BID DOCUMENTS COVER SHEET

CONTRACT DOCUMENTS

FOR

L-1120 Gymnasium Roof Replacement

AT

Los Medanos College

2700 East Leland Drive
Pittsburg, CA 94565

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

Consist of the following:

ADDENDUM #1

STEELHEAD ENGINEERS, INC.
2570 W. El Camino Real Ste320
Mountain View, CA 94040

March 21, 2017
CONTRA COSTA COMMUNITY COLLEGE DISTRICT
L-1120 Gym Roof Replacement
Los Medanos College
ADDENDUM #1 Date: 3/21/17

NOTICE TO ALL PRE-QUALIFIED CONTRACTORS ONLY

You are hereby notified of the following changes, clarifications and/or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and/or previous Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same, and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents dated 2/24/2017. Acknowledge receipt of this Addendum in space provided on the Bid Proposal Form. Failure to acknowledge may subject Bidder to disqualification.

A. Deletions, Additions, Changes, Revisions, Replace.
   ADD: SECTION 02 82 00 ASBESTOS ABATEMENT AND DISPOSAL

B. Pre-Bid Meeting Minutes.

C. Pre-Bid Meeting Sign in Sheet.

If you have any questions regarding this Addendum, please contact:

Jovan Esprit
Contra Costa Community College District
500 Court St., Martinez, CA 94553
Email: jesprit@4cd.edu;
Facsimile: 925-229-6959;
All other terms and conditions of BID are to remain the same.

STEELHEAD ENGINEERS, INC.
2570 W. El Camino Real Ste320
Mountain View, CA 94040

END OF ADDENDUM #1
SECTION 02 82 00

ASBESTOS ABATEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
   A. The General Conditions and Division I General Requirements shall be included in and made part of this Section.
   B. Examine all other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

1.2 COMPLIANCE AND INTENT
   A. The Contractor is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for demolition that become damaged as a result of the work. All unscheduled repair work shall be at no increase to contract price.
   B. Contractor shall coordinate removal with all site requirements related to protection of existing finishes. Water and encapsulants used during abatement work must not migrate beyond established regulated work area barriers. All protection work must be completed prior to the start of abatement work on the roof and any pathways of travel to the work area.
   C. This project deals with abatement of asbestos-containing materials (ACMs). It is necessary for the Contractor to coordinate all abatement work with the project drawings and specifications. During all work, provide monitoring and worker protective equipment in accordance with the California Occupational Safety and Health Administration (Cal-OSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.
   D. The work covered by this specification includes the handling, removal, and proper disposal of ACMs. All ACMs shall be removed and disposed of according to all federal, state, and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the abatement work. The cleanup of any incidental asbestos found in areas undergoing abatement of asbestos that become separated from the building during the dismantling process are part of the work.
   E. The abatement workers shall have received Cal-OSHA accredited training and be certified for asbestos abatement work.
   F. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for asbestos abatement in accordance with this specification.
   G. Comply with all federal, state, and local regulations pertaining to asbestos removal, storage, transportation and disposal; employee heat and safety; Contractor certifications; and all licenses, permits, and training.
H. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.

I. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to asbestos abatement, handling, and the subsequent cleaning of contaminated areas.

J. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, sensitive building finishes, adjacent building areas, and shall ensure that there is no airborne release of dusts. The District may collect air samples in the building and in adjacent areas to evaluate the Contractor’s performance. Evidence of settled dust or elevated airborne levels of contaminants will require the implementation of additional controls at no increase to contract price.

K. It is the Contractor's responsibility to determine the quantities of ACMs that will require removal prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will require abatement. This section provides appropriate protocols for handling and disposal of ACMs. All ACMs shall be removed according to the procedures outlined in this specification. If additional suspect ACMs are discovered during the course of the abatement work, immediately notify the District and/or the District’s Environmental Consultant.

L. The work of this section shall be performed by an entity that holds a current, valid asbestos handling license issued by the California State Contractor's Licensing Board (SCLB) and a current valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations-Division of Occupational Safety and Health (Cal-OSHA), unless other specified. Display copies of CSLB license and Cal-OSHA Registration in a visible place at the job-site.

