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# SECTION 02080 - HAZARDOUS MATERIALS REMOVALS

## PART 1 - GENERAL

### 1.1 PROJECT SITE

- A. The project site is identified as the Alvarado Intermediate School – Partial Modernization. Buildings to be impacted include the 60 Wing (C-1) Classroom Building, 50 Wing (C-2) Classroom Building, 40 Wing (C-3) Classroom Building, 30 Wing (C-4) Classroom Building, 20 Wing (C-5) Classroom Building, 10 Wing (C-6) Classroom Building, 70 Wing (K1-A) Science Building, Admin, MPR, Classroom A-1, Library, Locker Bldg, and Portables 81-87 on the campus of Alvarado Intermediate School, located at 1901 South Desire Avenue in the city of Rowland Height, California. Work areas shall include areas of impact where hazardous materials are to be impacted, as outlined in the Table located in Article 1.2.G, below.

### 1.2 SCOPE OF WORK

- A. The main project goal for this project is the complete demolition of the subject buildings, to be replaced by a new structure. All hazardous materials identified within the subject buildings are to be removed as part of the demolition project.
- B. All removal and disturbance of asbestos-containing materials shall be performed by an asbestos abatement contractor, using 32-hour asbestos certified workers (Asbestos Worker trained as outlined in 40 CFR 763). Abatement contractor's workforce shall be supervised by experienced persons trained, knowledgeable and qualified in the techniques of asbestos abatement, handling and disposal of asbestos-containing and/or asbestos-contaminated materials, and the subsequent cleaning of contaminated areas, including, at a minimum, Competent Person/Contractor Supervisor training as outlined in 40 CFR 763.
- C. All removal and disturbance of lead-based materials shall be performed by a state-licensed contractor, using DHS-certified workers with at least one DHS-certified Supervisor. All removal and disturbance of lead-containing materials (not meeting the definition of "lead-based") as defined in 8 CCR 1532.1, shall be performed by a state-licensed contractor, using lead-trained workers with certification of training meeting the requirements of 8 CCR 1532.1. Abatement contractor's workforce shall be supervised by experienced persons trained, knowledgeable and qualified in the techniques of lead abatement, handling and disposal of lead-containing and/or lead-contaminated materials, and the subsequent cleaning of contaminated areas.
- D. When exposure monitoring of a particular lead-related task indicates that the permissible exposure limit is or will be exceeded, the contractor shall use DHS-certified lead workers to complete the task. Contractors performing work that disturbs any LCM must submit proof of negative exposure assessment (NEA) if personal protective equipment is not to be used.
- E. For Cal/OSHA compliance purposes, all other painted, varnished, and glazed surfaces identified in the Hazardous Materials Survey Report (see Attachment A) as lead-containing surface coatings (LCSCs) require that contractors performing activities that will disturb these surfaces/materials comply with the requirements of 8 CCR 1532.1. These surfaces were identified in the above-referenced report to have detectable levels of lead, at concentrations less than 0.7 mg/cm<sup>2</sup> lead (the LBP standard) by X-Ray fluorescence.
- F. Contractor shall utilize employees with HAZWOPER training, as outlined in 29 CFR 1910.120 and 8 CCR 5192, when handling all "other" hazardous materials, including fluorescent light ballasts and tubes, mercury switches, refrigerants, batteries, and the like.

- G. Contractor shall furnish all labor, materials, services, insurance (specifically covering the handling and transportation of asbestos, lead, and other hazardous materials), and equipment which is specified, shown or reasonably implied for the removal, transport, and disposal of the hazardous materials identified in the following table:

<b>60 Wing (C-1) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
9" Beige Floor Tile and Associated Black Mastic	Rooms 61 to 64 (under carpet), suspected below cabinets and below non-load barring walls. Material is also assumed below cabinets	4,200 sq. ft. Complete Removal
Carpet Glue (Green & Black) (2 layers of carpeting)	Rooms 61 to 64 Throughout	4,200 sq. ft. Complete Removal
Window Putty	Exterior Windows	32 Window Banks
Beige Stucco Plaster	Exterior Ceilings and Overhand Walkways, and small areas on walls	1,200 sq ft Spot removal/impact as required to accommodate new construction
Sink Undercoating	Rooms 61, 62, 63, 64	5 ea
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
Lead-Based Containing Surface Coatings	Exterior Wood Wall	Spot removal as required to accommodate new construction
	White Wood Soffit Trim	Spot removal as required to accommodate new construction
	Blue Metal Beams	Spot removal as required to accommodate new construction
	Blue Metal Doors	Component removal as required to accommodate new construction
	Green Wood Door Frames	Component removal as required to accommodate new construction

<b>60 Wing (C-1) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead-Based Containing Surface Coatings	Blue Exterior Wood Bench	Component removal as required to accommodate new construction
	Blue Metal Flashing	Component removal as required to accommodate new construction
Lead Bearing Substances	Blue & White Metal Door Frame	9 ea
	Blue Wood Door	9 ea
	Brown Wood Window Header	32 window banks
	Grey Ceramic Window Sill	15 In ft ea, 32 window banks
	Exterior H.M. Gate Frame	6 ea
	Blue Wood Fascia	200 In ft
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

<b>50 Wing (C-2) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
9" Beige Floor Tile and Associated Black Mastic	Rooms 51 to 54 (under carpet), material is also assumed below cabinets	4,200 sq. ft. Complete Removal
Carpet Glue (Green & Black) (2 layers of carpeting)	Rooms 51 to 54 walk	4,200 sq. ft. Complete Removal
Window Putty	Exterior Windows	32 window banks
Beige Stucco Plaster	Exterior Ceilings and Overhand Walkways, and small areas on walls (Exterior sink)	1,200 sq ft Spot removal/impact as required to accommodate new construction
TSI Pipe Insulation and Elbows	Above Ceilings of Rooms 51 to 54	300 In ft, 24 Elbows
Sink Undercoating	Rooms 51-54	4 ea
White Mesh Vibration	Attic on Ducting	100 In ft
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
Lead-Based Containing Surface Coatings	Exterior Wood Wall	Spot removal as required to accommodate new construction
	White Wood Soffit Trim	Spot removal as required to accommodate new construction
	Blue Metal Beams	Spot removal as required to accommodate new construction
	Blue Metal Doors	Component removal as required to accommodate new construction
	Green Wood Door Frames	Component removal as required to accommodate new construction

<b>50 Wing (C-2) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead-Based Containing Surface Coatings	Blue Exterior Wood Bench	Component removal as required to accommodate new construction
	Blue Metal Flashing	Component removal as required to accommodate new construction
Lead Bearing Substances	Blue & White Metal Door Frame	10 ea
	Blue Wood Door	10 ea
	Brown Wood Window Header	32 banks
	Grey Ceramic Window Sill	15 In ft ea, 32 window banks
	Exterior H.M. Gate Frame	6 ea
	Blue Exterior Fascia Boards	120 In ft
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

40 Wing (C-3) Classroom Building		
MATERIAL	LOCATION OF MATERIAL	ESTIMATED TOTAL QUANTITY
Beige Stucco Plaster	Exterior Ceilings and Overhand Walkways, and small areas on walls	Spot removal/impact as required to accommodate new construction
Window Putty (Check For Transite)	Rooms 41- 44	27 Window Banks
9" Green Floor Tile & Mastic (Under Blue Carpet, 2 layers of carpeting)	Rooms 41, 42 and 44, material is also assumed below cabinets	3,200 sq. ft. Complete Removal
9" Brown Floor Tile & Mastic (Under Carpet, 2 layers of carpeting)	Room 43	1,100 sq. ft. Complete Removal
4 X 2 Transite Panels	Exterior Southside of Rooms 43 and 44 (Also on some widow paneling)	32 sq ft Spot removal as required to accommodate new construction
TSI Pipe and Elbows (including contaminate blown insulation in attic)  (Abatement and clean shall be performed under an approved <u>SCAQMD Procedure 5</u> )	Attic  <u>TSI Debris above Room 42</u>	300 In ft, 24 Elbows
White Mesh Vibration	Attic on Ducting	100 In ft
Sink undercoating	Rooms 41 & 42	4 ea
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
Lead-Based Containing Surface Coatings	Blue Metal Beams	Spot removal as required to accommodate new construction
	Blue Metal Doors	Component removal as required to accommodate new construction
	Blue Wood Fascia	Spot removal as required to accommodate new construction
Lead-Based Containing Surface		

<b>40 Wing (C-3) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Coatings	White Plaster Wall Assemblies	Spot removal as required to accommodate new construction
	Blue Metal Flashing	Spot removal as required to accommodate new Roofing
Lead Bearing Substances	Exterior H.M. Gate Frame	6 ea
	Blue Wood Door	10 ea
	White/ Blue Metal Door Frame	10 ea
	Brown/ White Wood Window Header	27 banks
	Grey Ceramic Window Sill	15 In ft ea, 27 window banks
	White/ Blue Window panel	7 ea
	White/Blue Metal post	27 banks
	Asbestos Cement Window Panel (Transite)	32 sq ft
	Exterior Work Bench	4 ea
	Blue Wood Fascia Boards	400 In ft
	Exterior H.M. Gate Frame	6 ea
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

<b>30 Wing (C-4) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
9" Beige Floor Tile and Associated Black Mastic (Under Carpet, double layer tile)	Rooms 31 to 34, material is also assumed below cabinets	4,200 sq. ft. Complete Removal
Carpet Glue (Layered with Leveling Compound Black Mastic, 2 layers of carpeting)	Rooms 31 to 34	4,200 sq. ft. Complete Removal
TSI Pipe Insulation and Elbows	Above Ceilings in Rooms 31 to 34	300 In ft, 24 Elbows
Grey Window Putty	Exterior Windows of Rooms 31 to 34	32 Window banks
Sink undercoating	Rooms 31 to 34	4 ea
Beige Stucco Plaster	Exterior Ceilings and Overhand Walkways, and small areas on walls	1,600 sq ft Spot removal/impact as required to accommodate new construction
White Mesh Vibration	Attic on Ducting	100 In ft
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
Lead-Based Containing Surface Coatings	Blue Metal Beams	Spot removal as required to accommodate new construction
	Blue Metal Doors	Component removal as required to accommodate new construction
	Blue Wood Fascia	Spot removal as required to accommodate new construction
	White Plaster Wall Assemblies	Spot removal as required to accommodate new construction
Lead-Based Containing Surface Coatings	Blue Metal Flashing	Spot removal as required to accommodate new Roofing

<b>30 Wing (C-4) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	Exterior H.M. Gate Frame	6 ea
	Blue Wood Door	10 ea
	White/ Blue Metal Door Frame	10 ea
	Brown/ White Wood Window Header	27 banks
	Grey Ceramic Window Sill	15 ln ft ea, 27 window banks
	White/ Blue Window pane	7 ea
	White/Blue Metal post	27 ea
	Asbestos Cement Window Panel (Transite)	32 sq ft
	Exterior Work Bench	4 ea
	Blue Wood Fascia Boards	400 ln ft
	Exterior H.M. Gate Frame	6 ea
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

<b>20 Wing (C-5) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Stucco/Plaster (ACCM)	Exterior Ceilings and Overhand Walkways, and small areas on walls (exterior drinking fountain)	Spot removal/impact as required to accommodate new construction
Window Putty	Exterior Windows on North & South Side of Classrooms 21, 22, 23, & 24	480 sq ft (32 banks)
Black Mastic and Yellow Glue	Rooms 21 (Under Carpet), 22 (Under Carpet), 23, & 24, material is also assumed below cabinets	700 sq. ft. Removal as required to accommodate new construction & Saw Cutting
White Duct Vibration Mesh	Attic	100 sq ft
TSI Pipe and Elbows	Attic	430 In ft 24 Elbows
Sink undercoating	Rooms 21 - 24	4 ea
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
Lead-Based Containing Surface Coatings	Fiberglass Ceiling Panels	Spot removal as required to accommodate new construction
	White Plaster Wall Assemblies	Spot removal as required to accommodate new construction
	Blue Metal Flashing	Spot removal as required to accommodate new Roofing
Lead Bearing Substances	White Metal Door Frames	10 ea
	Blue Metal/Wood Door Assemblies	10 ea
	Brown Wood Window Assemblies	200 sq ft (32 banks)
Lead Bearing Substances	White Ceramic Tile	15 In ft ea, 32 window banks
	Brown Wood Window Assemblies	400 sq ft (32 banks)
	Blue Wood Siding	200 sq. ft.

