential (0.02 inch water column, relative to adjacent, unsealed areas) that could cause adjacent unsealed areas to have asbestos fiber concentrations in excess of 0.01 fibers per cubic centimeter or background, whichever is greater.

#### *2.3.9. Asbestos Disposal Quantity Report*

The Contractor shall review and report to the Owner and/or Consultant, within 4 hours from the end of each workday, the amount of asbestos containing materials removed during the previous day.

#### *2.3.10. Contractor Licensing Board Asbestos Certification*

Submit a copy of the Contractor's California State Contractor's Licensing Board Asbestos Certification in accordance with the California Business and Professional Code, Section 7058.5, to the Owner and/or Consultant.

#### *2.3.11. Contractor Class C Asbestos Removal License*

Submit proof that the Contractor possesses a current California Class C Asbestos Removal License to the Owner and/or Consultant.

#### *2.3.12. Hazardous Waste Hauler License and EPA Transporter's Number*

Submit proof that the Contractor's Hazardous Waste Hauler possesses a current Hazardous Waste Hauler License and EPA Transporter's Number to the Owner and/or Consultant.

#### *2.3.13. At Job Completion*

Contractor shall transmit the job binder to Owner and/or Consultant. Contents shall be as describes in this section plus any additional items as designated by the Owner and/or Consultant.

### **2.4 Quality Assurance**

- Where the methods or procedure are specified, they shall constitute the minimum measures and shall in no way relieve the Contractor of sole responsibility for the means, measures, methods, techniques, sequences, or safety measures in connection with the work.
- The removal of asbestos shall be supervised by a licensed supervisor who has experience in this field of construction and can furnish a record of satisfactory performance on at least three projects for work of comparable type and size.
- Subcontractor qualifications shall be the same in form and quantity as required for the Contractor.

### 3.0 PRODUCTS

Products to be supplied by the Contractor, include, but are not limited to, the following.

- Polyethylene: Polyethylene sheeting in various sizes to minimize the frequency of joints.
- Tape: Glass fiber or other tape capable of sealing joints of adjacent plastic sheets and for attachment of plastic sheeting to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions.
- Surfactant (Wetting Agent) Shall consist of materials that are non-toxic and non-irritating to skin and eye and non-carcinogenic. The wetting agent shall consist of 50% polyoxyethylene or polyglycolester and 50% polyoxyethylene ether, or the equivalent. Wetting agents shall be applied by means of an airless sprayer or equivalent.
- Encapsulant: Shall conform with EPA requirements, and shall contain no toxic or hazardous substances and no solvents.
- Impermeable Containers: Air and water-tight, suitable to receive and retain any asbestos-containing or contaminated materials until disposal time at an approved site and labeled in accordance with applicable Cal-OSHA regulations (CCR Title 8, Section 1529). Two types of impermeable containers shall be used:
  - 6-millimeter (mil) plastic bags
  - Metal or fiber drums with tightly fitting lids
- Warning Labels and Signs: In conformance with applicable Cal-OSHA regulation (CCR Title 8, Section 1529).
- Other Materials: Provide all other materials, such as lumber, nails, and hardware that may be required to construct and dismantle the decontamination area and the barriers that isolate the work area.

### 4.0 EXECUTION

#### 4.1. Material Handling

- Deliver materials in original packages, containers, or bundles bearing the name of the manufacturer and the brand name
- Store materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damages or contamination.
- Removal of all ACMs from the premises. Dispose of materials that become contaminated with asbestos in accordance with applicable regulatory standards.

#### 4.2 Equipment

##### 4.2.1. Respirators

The Contractor shall provide workers with personally issued and marked respiratory equipment approved by National Institute for Occupational Safety and Health (NIOSH) and meeting the specifications of Cal-OSHA. The respiratory equipment shall be suitable for the asbestos exposure level in the work area according to CCR Title 8, Section 1529(i). The Contractor shall provide disposable HEPA (P100) cartridges as required, with sufficient replacement cartridges.

##### 4.2.2 Personal Protective Equipment

The Contractor shall provide workers, the Owner and/or Consultant, and authorized visitors with sets of protective disposable clothing, lead covers, gloves, eye protection, and foot covers of sizes to properly fit individual workers and visitors whenever they are required to enter the work area. The Contractor shall also provide access and use of the Contractor's change room and provide a minimum of four sets of personal protective equipment (PPE) per day for visitors and sufficient sets as required for workers and the Owner and/or Consultant. The PPE, both new and used, shall remain the property of the Contractor.