M. ACMs removed during the abatement activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the District thereby limiting the District's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose. The District or the District’s Environmental Consultant shall approve the non-ACM hazardous waste disposal site(s) prior to disposal for materials that may be disposed of in that manner.

N. All exterior asbestos abatement work shall be conducted within an asbestos regulated work area demarcated with barrier tape and asbestos signage, unless otherwise specified.
1.3 DEFINITIONS

A. The following definitions pertain to work of this section.

1. Abatement: Process of controlling fiber release from ACMs including encapsulation, enclosure, controlled renovation procedures, removal, clean-up and disposal.

2. ACM: Asbestos-containing material

3. Aggressive Sampling: Air sampling either during or following the agitation of the air.


5. Ambient Air Quality: The quality of air (in terms of airborne fiber content) that is present in a given space.

6. Area Monitoring: Sampling of airborne asbestos fiber concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

7. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.

8. Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

9. Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0%) asbestos by weight.

10. Asbestos: Asbestos includes asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-gunerite (amosite), anthophylite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.

11. Authorized Visitor: Designated employees or consultants for the District and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.

12. Baseline: Refers to the background levels of asbestos monitored before abatement.

13. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

14. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

15. Cal-OSHA: State of California, Occupational Safety & Health Administration.
16. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

17. Change Area: Refers to the decontamination area used to change into and out of protective clothing.

18. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.

19. Clean Area: An uncontaminated area or room that is part of the worker decontamination area, with provisions for storage of workers’ street clothes and protective equipment.

20. Clearance Level: Clearance level for samples analyzed by PCM will be less than 0.01 fibers per cubic centimeter of air and for TEM will be less than 70 structures per square millimeter (<70 s/mm²). Samples may be collected by non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.

21. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.

22. Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

23. CSLB: Contractors State Licensing Board

24. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

25. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

26. DOT: Federal Department of Transportation.

27. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)

28. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

29. Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels according to Title 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator’s name, address, site location, generator number, and the following information:
30. District: Contra Costa Community College District

31. District's Environmental Consultant: Environmental Consulting firm and its representatives retained to provide compliance oversight and monitoring for the Contractor's asbestos abatement work activities.

32. Encapsulant: A liquid material that can be applied to ACMs that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).

33. Encapsulation: A specified procedure necessary to coat ACMs or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.

34. Equipment Area: A contaminated area that is part of the worker decontamination area, with provisions for storage of contaminated clothing and equipment. The equipment area shall be kept clean from asbestos-containing debris at all times.

35. Excursion Limit: A California Code of Regulations (Title 8 CCR 1529) requirement that ensures no employee exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.

36. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

37. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

38. Friable Asbestos-Containing Material: Material that contains more than 1.0% asbestos by weight, and that can be crumbled, pulverized or reduced to powder by hand pressure when dry.

39. Foreman: An individual who typically fulfills the duties of “competent person” as defined by Title 8 CCR 1529. This individual must supply documentation of a passing grade in a Cal-OSHA accredited course in Asbestos Contractor/Supervisor training. The foreman must be on-site during all abatement work.

40. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

41. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.
42. Movable Object: A unit of equipment in the work area that can be removed from the work area.

43. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.

44. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).


46. NIOSH: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).

47. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.

48. NVLAP: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.

49. Passive Sampling: Refers to air sampling with no air agitation.

50. Permissible Exposure Limits (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air and 30 minute excursion limit of 1.0 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

51. Phase Contrast Microscopy (PCM): Technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 microns and wider than approximately 0.25 microns. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.

52. Polarized Light Microscopy (PLM): An optical microscope technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.

53. Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

54. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

55. Remodel: Replacement or improvement of an existing building or portion thereof where exposure to airborne asbestos may result. Remodel includes,
but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

56. **Respirator:** A device designed to protect the wearer from the inhalation of harmful atmospheres.

57. **Surfactant:** A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.

58. **Transmission Electron Microscopy (TEM):** Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beams transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. TEM is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. TEM microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.

59. **Visible Emissions:** Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

60. **Visual Inspection:** A visual inspection by District’s Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible debris and dust.

61. **Water Filtration:** Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

62. **Wet Cleaning:** The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.

63. **Work Area:** The area where asbestos removal is performed and that is defined or isolated to prevent the spread of asbestos fibers, dust or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1529.