<b>20 Wing (C-5) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
	Blue Wood Fascia Boards	400 In ft
	Exterior H.M. Gate Frame	6 ea
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

<b>10 Wing (C-6) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Black Mastic and Yellow Glue	Under Carpet in Rooms 11 to 14, material also assumed below cabinets	700 sq. ft. Removal as required to accommodate new construction & Saw Cutting
Grey Window Putty	South & North Sides of Rooms 11 to 14	450 sq ft (32 banks) Spot removal as required to accommodate new construction
Sink undercoating	Rooms 11-14	4 ea
Asbestos Button Mastic	Behind all Chalkboards/Tack Boards	Assumed
White Duct Vibration Mesh	Attic	100 sq ft
Lead-Based Containing Surface Coatings	White Plaster Wall Assemblies	Spot removal as required to accommodate new construction

<b>10 Wing (C-6) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead-Based Containing Surface Coatings	Blue Wood Walls	Spot removal as required to accommodate new construction
	Exterior Wood Bench	Component removal as required to accommodate new construction
Lead Bearing Substances	Blue Wood Door	10 ea
	White Metal Door Frame	10 ea
	White Gypsum Board Ceiling	80 sq ft
	White Gypsum Board Wall	50 sq ft
	Brown Wood Window Assemblies	20 sq ft (32 banks)
	White Ceramic Window Frame	15 ln ft ea, 32 window banks
	Blue Wood Siding	45 sq ft
	Exterior H.M. Gate Frame	6 ea
CFC - HVAC Unit	Wall mount	28 lbs (4 units)
PCB – Ballast	Interior	42 ea
Fluorescents Tubes	Interior	168 ea
Mercury Thermostat	Interior	4 ea

<b>70 Wing (K1-A) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Beige Stucco Plaster	Exterior Ceilings and Overhand Walkways, and small areas on walls	Spot removal/impact as required to accommodate new construction
Window Putty	Windows of Rooms 71, 72 & 73	620 sq ft (33 banks) Spot removal as required to accommodate new construction
Brown Textured Ceiling Coat	Storage Room	288 sq ft
TSI Pipes and Elbows	Boiler Room and Attic	410 In ft 24 elbows Spot removal as required to accommodate new construction
White Vibration Mesh on Ducts	Attic, Ducting HVAC	200 sq ft Spot removal as required to accommodate new construction
9" Floor Tile and Associated Black Mastic (Under two Layers of Carpet)	Rooms 71, 72, 73 & Storage Room, material assumed below cabinets	2,940 sq ft
Asbestos Cement Door Slide (Transite)	Exterior	30 sq ft Component removal as required to accommodate new construction
Sink undercoating	Rooms 71-73	6 ea
Lead-Based Containing Surface Coatings	White Brick Walls	Spot removal as required to accommodate new construction
	Yellow Plaster Ceiling Assemblies	Spot removal as required to accommodate new construction

<b>70 Wing (K1-A) Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead-Based Containing Surface Coatings	Light Brown Wood Doors	Component removal as required to accommodate new construction
	Beige Metal Door Frames	Component removal as required to accommodate new construction
Lead Bearing Substances	Blue Wood Door	10 ea
	White Metal Door Frame	10 ea
	Blue Metal Louver	80 sq ft
	Blue Wood Fascia	200 ln ft
	White Transite Panels	30 sq ft
	Grey Ceramic Window Sill	15 ln ft ea, 33 window banks
	Brown Wood Window Header	33 banks
CFC - HVAC Unit	Wall mount	21 lbs (3 units)
PCB – Ballast	Interior	48 ea
Fluorescents Tubes	Interior	192 ea
Mercury Thermostat	Interior	3 ea

<b>Multi-Purpose Building (MPR)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Drywall Ceiling and Associated Tape & Mud	Lobby, Student Store, Classroom 4 Kitchen and Cafeteria	6,800 sq ft, spot/impact as necessary for new construction
Drywall Wall and Associated Tape & Mud	Classroom 4 (West) and west of Stage by handicap access	8,000 sq ft spot/impact as necessary for new construction
12" Light Brown with Stripes Floor Tile and Associated Mastic	Lobby, Kitchen, Cafeteria, Kitchen Storage and Serving Area	9,000 sq ft, no impact anticipated
Window Putty	Student Store	180 ln ft,
Exterior Stucco and Associated Moisture Paper	Exterior Walls	2,600 sq ft spot/impact as necessary for new construction
Smooth Plaster Ceiling Composite	Boiler Room, Storage next to Boiler Room, Boy's Restroom, Girl's Restroom and Mechanical Room	4,200 sq ft spot/impact as necessary for new construction
HVAC Vibration Joint	S/E of Mechanical Room On One Unit Only	16 ln ft
Lead-Based Containing Surface Coatings	Light Blue Wood Door Blue Metal Door Jam, Cafeteria White Metal Door Jam, Cafeteria White Metal Vent, Stage S/W White Metal Pipe, Kitchen	7 Doors 150 ln ft 150 ln ft 30 sq ft 20 ln ft
Lead Bearing Substances	White Metal Door Jam, Men's Restroom White Drywall Wall, Men's Restroom White Ceramic Wall, Men's Restroom Purple Ceramic Wall, Men's Restroom White Ceramic Toilet, Men's Restroom	-

<b>Multi-Purpose Building (MPR)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Drywall Ceiling, Men's Restroom White Concrete Wall, Women's Restroom White Drywall Wall, Women's Restroom White Ceramic Wall, Women's Restroom Purple Ceramic Wall, Women's Restroom White Ceramic Sink, Women's Restroom White Drywall Ceiling, Women's Restroom White Wood Door Jam, Electrical Room S White Plaster Wall, Electrical Room	-
Lead Bearing Substances	White Metal Door Jam, Student Serving Blue Metal Door Jam, Student Serving White Brick Wall, Student Serving White Drywall Wall, Student Serving White Brick Wall White Metal Door Jam White Brick Wall, Cafeteria Brown Wood Shelve, Cafeteria Brown Wood Shelve, Cafeteria White Drywall Wall, Stage White Metal Vent Frame, Stage	-
Lead Bearing Substances	Brown Metal Wall Frame, Cafeteria White Metal Wall, Cafeteria Brown Metal Wall Frame, Cafeteria White Metal Wall, Cafeteria White Concrete Wall, Kitchen White Concrete Wall, Kitchen White Concrete Wall, Kitchen White Plaster Ceiling, Janitor Closet White Wood Cabinets, Janitor Closet	-
CFC - HVAC Unit	Wall mount	3 @ 7 lbs containers
PCB – Ballast	Interior	103 ea
Fluorescents Tubes	Interior	415 ea

<b>Administration Building (AL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Drywall Ceiling and Associated Tape & Mud	Throughout Building	5,000 sq ft spot/impact as necessary for new construction
Drywall Fire Wall	Attic of Both Restrooms 1 & 2	200 sq ft spot/impact as necessary for new construction
Drywall Ceiling and Associated Tape & Mud Note: This drywall is different from the rest of the building	Restrooms 1 & 2	200 sq ft spot/impact as necessary for new construction
Drywall Wall and Associated Tape & Mud	Restrooms 1 & 2	800 sq ft spot/impact as necessary for new construction
Transite Panel	Nurses Office	200 sq ft
Aluminum Windows Caulking	Exterior of Windows Between Brick Walls and Exterior Stucco	1.300 sq ft
Lead-Based Containing Surface Coatings	Light Blue Wood Door Conference Room	7 each
	Blue Wood Door Jam Conference Room	150 ln ft
	White Metal Door Jam Conference Room	150 ln ft
	White Metal Window Panels Conference	400 sq ft
	White Ceramic Sink Copy Room	
	Grey Ceramic Wall Trim, Office Manager	1 each 60 ln ft
	White Steel Downspout, Exterior	90 ln ft
	White Metal Raingutter, Exterior	50 ln ft
	White Steal Beam	50 ln ft
Blue Steel Beam	30 ln ft	
Lead Bearing Substances	White Plaster Wall Conference Room White Brick Wall Vice Principal White Brick Wall Vice Principal Brown Metal Door Jam Vice Principal Blue Drywall Wall Counselor Blue Drywall Wall Counselor Brown Metal Door Jam Counselor Brown Metal Window Frame Counselor Blue Wood Door Conference Room	-

<b>Administration Building (AL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Drywall Wall Conference Room White Wood Door Hall White Metal Door Jam Hall White Plaster Wall Hall White Wood Door Hall White Plaster Wall Faculty Restroom White Ceramic Wall Faculty Restroom Purple Ceramic Wall Faculty Restroom	-
Lead Bearing Substances	Grey Ceramic Floor Faculty Restroom Purple Ceramic Floor Faculty Restroom White Ceramic Sink Faculty Restroom White Ceramic Urinal Faculty Restroom White Plaster Wall Faculty Restroom White Plaster Wall Copy Room White Plaster Wall Copy Room White Brick Wall Copy Room Light Tan Wood Cabinets Copy Room Light Tan Wood Cabinets Copy Room Tan Wood Cabinets Copy Room Tan Wood Cabinets Copy Room White Wood Counter Copy Room White Drywall Wall Supply Room	-
Lead Bearing Substances	White Brick Wall Office Manager White Plaster Wall Office Manager White Drywall Wall Principal White Wood Door Principal White Plaster Wall Receptionist White Brick Wall Receptionist White Plaster Wall Receptionist Grey Wood Counter Receptionist White Brick Wall Office #1 White Wood Door Jam Office #1 White Plaster Wall Nurse's Office White Plaster Wall Nurse's Office White Brick Wall Nurse's Office White Brick Wall Nurse's Office Tan Wood Cabinets Nurse's Office Green Wood Cabinets Nurse's Office Yellow Wood Cabinets Nurse's Office White Wood Counter Nurse's Office White Wood Ceiling Trim Nurse's Office White Drywall Wall Nurse's Restroom White Drywall Wall Nurse's Restroom White Ceramic Wall Nurse's Restroom Purple Ceramic Wall Nurse's Restroom Grey Ceramic Floor Nurse's Restroom White Ceramic Sink Nurse's Restroom White Ceramic Toilet Nurse's Restroom Blue Metal Trim Exterior White Stucco Trim Exterior White Stucco Overhang Exterior	-