#### 4.2.3 *Change Rooms*

Provide a temporary unit with a separate equipment room, decontamination locker room, and a clean locker room for personnel requires to wear whole body protective clothing.

- Separate each room from the others and from the control area by airlocks
- Provide two separate lockers for each asbestos worker, one in each locker room
- Keep street clothing and street shoes in the clean locker
- Vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators in the equipment room. Seal clothing in impermeable bags of containers for disposal.
- Do not remove disposable protective clothing in the decontamination locker room
- Remove work clothing in the decontamination locker room
- Tag and bag cloth work clothes for laundering and keep work shoes in the decontamination locker room
- Do not wear work clothing between home and work
- Provide showers with hot and cold running water
- Locate showers between the decontamination locker room and the clean locker room and require employees to shower before changing into street clothes.
- Shower wastewater shall be handled and disposed of as ACM or shall be filtered through a final filter of at least 0.5-micron particle size collection capability before disposal into the sanitary sewer system.
- Handle and dispose of wastewater filters as ACM.
- Clean asbestos-contaminated work clothing in accordance with CCR Title 8, Section 1529 or use disposable clothing.
- Change rooms shall be physically attached to the work area wherever feasible and required.

#### 4.2.4 *Eye Protection*

Furnish goggles for personnel engaged in asbestos operations when a full-face respirator is not being used.

#### 4.2.5 *Caution Signs and Labels*

Provide caution signs printed in English and Spanish at approaches to asbestos work areas. Locate signs at such distances that personnel may read the sign and take the necessary precautions before entering the work area. Provide caution labels printed in English and Spanish. Affix labels to friable asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos containing products. Caution sign labels shall conform to the requirements defined in CCR Title 8, Section 1529.

#### 4.2.5 *Fire Extinguisher*

A minimum of one 4A/60BC dry chemical extinguisher shall be maintained at each of the following locations:

- At each electrical panel
- At each corner of the work area
- Within 5 feet of the external entry to the shower room from the work area
- Within 5 feet of the external entry to the shower room from the clean room

### 4.3 *Tools and HEPA-Filtered Negative Air System*

Where a negative pressure enclosure is utilized, the Contractor shall provide a HEPA-filtered negative air system in accordance with American National Standards Institute (ANSI) Z9.2 and as specified herein.

#### 4.3.1 *HEPA-Filtered Negative Air System*

Where a negative pressure enclosure is utilized, the Contractor shall provide a HEPA-filtered negative air system in each work area.

- Provide HEPA-filtered negative air equipment designed for a minimum of one work area air change every 15 minutes and additional air change flow rate sufficient to maintain a minimum pressure differential of minus 0.02 inches of water column relative to adjacent, unsealed areas.
- The HEPA-filtered negative air system shall operate continuously, 24 hours per day, until the asbestos control area enclosure is removed. The Contractor is responsible for providing all necessary manpower and/or equipment including but not limited to emergency power, security, and fire watch to ensure 24-hour operations.
- Replace filters as required to maintain the efficiency of the system
- The building heating, ventilation, and air conditioning system shall not be used as the HEPA-filtered negative air system for the work area.

#### *4.3.2 Additional Ventilation Units*

The Contractor shall provide additional units to the site in accordance with these Specifications for use inside the containment in the event engineering controls are not effective in controlling the fiber count below the PEL during the removal process. The unit(s) shall be placed inside the containment as additional filtration in manner to move the air away from the worker's breathing zones and towards the exhaust unit(s).

#### *4.3.3 Backup Ventilation Units*

The Contractor shall provide at a minimum one additional HEPA-filtered negative air system unit for up to every ten units on the site as a replacement in case a ventilation unit fails to operate properly. These backup units must be stored on site during the entire project duration.

#### *4.3.4 Filters*

Filters on vacuums and exhaust equipment shall be absolute HEPA-filters and Underwriters Laboratories (UL) 586 labeled.

#### *4.3.5 Negative Pressure Differential Monitor*

- The Contractor shall provide a manometer-type of magnehelic-type negative pressure differential monitor with minor scale divisions of 0.02 inches of water and accuracy within plus or minus 1%
- The Contractor will calibrate the manometer as recommended by the manufacturer.
- The Contractor shall furnish recorded readings of the pressure differential between locations in the work area and adjacent unsealed areas at the beginning of each workday and every two working hours thereafter.
- The Contractor will collect pressure differential readings at several points inside the work area, including the furthest point from the HEPA-filtered negative air equipment.