### 1.4 SCOPE OF WORK

A. Provide the removal of ACMs as specified in this section. Reference all other sections of the Specifications and other documents included in the contract documents for information and requirements that affect the work of this Section.

B. Table 1 attached provides estimated quantities of ACMs that will require removal and/or will be disturbed by the roof replacement work. A 10% variance of quantity of actual ACM and estimated ACM in Table 1 is not considered a changed condition. The Contractor is responsible for field verifying quantities of ACMs to be abated and/or disturbed.

C. The following materials shall be disposed of as regulated asbestos-containing material (RACM): All Category I materials rendered friable during the removal process.
D. The following materials can be disposed of as Category I Non-Friable ACMs if they are not rendered friable during removal: tar and gravel roofing field and roof curbs/flashings.

1.5 REFERENCES

The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

A. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)
   2. ANSI Z87.1, 2003, Occupational and Educational Eye and Face Protection
   3. ANSI Z88.2 1992, Respiratory Protection
   4. ANSI Z89.1, 1986, Requirements for Protective Headgear for Industrial Workers
   5. ANSI Z41, 1999, Personal Protection – Protective Footwear
   6. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
   9. ASTM D 1331, Solutions of Surface-Active Agents
   10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
   15. ASTM E849, 1986 Safety and Health Requirement Relating to Occupational Exposure to Asbestos

B. California Assembly Bills (CAB)
   1. CAB 040, Yearly Registration of Contractors

C. California Code of Regulations (CCR)
   1. Title 8 CCR 5208, General Industry – Asbestos
2. CCR CARS, Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14
3. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
4. CCR 1523, Illumination
5. CCR 1529, Asbestos in the Construction Industry
6. CCR 1531, Construction Respiratory Protective Equipment
7. CCR 3203, Injury and Illness Prevention Program
8. CCR 3204, Access to Employee Exposure and Medical Records
9. CCR 3220, Emergency Action Plan
10. CCR 3221, Fire Prevention Plan
11. CCR 5144, Respiratory Protection Equipment Standard
12. CCR 5194, Hazard Communication Standard
13. CCR 6003, Accident Prevention Signs
14. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

D. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements
   1. CHS 25123, Section 25123
   2. CHS 25124, Section 25124
   3. CHS 25143, Section 25143
   4. CHS 25163, Section 25163
   5. CHS 66508, Section 66508
   6. CHS 66510, Section 66510
   7. CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

E. California Health and Safety Code (CHSC)
   1. CHSC 20, Division 20, Commencing with Section 24200

F. California Labor Code (CLC)
   1. CLC DIVISION 5, Part 1, commencing with 6300

G. California Propositions (CP)
   1. CP 65, Proposition 65

H. California State Board of Equalization (CSBE)
   1. CSBE ETU, Excise Tax Unit

I. California State License Board (CSLB)
   1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"

J. Code of Federal Regulations (CFR)
1. 29 CFR 1910.134, Respiratory Protection
2. 29 CFR 1910.141, Sanitation
3. 29 CFR 1910.145, Accident Prevention Signs and Tags
4. 29 CFR 1926.21, Safety Training and Education
5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
6. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
7. 29 CFR 1926.59, Hazard Communication
8. 29 CFR 1910.1000, Air Contaminants
9. 29 CFR 1926.1101, Asbestos
11. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
13. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities
14. 40 CFR 763, Asbestos Containing Material in Schools

K. State and Local Regulations
1. Regulation 11, Rule 2, Bay Area Air Quality Management District (BAAQMD)

L. Underwriters Laboratories, Inc. (UL)
1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

1.6 SUBMITTALS PRIOR TO START OF WORK

A. The reviews by the District or District’s Environmental Consultant are intended to be only for general conformance with the requirements. The District or District’s Environmental Consultant assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.

B. Before commencing work involving the abatement or disturbance of asbestos, submit the following for review by the District or District’s Environmental Consultant.
1. Provide a detailed asbestos abatement work plan that follows Attachment A – Asbestos Abatement Work Plan Outline.
2. Provide an asbestos site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; fiber release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; asbestos handling procedures; fall protection; electrical safety; Contractor’s internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.
3. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of examination of a Cal-OSHA accredited asbestos training course.