<b>Administration Building (AL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	Blue Metal Window Frame Exterior Blue Metal Trim Exterior Blue Wood Trim Exterior White Stucco Overhang Exterior Blue Wood Window Panel Exterior Red Concrete Door Stripe Exterior White Wood Wall Exterior White Wood Wall Exterior Grey Metal Door, Office #3 Green Brick Wall, Office #3 Brown Metal Door Jam, Office #3	-
CFC - HVAC Unit	Wall mount	2 @ 7 lbs containers
PCB – Ballast	Interior	60 ea
Fluorescents Tubes	Interior	240 ea

<b>A1 Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
HVAC Duct Encasing Drywall and Tape and Mud	Attic Space N/E Above Boiler Room at Room 2	80 sq ft
TSI Elbows	Classroom 2 Ceiling Space, Boiler Attic and Boiler Room	10 Elbows
9" Brown Floor Tile and Associated Mastic	Boiler Room	150 sq ft, no impact anticipate
Lead-Based Containing Surface Coatings	Yellow Wood Cabinet Orange Wood Cabinet Light Blue Metal Door Jam White Metal Door Jam White Metal Window Frame White Steel Pole White Wood Door White Plaster Wall Brown Metal Ladder Cover Brown Metal Ladder Red Metal Fire Blanket Storage Blue Ceramic Wall Blue Metal Wall Frame	350 sq ft 350 sq ft 120 In ft 100 In ft 30 each 10 In ft 4 each 1 each 30 sq ft 1 each 1 each 100 sq ft 20 In ft

<b>A1 Classroom Building</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Plaster Walls White Wood Cabinet Green Metal Stove Light Blue Wood Door White Wood Door Jam White Stucco Wall Blue Plaster Wall White Wood Wall Red Metal Fire Blanket Storage Light Blue Steel Window Frame Light Blue Stucco Wall Red Concrete Door Stripe Blue Stucco Wall Blue Metal Trim	-
CFC - HVAC Unit	Wall mount	2 @ 7 lbs containers
PCB – Ballast	Interior	40 ea
Fluorescents Tubes	Interior	160 ea
Mercury Thermostat	Interior	2 ea

<b>Boys &amp; Girls Lockers (SL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
TSI Debris (including insulation) (Under Approved SCAQMD Procedure 5 Plan) Clean up will be required prior to access to area by trades	Throughout Attic Space,	7,000 sq ft
Drywall Ceiling and Associated Tape & Mud	Weight Room, Boys Restroom, Girls Restroom, Boys and Girls Coaches Offices	1,600 sq ft, spot/impact as necessary for new construction
Sand Plaster Ceiling	Boys and Girls Lockers and Mechanical Room	4,900 sq ft spot/impact as necessary for new construction
Sand Plaster Wall	Mechanical Room	3,400 sq ft spot/impact as necessary for new construction
Floor Tile & Associated Mastic and Blue Carpet Glue	Weight Room	800 sq ft, no impact anticipated
Exterior Stucco and Associated Moisture Paper	Exterior Walls	800 sq ft spot/impact as necessary for new construction
Lead-Based Containing Surface Coatings	White Ceramic Air Dry Unit, Restroom (Girls)	2 ea
	White Metal Door Jam, PE Classroom	200 In ft
	Blue Wood Door, PE Classroom	15 each
	Blue Metal Door Jam, PE Classroom	400 In ft
Lead-Based Containing Surface Coatings	White Ceramic Hand Air Dryer Unit, Boys Locker Restroom	4 each
	White Steel Window Frame , Boys Locker,	150 In ft
	Blue Ceramic Wall, exterior N	250 sq ft
	Blue Ceramic Wall, exterior N/W	250 sq ft
	Blue Steel Post	150 In ft

<b>Boys &amp; Girls Lockers (SL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Drywall Wall, Restroom (Girls Locker) White Ceramic Wall, Restroom (Girls Locker) Grey Ceramic Floor, Restroom (Girls Locker) Blue Ceramic Floor, Restroom (Girls Locker) White Ceramic Sink, Restroom (Girls Locker) White Ceramic Toilet, Restroom (Girls Locker) White Drywall Wall, Restroom (Girls Locker) White Metal Door Jam, Girls Locker Green Wood Window Sill, Girls Locker White Wood Window Frame, Girls Locker White Metal Door Vent, Girls Locker Grey Torazo Wall, Girls Locker White Brick Wall, Girls Locker	-
Lead Bearing Substances	White Plaster Wall, Girls Locker White Plaster Ceiling, Girls Locker Tan Metal Locker, Girls Locker Green Metal Locker, Girls Locker Blue Metal Locker, Girls Locker White Drywall Wall, PE Office Restroom White Drywall Ceiling, PE Office Restroom	-
Lead Bearing Substances	White Drywall Wall, Restroom (Girls Locker) White Ceramic Wall, Restroom (Girls Locker) Grey Ceramic Floor, Restroom (Girls Locker) Blue Ceramic Floor, Restroom (Girls Locker) White Ceramic Sink, Restroom (Girls Locker) White Ceramic Toilet, Restroom (Girls Locker) White Drywall Wall, Restroom (Girls Locker) White Metal Door Jam, Girls Locker Green Wood Window Sill, Girls Locker White Wood Window Frame, Girls Locker White Metal Door Vent, Girls Locker Grey Torazo Wall, Girls Locker White Brick Wall, Girls Locker White Plaster Wall, Girls Locker White Plaster Ceiling, Girls Locker Tan Metal Locker, Girls Locker Green Metal Locker, Girls Locker Blue Metal Locker, Girls Locker White Drywall Wall, PE Office Restroom White Drywall Ceiling, PE Office Restroom	-

<b>Boys &amp; Girls Lockers (SL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Ceramic Wall, PE Office Restroom Blue Ceramic Wall, PE Office Restroom Grey Ceramic Wall, PE Office Restroom White Ceramic Sink, PE Office Restroom White Ceramic Toilet, PE Office Restroom White Metal Door Jam, PE Office Restroom White Drywall Wall, PE Office White Stucco Wall, PE Office White Stucco Ceiling, PE Office Center Tan Wood Drawer, PE Office Orange Wood Drawer, PE Office Grey Ceramic Floor, PE Office Center Blue Ceramic Floor, PE Office Center Blue Metal Door, Exterior Blue Metal Door Jam, Exterior White Brick Wall, PE Classroom White Drywall Wall, PE Classroom White Wood Wall, PE Classroom White Plaster Wall, Storage White Drywall Ceiling, Boys PE Office Restroom White Ceramic Wall, Boys PE Office Restroom Blue Ceramic Wall, Boys PE Office Restroom Blue Ceramic Floor, Boys PE Office Restroom Lt Blue Ceramic Wall, Boys PE Office Restroom White Ceramic Sink, Boys PE Office Restroom White Metal Door Jam, Boys PE Office Restroom	-
Lead Bearing Substances	Green Wood Window Sill, Boys Locker Restroom White Wood Window Frame, Boys Locker White Metal Cabinet, Boys Locker White Plaster Wall, Boys Locker White Plaster Ceiling, Boys Locker White Metal Beam Panel, Boys Locker White Ceramic Urinal, Boys Locker Grey Torazo Wall, Boys Locker	-
Lead Bearing Substances	Green Metal Locker, Boys Locker Grey Metal Locker, Boys Locker Tan Metal Locker, Boys Locker Grey Metal Locker, Boys Locker Tan Metal Locker, Boys Locker Blue Metal Locker, Boys Locker White Wood Window Trim, Boys Locker Blue Metal Trim, Exterior Blue Wood Trim, Exterior Blue Wood Window Panel, Exterior Blue Metal Trim, Exterior Blue Wood Trim, Exterior Blue Stucco Wall, Exterior White Stucco Wall, Exterior	-

<b>Boys &amp; Girls Lockers (SL)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Plaster Wall, Boys PE Office White Drywall Wall, Boys PE Office Blue Ceramic Floor, Boys PE Office White Metal Door Jam, Boys PE Office White Plaster Ceiling, Boys PE Office White Metal Vent, Boys PE Office White Wood Door, Boys PE Office White Concrete Wall, Boys Locker Restroom White Drywall Wall, Boys Locker Restroom White Drywall Ceiling, Boys Locker Restroom Blue Ceramic Wall, Boys Locker Restroom Grey Ceramic Floor, Boys Locker Restroom Center White Ceramic Toilet, Boys Locker Restroom Grey Metal Door Jam, Boys Locker Restroom	-
CFC - HVAC Unit	Wall mount	2 ea
PCB – Ballast	Interior	60 ea
Fluorescents Tubes	Interior	240 ea

<b>Library Building (LM)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Sink Undercoat Mastic	Teachers Lounge	1 each
Exterior Stucco	Exterior	5,300 sq ft spot/impact as necessary for new construction
Blue Wall Seam Caulking	Exterior	400 In ft
Window Frame Seam Caulking	Library	20 In ft
Exterior Stucco	Exterior Overhang	975 sq ft spot/impact as necessary for new construction
4" TSI Elbow	Electrical Room and Teachers Lounge by Kitchen	30 Elbows
Carpet Glue	Library, Computer Room, Teachers Lounge, MP2 and Copy Room	6,000 sq ft, no impact anticipated
Lead-Based Containing Surface Coatings	White Metal Door Jam Blue Wood Door White Metal Door Frame, Computer Rm, White Wood Door Jam, Book Storage Blue Wood Door Blue Wood Table Drawers, Conference White metal pipe, Speech Room Blue Ceramic Wall, Exterior White Ceramic Drinking Fountain, Exterior Black Metal Wall Frame, Exterior Blue Steel Column, Exterior Red Concrete Door Stripe, Exterior White Metal Pipe Conduit, Janitors Closet White Ceramic Mop Sink, Janitors Closet	200 In ft 7 each 15 In ft 200 In ft 7 ea 350 sq ft 40 In ft 100 sq ft 1 ea 20 In ft 20 sq ft 100 In ft 10 In ft 1 ea
Lead Bearing Substances	White Plaster Wall, Library White Plaster Wall, Library White Plaster Wall, Library Yellow Wood Shelve, Library Yellow Wood Cabinet, Library Yellow Wood Counter, Library Yellow Wood Cabinet, Library White Plaster Wall, Computer Room White Plaster Wall, Computer Room White Plaster Wall, Computer Room Grey Metal Door Jam, Computer Room White Metal Conduit, Computer Room	-