### **4.4 Worker Protection**

#### *4.4.1 Abatement Contractor Responsibility*

Prior to commencement of work, all workers shall be instructed and shall be knowledgeable in the appropriate procedures of personal protection and asbestos removal.

The Contractor shall be solely responsible for enforcing worker protection requirements.

#### 4.4.2 Reporting Unusual Events

When an event of unusual significant nature occurs at the site, the Contractor shall prepare and submit a special report listing chain of events, persons participating, responses, and similar pertinent information. When such events are known or predictable in advance, advise the Owner and/or Consultant at the earliest possible date. Unusual events would include breaches of containment.

#### 4.4.3 Reporting Accidents

If a significant accident occurs at the site or anywhere else work is in progress, the Contractor shall prepare and submit appropriate reports to the Owner and/or Consultant. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss if substance is sustained.

### 4.5 General Work Area Requirements

#### 4.5.1 Respirators

- Workers shall always wear a respirator properly fitted on the face while in the work area
- Workers wearing tight-fitting face pieces shall be clean-shaven to the extent that the hair does not interfere with the sealing surface of the respirator. This must be documented by a standard respirator fit test.
- The Contractor shall instruct and train workers in proper respirator use.

#### 4.5.2 Clothing

Workers shall wear disposable, full-body coveralls and disposable head covers and footwear suitable for asbestos work in the work area.

### 4.6 Decontamination Unit Requirements

At all work areas, the Contractor shall set up a change room, shower, and equipment room outside the work area. Where feasible and required, the change room, shower and equipment room will be attached to the work area. All workers without exception shall:

- Remove and properly store street clothes in the change room and put on new disposable coveralls, head covers, footwear, and cleaned respirator before entering the work area
- Remove the disposable coveralls, head covers, and footwear in the equipment room and dispose of them in an appropriate asbestos waste container. Still wearing their respirator, workers shall proceed to the showers and remove their respirators while showering with soap and tempered water. Wetted HEPA respirator cartridges shall be disposed of in appropriate asbestos containers.
- This procedure shall be followed each time a worker leaves the work area
- Workers shall not eat, drink, smoke or chew gum or tobacco in the work area
- The Contractor shall also provide disposable coveralls, head coverings, and footwear to the Owner and/or Consultant.
- All persons entering the work area shall wear an approved respirator and disposable coveralls, head coverings, and footwear.

### 4.7 Personal Air Monitoring

Daily personal air monitoring shall be constructed by the Contractor in order to determine the airborne concentrations of asbestos to which workers may be exposed. Copies of the analytical results for the daily personal monitoring shall be submitted to the Owner and/or Consultant within 48-hours of sample collection.



#### 4.8 Sign-In / Sign-Out Log and Daily Activity Report

- The Contractor shall maintain a sign-in / sign-out log in the immediate vicinity of the change room or any decontamination area. This log shall be maintained from the time the first activity is performed involving the disturbance of ACM until the time final air test results. All persons entering the work area, including Contractor's workers, Owner and/or Consultant, and Government officials, shall be required to sign in and out each time upon entering and leaving the work area. All persons shall indicate name time, company or agency represented, and reason for entering the work area.
- The Contractor shall maintain a daily activity report describing work performed, materials and methods used, inspection(s) made, test(s) taken, and any unusual conditions or problems.
- Except for governmental inspectors having jurisdiction, no visitors shall be allowed in any work area, except as authorized by the Owner and/or Consultant.

#### 4.9 Housekeeping

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by their employees. Bags of asbestos material and other waste materials shall be removed immediately at the completion of work. Maintain surfaces of the work area free of debris and keep waste from being distributed outside of the immediate work area.

##### 4.9.1 *Removal of Asbestos Waste Containers*

The Contractor shall provide a waste container removal system. Asbestos waste containers shall not be removed through the change rooms. The waste container removal system shall consist of a wash-down station inside the work area, a washroom, a waste container holding area. Provide airlocks between each area and an airlock with access to outside the work area from the holding areas. Provide caution signs as specified herein for asbestos work areas. The waste container removal system shall be a temporary unit constructed to prevent the escape of asbestos fibers from the area. The system shall be physically attached to the work area. Personnel entering the waste container removal system shall wear PPE. The system shall not be used to enter or exit the work area. Access to outside the waste container removal system shall be sealed except during the removal of asbestos waste containers. Perform cleanup of the waste container removal system as specified herein for enclosed work areas. Do not remove the waste container removal system enclosure and caution signs prior to receipt of the Consultant's clearance sample results. All asbestos waste containers shall be removed from the work area daily.