4. Workers: Demonstrate education and specialized training with successful completion of a Cal-OSHA accredited asbestos training course.

5. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain asbestos. Include documentation showing that the worker understands the following; health implications and risks involved (including the illnesses possible from exposure to airborne asbestos fibers), the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of asbestos concerning health and respiratory equipment.

6. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.

7. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

8. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529. The submitted document must be less than eleven (11) months old.

9. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the District’s Environmental Consultant.

10. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2. Submit results of onsite DOP testing of all HEPA-filtered ventilation equipment.

11. Submit the proposed landfills to be used for waste disposal.

12. Satisfactory proof that written notification and subsequent updates have been provided to the Bay Area Air Quality Management District (BAAQMD), in accordance with Regulation 11, Rule 2, Cal-OSHA, and Title 40 CFR Part 61 Subparts A&M, National Emission Standards for hazardous Air Pollutant, U.S. EPA, as applicable.

13. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.

14. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.

15. Safety Data Sheets/Specification Sheets: The Contractor shall submit Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.
1.7 SUBMITTALS AT THE COMPLETION OF THE PROJECT

A. Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the District prior to acceptance of final pay request and shall include the following:

1. Copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident).
2. Chain of custody documentation and laboratory reports for all analyses performed.
3. Emergency evacuations and any other safety or health incident.
4. Submit uniform hazardous and non-hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District or District's Environmental Consultant within ten working days after delivery.
5. Personal air sample results.
6. Project Summary:
   a. Abatement contractor’s name and address, certification number (CSLB), registration number (DOSH) and Tax ID number.
   b. Hazardous waste hauler certifications (DHS, DOT).
   c. Name, address and registration number of hazardous waste hauler.
   d. Laboratory performing analyses (NVLAP).
   e. Contract number and name of project.
   f. Specific inventory (including locations and approximate quantities) of the hazardous materials which were removed or handled.
   g. Number of employees working on the project.
   h. Dates of commencement and completion of on-site work.
   i. Work method employed (i.e., glove bag, mini-containment, full containment with negative air and decontamination enclosure system, etc.)
   j. Name, location, telephone number and EPA registration of waste disposal site(s) used.
   k. DOP testing results.

1.8 CONTRACTOR MONITORING

A. The District or District's Environmental Consultant reserves the right to perform air sampling in selected areas during the course of the project. District or District's Environmental Consultant reserves the right to stop work within an area if in the course of performing monitoring, the District or District's Environmental Consultant observes instances of substantial non-conformance with this Section or other Sections of the Specification presenting health hazards to workers, the general public or the surrounding areas. Work shall not resume until the corrective measures
have been enforced.Instances of substantial non-conformance shall include, but not be limited to, the following:

1. Activities or misconduct imperiling worker’s safety and health.
2. Airborne fiber concentrations as measured by PCM outside of the work area exceeding background or 0.01 f/cc whichever is greater. Airborne concentrations as measured by TEM outside of the work area exceeding background or 70 S/mm², whichever is greater.
3. Breaches in critical barriers resulting in potential release of asbestos to non-work areas.

B. The District’s Environmental Consultant may perform air sampling inside and outside the hazardous materials work area during all phases of the work. The Contractor shall cooperate fully with the District’s Environmental Consultant and ensure the cooperation of his workers during collection of air samples and work area inspections.

C. When visual inspections or air monitoring are specified, the Contractor shall notify the District or District’s Environmental Consultant in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor’s Competent Person or Foreman indicating that the work area has been previously inspected and is ready for inspection/testing.

D. Air monitoring generated by the District or District’s Environmental Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of workers exposure to airborne asbestos, nor shall any other activity on the part of the District or District’s Environmental Consultant be construed to meet the Contractor’s compliance with applicable health and safety regulations.

PART 2 - PRODUCTS

2.1 SIGNS AND LABELS:

A. Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.

B. Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work area in languages used by the Contractor’s employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos-containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.

C. Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:
DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

D. Warning Label Format: Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following:

DANGER CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

2.2 ENCAPSULANTS

A. Encapsulants shall be U.L. Listed, in full-scale E-119 fire test.

B. Average depth of penetration shall meet manufacturer's recommendations.

C. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:

2. Fire classification - UL Class A approved in the specific or similar assembly to its intended application.
3. Product shall be tested and rated non-toxic and non-irritating under the Federal Hazardous Substances Control Act and contain no methylene chloride.
4. Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.