<b>Library Building (LM)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Lead Bearing Substances	White Wood Door Jam, Computer Room White Plaster Wall, Book Store White Plaster Wall, Book Storage White Plaster Ceiling, Book Storage White Metal Door, Computer Room White Plaster Wall, MP2 AVID White Wood Door, MP2 AVID White Wood Door Jam, MP2 AVID White Plaster Wall, Teachers Lounge White Plaster Wall, Teachers Lounge Green Wood Cabinet, Teachers Kitchen Green Wood Counter, Teachers Kitchen	-
Lead Bearing Substances	White Drywall Wall, Staff Restroom White Drywall Wall, Staff Restroom White Drywall Ceiling, Staff Restroom White Metal Vent, Staff Restroom Blue Ceramic Wall, Staff Restroom Grey Ceramic Floor, Staff Restroom Blue Ceramic Floor, Staff Restroom White Ceramic Toilet, Staff Restroom White Drywall Wall, Staff Restroom White Wood Door, Staff Restroom White Plaster Wall, Copy Room White Plaster Wall, Copy Room White Plaster Wall, Copy Room White Plaster Wall, Copy Room White Plaster Wall, Conference Room White Wood Wall, Conference Room White Wood Backsplash, Conference Room White Wood Window Frame, Conference	-
Lead Bearing Substances	Blue Wood Cabinet, Conference Room White Wood Door Jam, Conference Room White Plaster Wall, Speech Room White Plaster Wall, Speech Room White Plaster Wall, Speech Room Black Metal Board Frame, Speech Room White Plaster Wall, Speech Room Yellow Wood Cabinet, Speech Room White Wood Door Jam, Speech Room White Plaster Wall, Teachers Lounge Blue Wood Drawer, Teachers Lounge White Wood Wall, Teachers Lounge White Plaster Wall, Teachers Lounge White Wood Wall, Teachers Lounge Storage Tan Metal Wall-Trim, Teachers storage Tan Stucco Wall, Exterior Tan Stucco Wall, Exterior	-
Lead Bearing Substances	Blue Stucco Wall, Exterior Tan Stucco Overhang, Exterior Blue Metal Trim, Exterior Blue Wood Trim, Exterior Tan Stucco Wall, Exterior Tan Metal Wall Trim, Exterior Tan Stucco Wall, Exterior Tan Metal Wall Trim, Exterior White Plaster Wall, Janitors Closet White Plaster Wall, Janitors Closet White Plaster Wall, Janitors Closet Blue Wood Overhang, Exterior Blue Metal Downspout, Exterior	

<b>Library Building (LM)</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
CFC - HVAC Unit	Wall mount	3 ea
PCB – Ballast	Interior	103 ea
Fluorescents Tubes	Interior	415 ea
Emergency Exits	Interior	4 ea

<b>Room 81</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Hand Rail, Exterior Red Concrete Door Stripe, Exterior	20 ln ft 20 ln ft
Lead Bearing Substances	Blue Metal Door Blue Metal Door Jam Brown Metal Door Jam Blue Metal Beam Overhang Blue Metal Upper Trim Off White Wood Wall Blue Metal Lower Trim Yellow Concrete Door Stripe White Metal Lower Trim	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 82</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	Blue Metal Upper Trim, Exterior Blue Steel Beam Overhang, Exterior Blue Steel Wall Columns, Exterior Metal Handrail ,Exterior	120 In ft 100 In ft 170 In ft 20 In ft
Lead Bearing Substances	White Wood Window Sill White Wood Window Frame Blue Metal Door Blue Metal Door Jam Light Blue Metal Door Jam Blue Wood Overhang White Wood Wall White Wood Wall Metal Lower Trim	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 83</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Handrail	20 In ft
Lead Bearing Substances	Red Metal Beam Blue Metal Door Blue Metal Door Jam Light Blue Metal Door Jam Blue Overhang Beam Blue Metal Overhang Beam Blue Steel Columns Red Concrete Door Stripe Blue Metal Lower Trim White Metal Lower Trim Blue Metal Downspout	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 84</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Handrail	20 ln ft
Lead Bearing Substances	Blue Metal Door Jam White Metal Door Jam Blue Wood Overhang Blue Metal Overhang Beam Blue Metal Upper trim Blue Steel Wall Column Blue Metal Lower Trim White Metal Lower Trim Blue Metal Downspout	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 85</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Handrail	20 ln ft
Lead Bearing Substances	White Metal Lower Trim White Metal Conduit Light Blue Metal Door Jam Blue Metal Door Blue Metal Door Jam Blue Wood Overhang Blue Metal Upper Trim Blue Metal Overhang Beam Blue Steel Wall Column Blue Metal Lower Trim	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 86</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Handrail	20 In ft
Lead Bearing Substances	Light Blue Metal Door Jam Blue Metal Door Blue Metal Door Jam Blue Wood Overhang Blue Metal Overhang Beam Blue Metal Upper Trim White Metal Lower Trim	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Room 87</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Penetration Mastic	Roof	10 sq ft
Lead-Based Containing Surface Coatings	White Metal Handrail	20 In ft
Lead Bearing Substances	Light Blue Metal Door Jam Blue Metal Door Blue Metal Door Jam Blue Wood Overhang Blue Metal Upper trim Blue Metal Overhang White Metal Overhang Blue Metal Downspout Blue Metal Lower Trim Blue Steel Wall Column	-
CFC - HVAC Unit	Wall mount	1 @ 7 lbs containers
PCB – Ballast	Interior	24 each
Fluorescents Tubes	Interior	48 each
Mercury Thermostat	Interior	1 ea

<b>Walkways, Landscape and Grading Areas</b>		
<b>MATERIAL</b>	<b>LOCATION OF MATERIAL</b>	<b>ESTIMATED TOTAL QUANTITY</b>
Underground Transite Pipe (Removal under Approved SCAQMD Procedure 5 Plan)	Throughout, 0-4 feet	200 In ft As encountered during excavation, grading, etc

- H. The Work includes the removal, transport, and disposal of the following contaminated materials.
  - 1. All hazardous materials identified in the table in Article 1.2.G, above.
  - 2. All materials used for work area preparation.
  - 3. All discarded personnel protective equipment.
  - 4. All other potentially contaminated materials.
- I. Other items of work shall include:
  - 1. As per agreement between Contractor and Owner.
- J. Replacement of removed materials:
  - 1. As per agreement between Contractor and Owner. Where replacement applies, replacement materials shall be free of asbestos, lead, or any other material deemed hazardous by the State of California.
- K. Furnishings, cabinets, moveable objects, and equipment temporarily removed to gain access to hazardous materials shall be reinstalled to original location upon completion of work, unless other arrangements and approval have been provided by the Owner.
- L. Damages caused during the performance of abatement activities shall be repaired by Contractor (e.g. paint peeled off by barrier tape, nail holes, water damage, etc.) at no additional expense to Owner, unless other arrangements and approval have been provided by the Owner.
- M. Listed quantities are for budgetary information and are not to be used for bidding purposes. The abatement contractor has the sole responsibility for confirming the location, quantity and degree of difficulty in removing the identified materials.

### **1.3 WORK TO BE PERFORMED BY OTHERS**

- A. As per Project Specifications.

### **1.4 RESPONSIBILITIES OF OWNER**

- A. The Owner will provide daily oversight of and environmental monitoring surrounding the abatement/removal operations.
- B. The Owner will provide existing water, at no cost to the Contractor, for construction purposes.
- C. The Owner will provide existing electrical power, at no cost to the Contractor, for construction purposes.
- D. The abatement contractor shall coordinate with the Owner and/or school representatives for the location of equipment storage, staging and waste storage locations.

## 1.5 REQUIRED LICENSURE

- A. Contractor shall be licensed by the State of California, Contractors State License Board and be registered to perform asbestos related work with the Division of Occupational Safety and Health, Department of Industrial Relations. At a minimum contractor shall hold the following license classifications:
  - 1. ASB - Asbestos Certification
- B. Transportation of Friable and Non-Friable Asbestos Containing Materials: Contractor shall itself be or have a subcontractor who is a registered hazardous waste transporter with the State of California, Department of Toxic Substances Control.
- C. Subcontractors shall hold all licenses applicable to specified trade work.

## 1.6 PERMITS

- A. As required by Cal/OSHA.
- B. As required by the South Coast Air Quality Management District.
- C. As required by Los Angeles City Fire Department.
- D. As required by local agencies for specific tasks (i.e., electrical permit for temporary power, etc.).
- E. SCAQMD Approved Procedure 5 Plans, as required per building for TSI contamination clean-up activities (Attic/Ceiling Spaces of Bldg 40 Wing (C-3) & Library (LM) and all underground asbestos transite encountered. Procedure 5 will need to be submitted to SCAQMD 10 days prior to commencement of Procedure 5 work. Contractor to Coordinate with **ENCORP** to assure submittal to SCAQMD.

## 1.7 NOTIFICATIONS

- A. Contractor shall make all required written notifications to regulatory agencies including the following:
  - 1. California Division of Occupational Safety and Health (Cal/OSHA)
  - 2. South Coast Air Quality Management District (SCAQMD)
  - 3. Department of Health Services (Cal/DHS)

## 1.8 INSURANCE REQUIREMENTS

- A. Contractor and all subcontractors shall maintain, at a minimum, workers compensation insurance at the statutory limits required. This shall, at a minimum, include the limits necessary to maintain their DOSH Asbestos Certification in good standing.
- B. Contractor shall maintain general liability insurance with a minimum rating of A RATING, with a limit of \$5 Million per occurrence and \$5 Million aggregate coverage.
- C. Contractor shall maintain pollution and environmental liability insurance with the same limits and rating requirements as the general liability insurance requirements in Item 1.8.B, above.
- D. Contractor and all subcontractors shall maintain, at a minimum, auto insurance with a minimum rating of A RATING, and a limit of \$2 Million per occurrence and \$2 Million aggregate coverage

## **1.9 BONDING REQUIREMENTS**

- A. Please refer to Rowland USD General Conditions and Requirements from Purchasing.

## **1.10 PROJECT SCHEDULE**

- A. Project Start Date: TBD Project Completion Date: TBD
- B. All work shall be performed as per agreement between Contractor and Owner.
- C. For the purposes of this Work Plan "submittal due date" shall mean the day on which submittals required by Article 1.12 shall be received by the Construction Manager, "start work" shall mean the day Contractor arrives on the project site, and "completion date" shall mean the day Contractor leaves the project site including final clearance testing and demobilization.
- D. Contractor to indicate the number and duration of shifts required to perform abatement monitoring as part of the bid document. Costs associated with hazardous materials abatement monitoring, beyond those pertaining to the project duration indicated in the Contractor's Bid, shall be deducted from Contractor's Contract Amount.