##### 4.9.2 *Procedure for Disposal of Asbestos*

Do not remove any ACMs from the site without approval from the Owner and/or Consultant. Procedure for hauling and disposal of asbestos waste shall comply with 40 CFR 61, Subpart M and CCR Title 8.

#### 4.10 Work Area Preparation

##### 4.10.1 *Warning Signs*

The Contractor will provide Warning Signs meeting regulatory requirements at each visual and physical barrier.

##### 4.10.2 *Critical Barriers*

Where appropriate, the Contractor shall seal all openings with two layers of 6-mil minimum polyethylene as a containment barrier to prevent leakage of air into the outside environment or other portions of the building. Individually seal ventilation openings in walls (supply and exhaust), wall-mounted fixtures, doorways, windows, convectors, and other wall and floor openings into the work area with adhesive tape alone or with two layers of polyethylene sheeting at least 6-mil (true), taped securely in place with adhesive tape.

#### 4.10.3 Pre-Cleaning

- The Contractor shall pre-clean movable objects to be salvaged for the Owner within the proposed work areas using HEPA vacuum equipment or wet cleaning methods as appropriate. The Contractor shall move such items to storage or other areas as directed by the Owner.
- The Contractor shall pre-clean immovable objects such as mechanical and electrical equipment and fixtures within the proposed work area using HEPA vacuuming equipment or wet cleaning methods as appropriate.
- Prior to placing plastic sheeting, clean the work area(s) and immediately adjacent areas physically connected to abatement areas using HEPA vacuum equipment or wet-cleaning methods as appropriate. Do not use methods that raise dust such as broom sweeping or vacuuming with non-HEPA equipped vacuum cleaners.

#### 4.10.4 Containment

Where necessary, the Contractor will contain work areas with two layers of 4-mil plastic sheeting on walls and ceilings, and two layers of 6-mil plastic sheeting on floors, or as otherwise directed in writing by the Owner and/or Consultant.

#### 4.10.5 Decontamination Unit

The Contractor shall construct worker and waste container / equipment decontamination units in compliance with EPA guidelines. Provide sufficient numbers of lockers in change and clean rooms or worker's clothing with one locker reserved for Owner and or Consultant personnel.

#### 4.10.6 Emergency Exits

The Contractor shall establish emergency exits and procedure for each work area, satisfactory to fire officials and provide fire extinguishers as required.

#### 4.10.7 Work Area Maintenance

The Contractor shall ensure that barriers and plastic enclosures remain effectively sealed and taped. Inadvertent tears in plastic shall be repaired with fiber tape and the tear covered by plastic applied with spray-adhesive, overlapping the tear by 6 inches on all sides.

If, during performance of abatement work, suspect ACM is observed outside of abatement enclosures, or if damage occurs to the enclosure barrier(s), work shall stop immediately upon discovery, appropriate repairs will be made (by the Contractor), and all such debris will be collected using appropriate vacuums and wet methods.

## 5.0 ASBESTOS REMOVAL

### 5.1 General Work Area Requirements

In a work area, the Contractor shall:

- Remove and dispose of all ACMs and PACMs in accordance with the methods and procedure outlined in CCR Title 8, Section 1529.
- All asbestos removal shall be supervised by a competent person.
- Where appropriate, enclose work areas under differential air pressure for the duration of the asbestos removal and subsequent cleaning phases and until all areas have been air-tested and found to be in compliance with the specific air quality clearance level detailed in Section 6.2 of these specifications.
- Perform appropriate cleaning using HEPA vacuum or wet cleaning methods of all areas physically connected to areas receiving asbestos removal.

- Dispose of all contaminated or otherwise removed materials and wastes in sealed and labeled containers in an approved sanitary landfill.
- Never use high-pressure water streams to remove any type of ACM.
- After removal, all surfaces shall be wet-cleaned and HEPA vacuumed to remove residual accumulated material. After cleaning, surfaces shall appear free of visible material.
- Prior to the removal of the plastic sheeting from the wall, apply approved sealant on all concrete or wood substrate, structural steel, and piping surfaces from which the material was removed and to plastic sheeting prior to its removal.
- Following related repair work remove any remaining floor and wall plastic, including seals on openings, and dismantle worker waste container/equipment decontamination areas and leave all areas clean.
- Eating, smoking, or applying cosmetics shall not be permitted in the work area.