2.3 PLASTIC SHEETING:

A. Use fire-retardant (FR) polyethylene (poly) film.
   1. Thickness - 6-mil, minimum, NO EXCEPTIONS.
   2. Flame Resistance/Flame Spread Rate <25.
   3. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.4 TAPE, ADHESIVE, SEALANTS:

A. Tape, 2” or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape.
B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.

C. Fire resistant sealants shall be compatible with concrete, metals, wood, etc. Sealant shall prevent fire, smoke, water and toxic fumes from penetrating. Sealant shall have a flame spread, smoke and fuel contribution of zero, and shall be ASTM and UL rated for 3 hours for standard method of fire test for fire stop systems.

2.5 VACUUM EQUIPMENT:

A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing. Repeat DOP testing every thirty (30) days after initial testing. Provide documentation to the District or District’s Environmental Consultant within 24 hours of DOP testing.

2.6 RESERVE EQUIPMENT:

A. Contractor shall have the following equipment on site: one reserve, functioning and DOP-tested HEPA Filter Vacuum Cleaning Units. Contractor shall also have sufficient polyethylene (poly), respirators, protective equipment, tape, tools, decontamination areas for each work area.

B. Provide authorized visitors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

C. The Contractor shall document that each visitor has been trained and fit-tested prior to entering an abatement area.

2.7 TRANSPORTATION EQUIPMENT:

A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

2.8 CONNECTIONS TO WATER SUPPLY:

A. Contractor shall assure that all connections to the site's water system shall include backflow protection. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water shall not damage existing finishes or equipment.
B. Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system in each work area. Provide fittings as required to allow for connection to existing wall hydrants or spouts.

2.9 OTHER TOOLS AND EQUIPMENT:

A. The Contractor shall provide other suitable tools for the stripping, removal and disposal activities.

B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the District or District’s Environmental Consultant:

1. High or low pressure water blasting equipment for hosing of work areas.
2. Bead blasting or other uncontained abrasive blasting methods.
3. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a “Vacu-Loader”.
4. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the District or District’s Environmental Consultant.
5. Metal wire-brushes.
6. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.
7. Non-fire retardant polyethylene sheeting.
8. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - EXECUTION

3.1 INITIAL AREA ISOLATION

A. The District or District’s Environmental Consultant reserves the right to inspect and approve all regulated work area setups before any abatement is undertaken.

B. If a work area is breached (failure of polyethylene seals, visible dust emission, elevated fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the District or District’s Environmental Consultant.

C. If sample results indicate that conditions have exceeded the baseline or clearance criteria, as determined by the District or District’s Environmental Consultant, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.
D. Verify that all electrical power, gas and water systems to the work area have been shut down and disconnected so that there is no possibility of reactivation and electrical shock.

E. Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

F. Contractor shall conform to the District's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, District or District’s designative representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

G. Contractor shall store all materials, equipment, and supplies for the project in areas designated by the District and in accordance with District’s requirements.

H. Provide signs around the perimeter of the work areas according to EPA and Cal-OSHA.

I. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.

J. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

K. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.2 CONTAINMENT SET-UP PROCEDURES

A. Containment is not required for the exterior, non-friable roofing work. All exterior asbestos abatement not conducted in containment shall be carried out in a regulated area demarcated with asbestos warning signs and barrier tape and 6-mil poly drop sheets sufficient in size to capture fallen debris. Critical barriers consisting of 2 layers of 6-mil poly sheeting shall be installed on HVAC equipment located on the roof.

B. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated in the work area. The emergency exit plan shall be approved by the District’s Environmental Consultant prior to the set up of any work areas.
3.3 PERSONNEL PROTECTION

A. Informed Workers:
   1. All workers shall be informed of the hazards of ACMs and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the abatement work.