## **1.11 APPLICABLE REGULATIONS**

- A. Contractor shall perform all Work in compliance with the most recent edition of all applicable federal, state, and local regulations, standards and codes governing asbestos abatement, transport, and disposal of asbestos containing/contaminated materials, lead-based/containing surface coatings and contaminated materials, and all other hazardous materials.
  - 1. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with codes, regulations, and standards.
- B. Regulations, Standards, and Codes (General):
  - 1. General applicability of federal, state, and local regulations, standards and codes governing hazardous materials abatement, demolition, transport, and disposal, except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable regulations, standards, and codes have the same force and effect and are made a part of the contract documents as if copied directly into the contract documents, or as if published copies are bound herewith.
- C. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable federal, state, and local regulations pertaining to work practices, transport, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site.
  - 1. The contractor is responsible for providing training, medical examinations and maintaining training/medical records of personnel as required by the applicable federal, state, and local regulations, including personal air monitoring for all work practices.
  - 2. The Contractor shall hold the Owner and Project Environmental Consultant harmless for failure to comply with any applicable hazardous materials abatement, transport, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

## 1.12 SUBMITTALS

- A. No later than five days prior to commencement of work, Contractor shall submit (six copies) to the Project Environmental Consultant documentation that includes, without limitation, the following:
1. Current Copies of licenses and registrations required by Article 1.5 Required Licensure (include copies of subcontractors licenses).
  2. Copies of written notification to the following regulatory agencies:
    - a. California Division of Occupational Safety and Health (Cal/OSHA)
    - b. South Coast Air Quality Management District (SCAQMD)
    - c. Los Angeles City Fire Department Permit
    - d. Department of Health Services (Cal/DHS)
  3. Current Proof of insurance coverage required by Article 1.8 Insurance Requirements (include proof of insurance for subcontractors).
  4. Current Proof that required permits, site location and arrangements for transport and disposal of asbestos containing waste materials have been made.
  5. Current Proof of legal right to use patented equipment or processes.
  6. Current Manufacturer's certification that HEPA vacuums, differential pressure air filtration devices and other local exhaust ventilation equipment conform to ANSI Z9.2-79 and have been permitted by the SCAQMD.
  7. Current Documentation showing that Contractor's employees, including foreman, supervisor, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of asbestos abatement activities, have received training as required by 29 CFR 1926.1101 and 8 CCR 1529.
  8. Current Documentation showing that Contractor's employees, including foreman, supervisor, and any other company personnel or agents who may be exposed to airborne lead dust or who may be responsible for any aspects of lead abatement activities, have received training as required by 29 CFR 1926.62 and 8 CCR 1532.1.
  9. Current Documentation from Physician (signed by an M.D.) showing that all employees or agents who may be exposed to airborne asbestos fibers in excess of background levels have received medical monitoring to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities.
  10. Current Documentation of respirator fit-testing for all Contractor employees and agents who must enter the work area. This fit-testing shall be conducted annually and in accordance with procedures as required by 29 CFR 1910.134 and 8 CCR 5144.

11. An emergency preparedness plan as required by Article 1.15 - Emergency Planning.
  12. Master schedule, showing phasing, number of shifts, time for air clearances, tear down and manpower loading to be utilized for the duration of the project.
  13. Submit a list of at least five projects of similar size, nature, and scope of work, completed within the past three years
  14. A site specific work plan based on scope of work. Include a diagram showing containment set-up, decontamination unit(s), location of negative air machine and exhaust placement.
- B. During abatement activities, Contractor shall submit to Project Environmental Consultant documentation that includes, without limitation, the following:
1. Copies of the work area entry/exit log book. Log book must record name, affiliation, time in, and time out for each entry into the work area.
  2. Copies of logs documenting filter changes on respirators, HEPA vacuums, differential pressure air filtration devices, water filtration device, and other engineering controls.
  3. Copies of Material Safety Data Sheets (MSDS) for solvents, encapsulants, wetting agents, replacement materials, and other substances brought by Contractor to the Project Site. MSDSs shall be available the first day that subject materials/substances are present on the project site.
  4. Results of all required OSHA compliance air monitoring. Results shall be available prior to the start of the following shift and within 24 hours of completion of the last shift.
  5. Copies of all accident/incident reports where injury or damage has occurred on or to the Owner's property.
  6. Copies of daily logs indicating location(s) worked, type of materials removed, quantity of materials removed and number of personnel conducting the aforementioned activities.
  7. Copies of all transport manifests, trip tickets and disposal receipts for all asbestos waste materials removed from the work area within 48 hours of the transport, to:
    - A. ENCORP  
16700 Valley View Ave, Suite 100  
La Mirada, California 90638  
Attn: Alexander Blankevoort
  8. Abatement contractor is responsible for profiling all waste streams at the start of the project. Results must be submitted to the Environmental Consultant for verification of proper disposal.

### **1.13 NOTICES**

- A. Post in the clean room area of the worker decontamination enclosure a list containing the names, and telephone numbers of Owner, Construction Manager, Abatement Contractor, and Project Environmental Consultant.
- B. Post in the clean room area of the worker decontamination enclosure a list of all persons authorized to enter the work area.
- C. Additional postings shall include:
  - 1. Visitor Entry and Exit Log.
  - 2. Employee Daily Sign in Log.
  - 3. Entry and Exit Procedures.
  - 4. Emergency Procedures.
  - 5. Copies of permits required in Article 1.6 of this document and copies of notifications required in Article 1.7 of this document.
  - 6. As required by the Department of Labor.

### **1.14 SITE USE AND SECURITY**

- A. Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond which areas on which work is indicated are not to be disturbed.
- B. The work area shall be restricted only to authorized, trained and protected personnel, including Contractor, Contractor's employees, Owner employees, Owner, Construction Manager, Project Environmental Consultant, State and Local Inspectors.
- C. Entry into the work area by unauthorized individuals shall be reported immediately to the Project Environmental Consultant.
- D. Contractor shall be responsible for Project site security during abatement operations in order to protect work efforts and equipment.

### **1.15 EMERGENCY PLANNING**

- A. Emergency planning and procedures shall be developed by Contractor prior to abatement initiation.
- B. Emergency procedures shall be in written form and prominently posted. Contractor shall ensure that all persons entering the work area read these procedures and understand the Project site layout, location of emergency exits and emergency procedures.
- C. Emergency planning shall include considerations of fire, explosion, electrical hazards, slips, trips and falls, confined spaces, school emergencies and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided by Contractor.
- D. Employees shall be trained in evacuation procedures in the event of work place emergencies.

1. For non-life-threatening situations, employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting the work place to obtain proper medical treatment.
2. For life-threatening injury or illness, worker decontamination shall take least priority. After measures to stabilize the injured worker, remove him from the work place and secure proper medical treatment.
3. Telephone numbers of all emergency response personnel and map to closest hospital shall be prominently posted in the clean and equipment rooms.

#### **1.16 FIRE PROTECTION**

- A. All plastic, spray-on strippable coatings, and structural materials used in the asbestos abatement process shall be UL-approved and certified as fire retardant or noncombustible.
- B. Wood shall be pressure impregnated and certified as fire retardant.
- C. Material Safety Data Sheets (MSDS) for fire retardant materials shall be made available upon request.
- D. All combustible rubbish and debris, including properly bagged asbestos shall be properly disposed of at the end of each working day.
- E. A minimum of one (1) 4A/60BC dry-chemical extinguisher shall be maintained at each of the following locations:
  1. At each corner of the work area. Where no clear corners exist, four (4) extinguishers shall be placed around the exterior wall of the work area so that they are approximately 25 percent of the total distance apart.
    - a. Exception: Where total contained work area is less than 1,000 square feet, two (2) 4A/60BC extinguishers shall be provided. All extinguishers shall be clearly identified with red tape.
  2. Contractor shall ensure that on site personnel are aware of the location and proper use of all extinguishers and other fire/life safety equipment.
- F. All existing fire detection, alarm systems, connections and standpipes shall remain in place, active and unobstructed. Any alteration to this equipment must be approved by Project Environmental Consultant.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Generally, Contractor shall carefully adhere to the following:
1. All plastic, spray-on strippable coatings and structural materials used shall be UL-certified as fire retardant or non-combustible.
  2. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and brand name (where applicable).
  3. Fire-retardant polyethylene sheeting utilized for worker decontamination and construction/containment barriers shall be a minimum of six-mil in thickness.
  4. Disposal bags shall be of six-mil polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.152 (b) (I) (iv) or applicable Cal/OSHA requirements.
  5. Stick-on labels as per EPA or Cal/OSHA requirements for disposal drums.
  6. Warning signs as required by Cal/OSHA shall be utilized.
  7. Disposal drums shall be 55-gallon DOT A1A (DOT 17H) with locking ring tops and will meet the requirements of 49 CFR 172-178.
- B. Removal and Encapsulation:
1. Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in proportion of 1 fluid ounce to 5 gallons.
  2. The encapsulating agent to be applied shall adhere to the substrate surfaces from which asbestos-containing material has been stripped.
  3. The encapsulating agent shall not be flammable and should not be solvent-based or utilize a vehicle (the liquid in which the solid parts of the encapsulant are suspended) consisting of hydrocarbon.
  4. If utilized, mastic removal solvents shall **NOT** be or create a RCRA waste, and shall be of the low odor variety.
- C. Replacement:
1. Submit manufacturers certification indicating that replacement materials (if used) do not contain asbestos or more than 600 parts per million (dry weight) of lead.

## 2.2 EQUIPMENT

### A. General:

1. A sufficient quantity of HEPA vacuums and/or differential pressure air filtration devices equipped with HEPA filtration and operated in accordance with ANSI Z9.2-79 (local exhaust ventilation requirements) and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos Containing Materials in Buildings. To calculate total air flow requirement:

$$\text{Total ft}^3/\text{min} = \frac{\text{Vol. of work area (in ft}^3\text{)}}{15 \text{ min}}$$

To calculate the number of units needed for the abatement:

$$\text{Number of units needed} = \frac{[\text{total ft}^3/\text{min}]}{[\text{capacity of unit in ft}^3/\text{min}]}$$

2. At a minimum, full-face powered air-purifying respirators (PAPRs) with P-100 cartridges shall be utilized during all friable/Class I asbestos removal and for all removal of lead-containing paints/substances involving abrasive removal techniques.
3. At a minimum, half-face air-purifying respirators with P-100 cartridges shall be utilized during all ceramic tile or lead-containing paint removal/impact except abrasive removal, or for the removal of all non-friable/Class II asbestos removal.
4. Respirators shall be furnished to the abatement workers by Contractor. The respirators shall have been tested and approved by National Institute of Occupational Safety and Health (NIOSH) for use in asbestos atmospheres.
5. Full body disposable protective clothing, including head, body, and foot coverings shall be furnished to visitors in sizes adequate to accommodate movement without tearing.
6. Additional safety equipment as supplied in accordance with 8 CCR 1514, (e.g. hard hats meeting the requirements of 8 CCR 1515, eye protection meeting the requirements of 8 CCR 1516, safety shoes meeting the requirements of 8 CCR 1517, hand protection meeting the requirements of 8 CCR 1520, hearing protection meeting the requirements of 8 CCR 1521 and body protection meeting the requirements of 8 CCR 1522), as necessary, shall be furnished to all workers and authorized visitors.
7. Non-skid foot wear shall be furnished to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
8. Furnish a sufficient supply of disposable mops, rags, and sponges for work area decontamination.