## 5.2 Removal of OSHA Class I Materials

Removal of Class I Osha materials is anticipated for this project. Contractor shall remove the Class I OSHA materials in accordance with appropriate federal, state, and local regulations. The Contractor is responsible for processing any permits with the SCAQMD.

Should the Contractor choose to utilize mechanical methods of other means that would or could potentially render non-friable material friable, the Contractor shall adhere to the work practices for Class I OSHA materials in accordance with appropriate federal, state, and local regulations. The Abatement Contractor is responsible for processing any permits with the SCAQMD, for the removal of materials via mechanical methods or other means that could potentially render a non-friable material friable. Exterior stucco (Texture Coat) will be removed in containment.

## 5.3 Removal of OSHA Class II Materials

### 5.3.1 Vinyl Flooring Tile and/or Flooring Mastic

The Contractor is responsible for the removal / abatement of any of the identified flooring materials, per the construction bid documents. The Contractor shall demonstrate to the Consultant that the flooring materials do not extend underneath any of the fixtured, cabinets, or other permanent items, in each room, where removal / abatement of asbestos containing flooring materials is scheduled to occur.

The Contractor shall adhere to the following additional work practices regarding the removal of vinyl flooring tile and/or mastic:

- Vinyl floor and/or mastic shall be removed with hand tools and, to the extent feasible, substantially intact.
- Vinyl flooring and/or mastic removal operations involving the use of mechanized work methods, including motorized floor buffers and mechanical chipping, shall be conducted utilizing Class I work methods.
- Low-odor, solvent-based mastic removers may be used to remove ACM mastic, provided the waste generated is managed in accordance with applicable state and federal regulations. Use of solvent-based mastic removers will be followed by suitable rinse (as per manufacturer's recommendations) to remove any residual mastic remover.

### 5.3.2 Roofing Materials

The Contractor shall adhere to the following additional work practices regarding the removal of roofing materials:

- Roofing materials shall be removed with hand tools, and to the extent feasible, substantially intact.
- Roofing materials shall not be dropped or thrown to the ground. The material shall be carried or passed down by hand, or the materials will be lowered to the ground via covered, dust-tight chute, crane, or hoist.

- The Contractor will spray large areas of roofing material thoroughly with amended water, using spray equipment recommended by the surfactant manufacturer and capable of providing a mist application to reduce the chance of release of fibers. Spray the roofing material repeatedly during the abatement work process to maintain wet conditions, but do not use excessive amounts of water that results in ponding or leakage into the building.
- While materials that have been removed remain on the roof, the material shall either be kept wet, placed in an impermeable waste container, or wrapped in plastic sheeting.

## 5.0 CLOSURE

### 6.1 Waste Labeling

- ACM should be placed in labeled, leak-tight containers and/or wrapping. The labels for friable ACMs shall contain all information as specified in Occupational Safety and Health Standards of the Department of Labor, under 1926.1101(k)(2)(iii) and Title 8, Section 5229, and any local regulations.
- For temporary storage on site, ACMs shall be stored in a secured area. The area shall be demarcated with Asbestos Warning Signs.

### 6.2 Clearance

- Work areas and all other decontaminated areas and cleaned areas shall be considered clean when:
  - The work area passes a visual inspection by the Consultant and
  - Air testing performed by the Consultant, complies with the EPA recommended re-occupancy level of 0.01 fibers per cubic centimeter, when analyzed by Phase Contrast Microscopy).
- PCM analysis will be conducted in accordance with NIOSH Method No. 7400
- Areas that do not comply with the standard of cleaning for final clearance shall continue to be cleaned by and at the Consultant's expense until the specified standard is achieved as evidenced by results of air sampling tests by the Consultant. The costs of all follow-up tests necessitated by the failure of the air tests to meet the cleaning criteria shall be borne by the Contractor. Follow-up testing shall occur within a time allotted for gross removal or all costs to the Owner, attributed to delayed occupancy or usage, shall be borne by the Contractor.
- When the clearance is achieved, as indicated above, and an inspection determined that the area has been visually decontaminated, the decontamination enclosure system shall be removed, the area thoroughly wet cleaned, and materials from the equipment room and shower disposed of as contaminated waste. The remaining barriers between contaminated and clean areas and all seals on openings into the work area and fixtures shall be removed and disposed of as contaminated waste.

### 6.3 Tear Down

All plastic sheeting, tape, cleaning materials, clothing, and all other disposable material used in the asbestos removal operation or item used in the work area shall be packed into sealable 6-mil plastic bags. These bags must be marked with labels as required by Cal-OSHA in CCR Title 8, Section 1529.

**END OF SECTION**