B. Personal Hygiene Practices:
   1. The Contractor shall enforce and follow good personal hygiene practices during the abatement of ACMs. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.
   2. Workers shall remove street clothes in the clean area and put on a respirator and clean protective clothing before entering the work area. Upon exiting the work area, remove gross contamination from clothing before leaving the work area; proceed to the change area and remove clothing except respirators; proceed to the wash station area; clean the outside of the respirator with soap and water; remove respirator and thoroughly wash. Following wash station, proceed directly to the clean area and dress in street clothes. Do not wear disposable clothing outside the decontamination area.
   3. If data gathered by the District or District’s Environmental Consultant in areas adjacent to the work areas shows exposure to airborne asbestos or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a decontamination facility provided to them.

C. Respirators:
   1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.
   2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in asbestos environments so that workers can change filters as required by the manufacturer.
   3. At a minimum, provide each employee with the following respiratory protection for each work phase:
      a. Pre-cleaning, work area set-up, and work area removal work: NIOSH-approved, half-face respirators with HEPA cartridges.
      b. Asbestos abatement of roofing products: NIOSH-approved, half-face respirators with HEPA cartridges.
   4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.
Table 1 – Respiratory Protection

<table>
<thead>
<tr>
<th>Airborne Concentration of Asbestos</th>
<th>Required Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not in excess of 1.0 f/cc (10 X PEL)</td>
<td>Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters</td>
</tr>
<tr>
<td>Not in excess of 5.0 f/cc (50 X PEL)</td>
<td>Full facepiece air purifying respirator equipped with high efficiency filters</td>
</tr>
<tr>
<td>Not in excess of 10 f/cc (1,000 X PEL)</td>
<td>Any powered air purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode</td>
</tr>
<tr>
<td>Not in excess of 100 f/cc (10,000 X PEL)</td>
<td>Full facepiece supplied air respirator operated in pressure demand mode</td>
</tr>
<tr>
<td>Greater than 100 f/cc or unknown concentration</td>
<td>Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus</td>
</tr>
</tbody>
</table>

D. Protective Clothing:
1. Provide personnel exposed to asbestos fibers with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering and leaving the work area follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.
2. Protective clothing will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.

E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling asbestos-containing materials and waste.

F. Emergency Precautions and Procedures:
1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.
2. The Contractor’s supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury
occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.

3.4 ASBESTOS REMOVAL

A. The Contractor shall abate all ACMs identified in this specification and/or that require disturbance to complete work specified in other specification sections.

B. The Contractor shall continuously apply wetting agent throughout the removal process. The wetting agent shall be applied with a low-pressure fine spray to minimize fiber releases. The materials shall be thoroughly saturated so that there is no detectable fiber release. All ACM shall be immediately packaged in leak-tight containers following removal.

C. Minimize removal activities of ACMs that generate airborne particulate. To the extent feasible, score or cut-out ACMs in sections, wetting along the scoring line continually, and misting the air with an airless sprayer to knock down suspended particulate. After completion of removal work, surfaces from which asbestos has been removed shall be wet cleaned to remove all visible material and residue.

D. Coordinate extent of removal with the other contract documents.

E. Wet clean the exterior surfaces of waste containers prior to removal from the work area. The Contractor shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the District or District’s Environmental Consultant. RACM shall be packaged in a minimum of two (2) 6-mil polyethylene bags. Bags shall be properly labeled for RACM disposal including site-specific generator labels. Non-friable ACM waste shall be packaged in a minimum of two (2) 6-mil clear, leaktight polyethylene disposal bags and properly labeled while stored on-site.

F. Asbestos-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Contractor shall clean the work area using wet methods and HEPA vacuum equipment.

3.5 REGULATED AREA MONITORING

A. Prior to each work shift and continuously throughout the project, each work area and decontamination area shall be inspected and repaired as needed.

B. Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm² (TEM). If the asbestos fiber concentrations outside work areas exceed those levels shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

3.6 AIR MONITORING

A. The purpose of any air monitoring that may be conducted by the District or District’s Environmental Consultant will be to detect possible release of fibers or dusts emanating from the work areas.
B. All PCM air sample analysis shall comply with NIOSH Method 7400. All TEM analysis shall be consistent with modified-AHERA protocols or NIOSH 7402.

C. The District or District’s Environmental Consultant reserves the right to perform and/or observe final clearance inspection and sampling.