- B. Removal:
  - 1. A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be furnished as needed.
  - 2. Rubber dustpans and rubber squeegees shall be furnished for cleanup.
  - 3. Brushes utilized for removing loose asbestos-containing material shall have nylon or fiber bristles, not metal.
  - 4. A sufficient supply of HEPA filtered vacuum systems shall be furnished during cleanup.
- C. Encapsulation: Encapsulants shall be sprayed using airless spray equipment or hand pressurized sprayer.
- D. Enclosure: Hand tools equipped with HEPA filtered local exhaust ventilation shall be utilized during the installation of enclosures and supports if there is any need to disturb asbestos containing materials during this process. As an alternative asbestos material may be partially removed following controlled removal procedures approved by the Project Environmental Consultant.

### **PART 3 - EXECUTION**

#### **3.1 CLASS I ASBESTOS REMOVAL WORK**

The following procedures shall be utilized for all removal of friable and/or Class I ACM, and from non-friable ACM utilizing mechanical removal methods from all impacted buildings.

- A. Contractor shall coordinate all items of work with the Project Environmental Consultant.
- B. Contractor shall shut down and lock out all heating, cooling, and air conditioning system (HVAC) components that are in supply or pass through the work area. In the event that there is any impact to the HVAC system (such as an air intake), the HVAC system shall remain off during the project.
- C. Contractor shall shut down and lock out electric power to all Work Areas. Contractor shall provide temporary power and lighting sources, insure safe installation of temporary power sources and equipment by compliance with all applicable electrical code requirements and Cal/OSHA requirements for temporary electrical systems. Protect each circuit with a Ground Fault Circuit Interrupter (GFCI) of proper size located in the temporary panel.
- D. Install worker decontamination unit described in Article 3.7 or as agreed upon with Project Environmental Consultant.

- E. Post warning signs meeting the specifications of 8 CCR 1529, 8 CCR 5208, and 29 CFR 1926.1101, at any location and approaches to a location where airborne concentration of asbestos fibers may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from a work area to permit a person to read the sign and take necessary protective measures to avoid exposure.
- F. Asbestos Handlers shall don personnel protective equipment as required in Article 2.2 - Equipment.
- G. Pre-clean all vertical and horizontal surfaces within the work area using a HEPA-filtered vacuum and/or wet cleaning techniques, as appropriate. Contractor shall not use any methods that would raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, and shall not disturb asbestos-containing materials during the pre-cleaning phase.
- H. Seal off all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and any other openings between the Work Area and uncontaminated areas outside of the Work Area with two layers six-mil fire retardant polyethylene sheeting and tape.
- I. Cover floors in the area, as follows (cover floors where flooring finishes, such as floor tile and/or mastic, are to be removed, during Class I activities).
  - 1. Two layers of six-mil (minimum) sheeting. Additional layers of sheeting may be utilized as a drop cloth to aid in cleanup of bulk materials, and/or to ensure protection from water leaks.
  - 2. Containment plastic shall be sized to minimize seams. If the floor area necessitates seams, those on successive layers of sheeting shall be staggered to reduce the potential for water to penetrate to the flooring material. A distance of at least 6 feet between seams is sufficient. Do not locate any seams at wall/floor joints.
  - 3. Floor sheeting shall extend at least 12" up the side walls of the Work Area.
  - 4. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material.
- J. Cover all immovable items (plumbing, etc.) and/or construct walls in the Work Area with fire retardant polyethylene sheeting and seal with duct tape. Walls that will be demolished do not necessarily need protection (check with Project Environmental Consultant). Walls shall be decontaminated using HEPA vacuums and wet cleaning techniques. Walls with mortar joints (e.g., tile) are considered porous. Openings through these walls, including louvers in Mechanical Rooms, must be sealed by critical barriers.
  - 1. Walls shall be covered with two layers six-mil fire-retardant polyethylene sheeting (sealed airtight with duct tape).
  - 2. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet.

3. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a better seal against water damage and for negative pressure.
  4. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This will require additional support/attachment when Negative Pressure Ventilation Systems area utilized.
  5. Where necessary for structural support, plywood sheeting and/or 2x4 lumber shall be utilized to ensure the structural integrity of the containment and critical barriers.
  6. Fire exits shall be clearly labeled as required by Regulations.
- K. Install the minimum number of 2' x 3' clear view windows that will provide visual access to ALL areas of each enclosure.
  - L. Install and initiate operation of negative pressure air filtration differential as required in Article 2.2 - Equipment. Negative pressure differential shall be at a minimum of - 0.02" of water column at all times during asbestos removal operations.
  - M. Install and maintain a manometer equipped with a strip chart recorder. Manometer shall be capable of detecting at least 0.02" of water column.
  - N. The Contractor shall carry out all asbestos removal activities in a manner that will minimize pulverizing, breaking or creation of dust. Generally, manual removal methods will be preferred, although larger systems, such as power washers, are acceptable, as long as they are equipped with proper HEPA-filtration equipment and do not create an undue hazard.
  - O. Keep the ACMs being removed wet throughout removal operations by the use of an airless sprayer. In the event that visible dust is generated during the abatement process, also mist the air within containment periodically with water or an amended water solution with an airless sprayer to reduce airborne asbestos fiber concentrations.
  - P. Once all removal activities have been completed, clean-up of the work areas shall be conducted in accordance with Article 3.6 - Clean-Up.
  - Q. Encapsulate entire work area with a penetrating and/or lock-down type encapsulant following acceptance of clean-up activities.
  - R. Dispose of all asbestos containing/contaminated waste in accordance with Article 3.8 - Disposal Procedures.

### 3.2 CLASS II ASBESTOS REMOVAL WORK - GENERAL

The following procedure shall be utilized for all removal of non-friable/Class II ACM from all impacted buildings. This type of work shall include, but not be limited to asbestos-containing mastics, vinyl flooring finishes, asbestos cement pipes and panels, and joint compound associated with wallboard systems. Class II removal of roofing products is addressed in Article 3.3, below.

- A. Contractor shall coordinate all items of work with the Project Environmental Consultant.
- B. Contractor shall shut down and lock out all heating, cooling, and air conditioning system (HVAC) components that are in supply or pass through the work area. In the event that there is any impact to the HVAC system (such as an air intake), the HVAC system shall remain off during the project.
- C. Contractor shall shut down and lock out electric power to all Work Areas. Contractor shall provide temporary power and lighting sources, insure safe installation of temporary power sources and equipment by compliance with all applicable electrical code requirements and Cal/OSHA requirements for temporary electrical systems. Protect each circuit with a Ground Fault Circuit Interrupter (GFCI) of proper size located in the temporary panel.
- D. Install worker decontamination unit described in Article 3.7 or as agreed upon with Project Environmental Consultant.
- E. Post warning signs meeting the specifications of 8 CCR 1529, 8 CCR 5208, and 29 CFR 1926.1101, at any location and approaches to a location where airborne concentration of asbestos fibers may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from a work area to permit a person to read the sign and take necessary protective measures to avoid exposure.
- F. Asbestos Handlers shall don personnel protective equipment as required in Article 2.2 - Equipment.
- G. Pre-clean all vertical and horizontal surfaces within the work area using a HEPA-filtered vacuum and/or wet cleaning techniques, as appropriate. Contractor shall not use any methods that would raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, and shall not disturb asbestos-containing materials during the pre-cleaning phase.
- H. Seal off all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and any other openings between the Work Area and uncontaminated areas outside of the Work Area with two layers six-mil fire retardant polyethylene sheeting and tape.
- I. Cover floors in the area of vapor barrier removal with fire retardant polyethylene sheeting (do not cover floors where flooring finishes, such as floor tile and/or mastic, are to be removed).

1. A single layer of six-mil (minimum) sheeting. Additional layers of sheeting shall be utilized as a drop cloth to aid in cleanup of bulk materials.
  2. Containment plastic shall be sized to minimize seams. If the floor area necessitates seams, those on successive layers of sheeting shall be staggered to reduce the potential for water to penetrate to the flooring material. A distance of at least 6 feet between seams is sufficient. Do not locate any seams at wall/floor joints.
  3. Floor sheeting shall extend at least 12" up the side walls of the Work Area.
  4. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material.
- J. Cover all immovable items (plumbing, etc.) and/or construct walls in the Work Area with fire retardant polyethylene sheeting. Walls that will be demolished do not necessarily need protection (check with Project Environmental Consultant). Walls shall be decontaminated using HEPA vacuums and wet cleaning techniques. Walls with mortar joints (e.g., tile) are considered porous. Openings through these walls must be sealed by critical barriers.
1. Walls shall be covered with two layers six-mil fire-retardant polyethylene sheeting (sealed airtight with duct tape).
  2. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet.
  3. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a better seal against water damage and for negative pressure.
  4. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This will require additional support/attachment when Negative Pressure Ventilation Systems area utilized.
  5. Fire exits shall be clearly labeled as required by Regulations.
- K. Install the minimum number of 2' x 3' clear view windows that will provide visual access to ALL areas of the enclosure.
- L. Install and initiate operation of negative pressure air filtration differential as required in Article 2.2 - Equipment. Negative pressure differential shall be at a minimum of -0.02" of water column at all times during asbestos removal operations.
- M. Install and maintain a manometer equipped with a strip chart recorder. Manometer shall be capable of detecting at least 0.02" of water column.
- N. The Contractor shall carry out all asbestos removal activities in a manner that will minimize pulverizing, breaking or creation of dust. Generally, manual removal methods will be preferred, although larger systems, such as bead-blasters for mastic removal activities, are acceptable, as long as they are equipped with proper HEPA-filtration equipment.
- O. Keep the ACMs being removed wet throughout removal operations. In the event that visible dust is generated during the abatement process, also mist the air within containment periodically to reduce airborne asbestos fiber concentrations.

- P. Once all removal activities have been completed, clean-up of the work areas shall be conducted in accordance with Article 3.6 - Clean-Up.
- Q. Encapsulate entire work area with a penetrating and/or lock-down type encapsulant following acceptance of clean-up activities.
- R. Dispose of all asbestos containing/contaminated waste; debris shall be kept wet at all times and be bagged while wet in accordance with Article 3.8 - Disposal Procedures.

### **3.3 CLASS II ASBESTOS REMOVAL WORK – ROOFING PRODUCTS**

The following procedure shall be utilized for all removal of non-friable/Class II asbestos-containing roofing products, including asphaltic roof membranes, flashings, and related mastics.

- A. Contractor shall coordinate all items of work with the Project Environmental Consultant.
- B. Contractor shall shut down and lock out all heating, cooling, and air conditioning system (HVAC) components that are in supply or pass through the work area. In the event that there is any impact to the HVAC system (such as a fresh air intake), the HVAC system shall remain off during the project.
- C. Contractor shall shut down and lock out electric power to all Work Areas. Contractor shall provide temporary power and lighting sources, ensure safe installation of temporary power sources and equipment by compliance with all applicable electrical code requirements and Cal/OSHA requirements for temporary electrical systems. Protect each circuit with a Ground Fault Circuit Interrupter (GFCI) of proper size located in the temporary panel.
- D. Install worker decontamination unit described in Article 3.7 or as agreed upon with Project Environmental Consultant. If installation cannot occur on the roof, installation shall occur as close to the roof access as possible, with polyethylene sheeting laid-down between the decontamination unit and the roof access.
- E. Post warning signs meeting the specifications of 8 CCR 1529, 8 CCR 5208, and 29 CFR 1926.1101, at any location and approaches to a location where airborne concentration of asbestos fibers may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from a work area to permit a person to read the sign and take necessary protective measures to avoid exposure (generally, at roof accesses, or at least twenty feet from removal, if on roof).
- F. Asbestos Handlers shall don personnel protective equipment as required in Article 2.2.A. Double-suiting is recommended if decontamination unit is not on roof.
- G. Pre-clean all vertical and horizontal surfaces within the work area using a HEPA-filtered vacuum and/or wet cleaning techniques, as appropriate. Generally, this will include roof-mounted duct work and equipment only; there is no need to pre-clean surfaces to be removed. Contractor shall not use methods that would raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, and shall not disturb asbestos-containing materials during the pre-cleaning phase.

- H. Seal off all windows, doorways, drains, ducts, skylights, roof penetrations, and any other openings between the Work Area and uncontaminated areas outside of the Work Area with six-mil fire retardant polyethylene sheeting and tape.
- I. Cover all immovable items (plumbing, etc.) and/or construct walls around immovable objects with fire-retardant polyethylene sheeting. Walls, where present, shall be decontaminated using HEPA vacuums and wet cleaning techniques. Walls with mortar joints (e.g., tile) are considered porous. Openings through these walls must be sealed by critical barriers.
  - 1. Walls shall be covered with six-mil fire-retardant polyethylene sheeting (sealed airtight with duct tape).
  - 2. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet.
  - 3. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a better seal against water damage and for negative pressure.
  - 4. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This will require additional support/attachment when Negative Pressure Ventilation Systems area utilized.
  - 5. Fire exits shall be clearly labeled as required by Regulations.
- J. The Contractor shall carry out all asbestos removal activities in a manner that will minimize pulverizing, breaking or creation of dust. Generally, manual removal methods will be preferred, although larger systems, such as mechanical shears for cutting membranes into strips, are acceptable, as long as they are equipped with proper shrouding and HEPA-filtration equipment.
- K. Keep the ACMs being removed wet throughout removal operations. In the event that visible dust is generated during the abatement process, also mist the air within regulated area periodically to reduce airborne asbestos fiber concentrations.
  - 1. Bags of asbestos waste shall not be dropped or thrown from the roof, but carefully lowered to the ground.
- L. Once all removal activities have been completed, clean-up of the work areas shall be conducted in accordance with Article 3.6 - Clean-Up.
- M. Encapsulate entire work area with a penetrating and/or lock-down type encapsulant following acceptance of clean-up activities.
- N. Dispose of all asbestos containing/contaminated waste in accordance with Article 3.8 - Disposal Procedures.

### 3.3.1 Class III Asbestos Disturbance

Asbestos-related disturbance is the drilling, coring, removal or similar disturbance of asbestos-containing construction materials (ACCM) or asbestos-containing materials (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). Asbestos-related disturbance work is considered to be Class III work in accordance with Title 8, Section 1529 (Asbestos) of the California Code of Regulations. In the event that disturbance greater than 3 square feet or 100 square feet total is required, the asbestos-related work shall be considered Class I or Class II asbestos abatement and require the use of an asbestos abatement contractor using 40-hour asbestos-trained workers and notification to the South Coast Air Quality Management District (SCAQMD) per Rule 1403, as required, (See Sections 3.1, 3.2, and 3.3 of this specification).

- A. Minor disturbance activities must be performed, at a minimum, by personnel possessing current 16-hour asbestos operations and maintenance (O & M) training. ACM waste must be disposed of as hazardous asbestos-containing waste. ACCM waste generated during minor disturbances can be disposed of as non-regulated construction waste.
- B. The following buildings will have ACM or ACCM impacted by drilling and coring during the planned Modernization Project.

Building Name	Materials and Locations
Building C1 (60 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls
Building C2 (50 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls
Building C3 (40 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls
Building C4 (30 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls
Building C5 (20 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls
Building K1-A (70 Wing)	Beige Stucco Plaster ( <u>ACCM</u> ) - Exterior Ceilings and Overhand Walkways, and small areas on walls

- C. Shut off air handling equipment to rooms where work will occur.
- D. Demarcate the work area with plastic "Caution" tape. Provide and post signs at the entrance to the work area affected. The signs shall comply with Cal/OSHA regulations.
- E. Clean the area immediately under the location to be disturbed.
- F. Move any moveable furniture or objects from immediately beneath the area to be disturbed.

- G. At a minimum, 6-mil plastic sheeting shall be placed on the floor below the work area. The plastic sheeting will be secured to the closest wall and floor surface with tape. The plastic sheeting shall extend away from the work area a sufficient distance so that debris is confined to the plastic and that debris is not tracked onto adjoining flooring or carpeted surfaces.
- H. For Class III disturbances requiring the cutting of an opening of 1 square foot or greater, but less than 3 square feet, through ACM or ACCM, or into an asbestos-contaminated space, provide an enclosure around the area of disturbance. This may include, but is not limited to:
  - 1. Mini-enclosure where not more than two persons may occupy for the purpose cutting holes in walls or ceilings.
  - 2. For drilling, coring, sawing or similar disturbance, an enclosure shall be placed over the area of disturbance of sufficient size to cover that area and contain the tools used. This can include drilling with a shroud, through a wet sponge, through a plastic enclosure, or similar designs which will ensure control of Asbestos fibers and other dust. Drilling or coring with the use of a vacuum collection device shall be equipped with a HEPA filter.
- I. A HEPA-equipped vacuum shall be used for all disturbance, decontamination, and debris clean-up work.

#### **3.4 LBP/LCP IMPACTS – REMOVAL/DEMOLITION**

This section applies to the removal of lead-based paints and/or the demolition of components coated with lead-based or lead-containing surface coatings, including lead-based paints, ceramic tiles with leaded glazing, and other such materials.

- A. Post warning signs meeting the specifications of 8 CCR 1532.1 and 29 CFR 1926.62 at any location and approaches to a location where airborne concentrations of lead dust may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from a work area to permit a person to read the sign and take necessary protective measures to avoid exposure. Barrier tape shall be utilized in conjunction with signs for exterior removal activities, to delineate the extent of regulated work areas.
- B. Prepare appropriate fall protection systems in accordance with the requirements of Title 8 California Code of Regulations, Sections 1669, 1670, 1724 and anchoring guidance from Title 8 California Code of Regulations, Section 3283 (where applicable).
- C. Install worker decontamination unit described in Article 3.7 or as agreed upon with Project Environmental Consultant.
- D. Lead-containing materials (LCM) handlers involved in removal procedures shall wear two disposable Tyvek suits, including gloves, hood and footwear. Minimum respiratory protective equipment shall be half-face air-purifying respirators equipped with P100 filters. Upon exiting the work area the handlers shall HEPA vacuum all visible debris from the outer suit, dispose of it as lead-contaminated waste, and proceed through the decontamination unit for full decontamination.

- E. Isolate work area by installing critical barriers or curtained doorways across all openings where airborne lead dust migration may cause secondary lead contamination (for work where components will be removed relatively intact, such as doors, downspouts, and wood trim, drop cloths will suffice).
- F. Cover floors in each work with fire retardant polyethylene sheeting (do not cover floors where flooring finishes, such as ceramic flooring, for example, are to be removed).
  - 1. A single layer of six-mil (minimum) sheeting.
  - 2. Containment plastic shall be sized to minimize seams.
  - 3. Where multiple layers of floor poly are utilized, sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material.
- G. Cover all immovable items and/or construct walls in the Work Area with fire retardant polyethylene sheeting. Walls that will be demolished do not necessarily need protection (check with Project Environmental Consultant).
  - 1. Walls shall be covered with six-mil fire-retardant polyethylene sheeting (sealed airtight with duct tape).
  - 2. Plastic shall be sized to minimize seams.
  - 3. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a better seal for negative pressure.
  - 4. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when Negative Pressure Ventilation Systems area utilized.
  - 5. Fire exits shall be clearly labeled with red tape or equivalent.
- H. Where manual demolition is employed for lead removal, such as ceramic tile demolition (for example), periodically mist the work area and materials to be impacted to maintain a wet condition and avoid the creation of airborne dust, which may carry lead.
- I. The Contractor shall carry out all impacts to lead-based surface coatings in a manner that will minimize pulverizing, breaking, abrading, or in any other way impacting lead-containing paints and generating airborne lead-containing dust.
- J. Once all removal activities have been completed, clean-up of the work areas shall be conducted in accordance with Article 3.6 - Clean-Up.
- K. Dispose of all lead-containing/contaminated waste in accordance with Article 3.8 - Disposal Procedures.

### 3.5 UNIVERSAL WASTE RULE IMPACTS (REFRIGERANTS, PCBs, Etc.)

This section applies to the removal of all Universal Waste Rule items, such as fluorescent light fixture ballasts, non-incandescent lamps (fluorescent light tubes), mercury switches, as well as other commonly encountered items, such as refrigerants.

- A. All fluorescent light fixtures to be disposed of shall be disassembled in a non-destructive manner. All fluorescent light tubes shall be removed intact, packaged, and disposed of in accordance with Title 22 of the California Code of Regulations, Sections 66243, et seq., and Sections 25157.8, et al, of the California Health and Safety Code.
- B. Once fluorescent light tubes have been removed from light fixtures to be disposed of, ballasts shall be visually inspected. All ballasts which are not clearly marked "No PCBs" or "PCB Free" shall be assumed to contain PCBs, and shall be removed intact, packaged, and disposed of in accordance with Title 22 of the California Code of Regulations, Sections 66243, et seq., and Sections 25157.8, et al, of the California Health and Safety Code. Any ballasts which are observed to be leaking shall be containerized, and shall be disposed via incineration as per 40 CFR 761. All other ballasts may be incinerated or recycled, in accordance with 40 CFR 761. ***In spite of the small capacitor variance, land disposal of PCB-containing ballasts shall not be considered an acceptable disposal method, under any circumstances.***
- C. Mercury switches identified in thermostat controls and/or any other electrical switching equipment to be demolished shall be removed intact, packaged, and disposed of in accordance with Title 22 of the California Code of Regulations, Sections 66243, et seq., and Sections 25157.8, et al, of the California Health and Safety Code. ***The Owner's preferred method of disposal shall be recycling.***
- D. All identified refrigerants shall be collected and disposed of in accordance with all applicable SCAQMD and federal EPA guidelines. ***The Owner's preferred method of disposal shall be recycling.***
- E. All other Universal Waste Rule wastes shall be removed intact, where feasible, and shall be packaged and disposed of in accordance with Title 22 of the California Code of Regulations, Sections 66243, et seq., and Sections 25157.8, et al, of the California Health and Safety Code.

### 3.6 CLEAN-UP PROCEDURES

- A. Remove and containerize all visible accumulations of asbestos-containing material, LCM, and asbestos/lead-contaminated debris utilizing rubber dust pans and rubber squeegees to move material around. Do not use metal shovels to pick up or move accumulated waste within contained work areas.

Asbestos-containing/contaminated waste shall be placed in leak tight disposal bags. Disposal bags shall be doubled six-mil polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.152 (b) (I) (iv), Cal/OSHA (Title 8 CCR Sections 1529 and 5208), SCAQMD Rule 1403, and if applicable Title 22 CCR Section 66504.

Lead-containing wastes shall be containerized in 55-gallon steel drums with labels as required by 8 CCR 1532.1 and 22 CCR 66504.

All other hazardous wastes shall be containerized as appropriate and disposed of in a manner that satisfies the requirements for waste characterization and disposal in accordance with the requirements of Title 22 of the California Code of Regulations, Sections 66243, et seq., and Sections 25157.8, et al, of the California Health and Safety Code.

- B. Whether cleaning an asbestos work area or a lead work area (or both), wet clean all surfaces in the work area utilizing rags, mops and sponges, and clean all horizontal surfaces within each work area with a HEPA-vacuum, as appropriate.
- C. Remove the cleaned layer of polyethylene sheeting from floors and walls, as applicable. Windows, doors, HVAC system vents and all other openings (critical barriers, if employed) shall remain sealed. Dispose of as asbestos-contaminated or lead-contaminated as appropriate to the work area in question.
- D. After gross cleaning of the work area, HEPA-vacuum and wet clean all objects and surfaces in the work area are completed, remove all containerized waste from the work area.
- E. Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.
- F. Project Environmental Consultant will inspect the work area for visible residue. If any accumulation of residue is observed, it will be assumed to be asbestos and/or lead, as appropriate to the work area, and a second settling period and cleaning cycle repeated at no additional cost to Owner.
- G. Following the satisfactory completion of clearance air monitoring or clearance wipe testing, the remaining barriers may be removed and prepared for proper disposal. A final visual inspection by Project Environmental Consultant will be performed. Unsatisfactory conditions may require additional cleaning and air monitoring/wipe sampling, at no additional cost to Owner.

### **3.7 WORKER DECONTAMINATION SYSTEMS**

- A. Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. At a minimum, one three-stage system at a single location is required. Each work area where negative pressure enclosure is the selected method of engineering controls shall have a worker decontamination unit.
- B. Worker decontamination enclosure systems constructed at the Project site shall utilize six-mil, fire-retardant polyethylene sheeting, or other approved materials for privacy.
- C. Personnel Decontamination Units shall not be located inside the work area(s) unless specifically authorized by the Project Environmental Consultant.
- D. Alternate methods of providing Decontamination facilities may be submitted to the Project Environmental Consultant for approval. Do not proceed with any such method(s) without the written authorization.
- E. The worker decontamination enclosure system shall consist of at least a cleansing station in accordance with the requirements of 8 CCR 1527 and 8 CCR 1529, equipped with adequate water, towels and cleansing agents to accommodate the entire crew and visitors.

### **3.8 DISPOSAL PROCEDURES**

- A. All friable asbestos waste shall be disposed of as Hazardous, Friable Asbestos Waste. All non-friable asbestos waste shall be disposed of as Non-Hazardous, Non-Friable Asbestos Waste.

Contractor is responsible for characterization of lead waste prior to waste being transported off site. All waste characterization samples must be taken under the supervision of the Project Environmental Consultant. Characterization sample results must be submitted to the District for review prior to waste being transported off site.

All lead waste shall be either disposed of as construction debris (if STLC/TCLP results allow) or lead-containing waste (with attendant RCRA codes, if STLC/TCLP results so require).

All asbestos-containing waste shall be placed and stored in clear, sealed, leak-tight and appropriately labeled containers, in accordance with 8 CCR 1529 and SCAQMD Rule 1403, and transported to an appropriate landfill for disposal.

- B. All lead wastes shall be either disposed of as construction debris (if STLC/TCLP results allow) or lead-containing waste (with attendant RCRA codes, if STLC/TCLP results so require).
- C. All hazardous wastes (including non-hazardous asbestos wastes) must be disposed of by a certified waste hauler approved by the Owner.
- D. Arrange for proper disposal of any generated hazardous waste stream through an Owner-approved waste disposal facility.
- E. Obtain the EPA Hazardous Waste Generator Identification Number and State of California Hazardous Waste Tax Identification Number from the Owner.
- F. All hazardous waste manifests or non-hazardous material data forms shall be delivered to the Project Environmental Consultant. Record keeping format shall utilize a chain of custody form which includes the names and addresses of the Generator (Owner), Contractor, Waste Hauler, pickup site, disposal site, the estimated quantity of the asbestos waste and the type of containers used. The form shall be signed by the Generator, Contractor, Waste Hauler and the Disposal Site Operator, as the responsibility for the material changes hands.

### **3.9 REESTABLISHMENT OF THE WORK AREAS**

- A. Reestablishment of the work area shall only occur following the completion of clean-up procedures and after clearance air monitoring has been performed and documented to the satisfaction of Project Environmental Consultant.
- B. Contractor and Project Environmental Consultant shall visually inspect the work area for any remaining visible residue. Evidence of contamination will necessitate additional cleaning and air monitoring requirements at no additional cost to Owner, until approved by PEC.
- C. Upon approval by Project Environmental Consultant, the Contractor shall remove remaining fire retardant polyethylene sheeting, critical barriers, and decontamination unit.

- D. Repair all areas of damage that occurred as a result of abatement activities at no additional cost to Owner, unless other arrangements and approval have been provided by the Owner.

### 3.10 ENVIRONMENTAL MONITORING

Stop work order due to inefficiencies:

If, at any time, RUSD Representative or Project Environmental Consultant decides work practices are violating Specifications, or, Federal or local regulations to extent of potential endangerment of building users, workers, RUSD Representative, employees or public, he will immediately notify Contractor (followed up in writing) that operations shall cease until corrective action is taken by Contractor. Contractor shall take such corrective action before proceeding with work. Loss or damage due to Stop Work Order(s) shall be Contractor's responsibility. A Stop Work Order, issued by RUSD's Representative or Project Environmental Consultant shall become effective immediately.

- A. Air monitoring will be carried out by the Project Environmental Consultant on behalf of the Owner to verify that the building beyond the contamination area and the outside environment remains uncontaminated.
- B. Background Air Monitoring:
  - 1. The Project Environmental Consultant will conduct pre-abatement air monitoring to determine ambient fiber levels prior to abatement. The analytical method shall utilize Phase Contrast Microscopy (PCM) using the NIOSH 7400 Method.
- C. Area Air Monitoring: The Project Environmental Consultant will conduct in-progress air monitoring daily to determine area airborne contaminant concentrations within the confines of the work area.
  - 1. Environmental Air Sampling: Ambient air samples are taken and analyzed to indicate fiber migration from containment to the environment. Should any environmental sample outside work areas exceed the base line of 0.01 f/cc of air, or established background concentrations as determined by PCM analysis, all work will immediately halt except for corrective work. The PEC shall determine the source of the high fiber count and notify the contractor with directions for the corrective action.
- D. Clearance Air/Wipe Monitoring:
  - 1. Following the completion of final clean-up operations, notify the Project Environmental Consultant that work areas are ready for final inspection and clearance air monitoring.
  - 2. Project Environmental Consultant will then sample the air in the work area for airborne fiber concentrations.

3. Phase Contrast Microscopy (PCM): In each homogeneous work area after completion of all cleaning work, a minimum number of samples will be collected and analyzed in accordance with the NIOSH 7400 Methodology as follows:

For work areas less than 160 square feet or 260 linear feet:

- a. 5 interior aggressive air samples, 5 exterior air samples, 2 field blank samples and 1 lab blank sample for areas that had asbestos-containing materials removed.
  - b. Release Criteria: Decontamination of the work site is complete when each sample analyzed reveals airborne asbestos fiber concentrations are at or below 0.010 f/cc, or established background concentrations.
  - c. If these conditions are not met then the decontamination is incomplete and the cleaning procedures noted in Article 3.3 above shall be repeated. The area shall be re-tested at no additional cost to Owner until satisfactory levels are obtained.
4. Transmission Electron Microscopy (TEM): In each homogeneous work area after completion of all cleaning work, a minimum number of samples MAY be collected and analyzed by TEM in accordance with the requirements of 40 CFR Part 763, Subpart E (AHERA) as follows:

For work areas equal to or greater than 160 square feet or 260 linear feet:

- a. 5 interior aggressive air samples, 5 exterior air samples, 2 field blank samples and 1 lab blank sample for areas that had asbestos-containing materials removed.
  - b. Release Criteria: Decontamination of the work site is complete when the average of the interior samples reveals that airborne asbestos fiber concentrations are at or below 70 structures/mm<sup>2</sup>, or established background concentrations.
  - c. If these conditions are not met, decontamination shall be deemed incomplete, and the cleaning procedures noted in Article 3.3 above shall be repeated. The area shall be re-cleaned and re-tested at no additional cost to Owner until satisfactory levels are obtained.
5. For work associated with LCM, wipe sampling shall be performed within the controlled work areas following completion of all lead-related impact and decontamination efforts.
    - a. Release Criteria: Decontamination of the work site is complete when each of at least two samples per work area are analyzed and reveal lead concentrations below those set forth by Cal/DHS in 17 CCR 35001, et. seq. Generally, this shall be 40 micrograms of lead per square foot of area on interior floors.

- b. If these conditions are not met then the decontamination is incomplete and the cleaning procedures noted in Article 3.3 above shall be repeated. The area shall be re-tested at no additional cost to Owner until satisfactory levels are obtained.

### 3.11 OSHA PERSONNEL AIR MONITORING:

- A. **Air monitoring required by OSHA is work of the contractor. The contractor is responsible for providing daily OSHA compliance monitoring as per 29 CFR 1926.1101, 8 CCR 1529 for asbestos and 29 CFR 1926.62 and 8 CCR 1532.1 for lead.**
  - 1. At minimum, Contractor shall conduct representative (25% of crew) breathing zone personal air monitoring of its employees twice each shift (asbestos only) and repeated daily or until a "negative exposure assessment", as derived in accordance with 29 CFR 1926.1101 (f)(2)(iii) and 8 CCR 1529 for asbestos, and 8 CCR 1532.1 for lead.
  - 2. Monitoring shall be conducted by a qualified air professional experienced and knowledgeable about the methods of air monitoring and in accordance with 29 CFR 1926.1101, 8 CCR 1529 and 8 CCR 1532.1.
  - 3. Monitoring results and appropriate laboratory analysis work shall be submitted to Project Environmental Consultant **within forty-eight (48) hours of the monitoring work.**

### 3.12 ALTERNATIVE PROCEDURES

- A. If specified procedures cannot be utilized, a request shall be made in writing to Project Environmental Consultant providing details of the problem encountered and recommended alternatives.
- B. The removal of all "other" hazardous materials shall be handled as an alternative procedure. Contractor shall submit a work plan for the removal, handling, and disposal of all "other" hazardous materials, including but not limited to fluorescent light ballasts and tubes, mercury switches, refrigerants, batteries, and radioactive smoke detector sources. Work described in said work plan(s) shall not commence until the work plan has been accepted and approved, in writing, by Project Environmental Consultant.
- C. Alternative procedures shall provide equivalent or greater protection than procedures that are replaced.
- D. Any alternative procedure must be approved in writing by the Project Environmental Consultant prior to the implementation of the procedure.

**End of Section 02080**