D. The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the District or District’s Environmental Consultant.

E. The Contractor shall be responsible for all personal air sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the Cal-OSHA asbestos standard. A minimum of 25% of the workforce shall be monitored during each shift. All sample results shall be available on-site within 24-hours of sample collection. If two consecutive shifts of non-compliant or overloaded samples are noted, the contractor shall hire a CAC/CSST at their own expense to assist in compliance with the specifications.

3.7 CLEARANCE INSPECTIONS

A. The District or District’s Environmental Consultant reserves the right to conduct visual inspections. Contractor shall notify the District or District’s Environmental Consultant when the decontamination process in each work area is complete. Evidence of debris will require additional clean up by the Contractor. Contractor shall be responsible for re-cleaning all areas found to be deficient.

B. If the District or District’s Environmental Consultant determines that the work area is sufficiently clean, the Contractor may proceed. If the District or District’s Environmental Consultant determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the recleaned area. All costs incurred by the District or District’s Environmental Consultant for inspections required after the second inspection will be charged to the Contractor.

C. Once the visual inspection is passed, the Contractor shall be approved to remove the regulated work area.

3.8 ASBESTOS CLEARANCE CRITERIA:

A. The asbestos abatement work areas will be cleared by visual inspection only.

3.9 ASBESTOS DISPOSAL

A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.

B. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the work area.
C. Ensure all disposal containers are properly labeled according to 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

D. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.

E. Asbestos-containing waste that is properly labeled and double-bagged may be temporarily stored in areas approved by the District. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than two (2) days before final load-out of materials.

F. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and Department of Transportation and maintain proper registration at all times.

G. Trucks must have an enclosed cargo area with a storage compartment that is fully lined with a minimum of one (1) layer of 6-mil polyethylene on the walls and two (2) layers on the floor.

H. All vehicles and containers used to transport waste are subject to inspection and approval of District prior to departure from site.

I. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.

J. Contractor shall provide at minimum one (1) day advance notification to the District when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous or Non-Hazardous Waste Manifests are correctly filled out. The Contractor shall give the appropriate copies to the District and shall also instruct the District in writing that they must send the appropriate copy to the Department of Toxic Substances Control.

K. If a debris box is used, the Contractor shall make all necessary arrangement with the District including obtaining all appropriate permits.

L. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.

M. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended.

N. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. The door of the container shall have a secure cover on the locking device with access to the lock only at the key-hole. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.

O. Disposal shall be in a District approved landfill that meets EPA requirements.
### TABLE I

**ESTIMATED QUANTITIES**

**ASBESTOS-CONTAINING MATERIALS**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Location</th>
<th>Waste Category</th>
<th>Asbestos Type</th>
<th>Estimated Quantities To Be Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tar and Gravel Roofing Field</td>
<td>East Equipment Roof (lower roof)</td>
<td>Cat. I</td>
<td>60% CH</td>
<td>600 sf</td>
</tr>
<tr>
<td>Roof Curb</td>
<td>East Equipment Roof (lower roof)</td>
<td>Cat. I</td>
<td>65% CH</td>
<td>Quantity Included Above</td>
</tr>
</tbody>
</table>

NA = Not Applicable, CH = Chrysotile, TR = Tremolite, RACM = Regulated asbestos containing material (friable), Cat. I = Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), Cat. II = Category II Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), sf = square feet
ATTACHMENT A
ASBESTOS ABATEMENT WORK PLAN OUTLINE

In accordance with the contract documents, the Contractor is required to prepare a written, site-specific Asbestos Abatement Work Plan, and submit to the District for approval prior to start of work. This plan is required for the contractor to meet Cal-OSHA requirements as well as the contract documents, and shall describe work procedures and control methods that will protect the District’s facilities and the environment.

I. Location of Work:
The work to be completed under this work plan will be completed at:

(Building name)
(Location within building)

Previous asbestos inspections or surveys have found that ACMs are present at the following locations:

(List all materials and locations to assure the District and the Contractor are aware of all hazardous materials locations)

II. Description of Work:
Describe the anticipated work scope

III. Schedule:

<table>
<thead>
<tr>
<th>Phase/Task</th>
<th>Anticipated Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization</td>
<td></td>
</tr>
<tr>
<td>Set-up of work area(s), containments</td>
<td></td>
</tr>
<tr>
<td>Abatement</td>
<td></td>
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<tr>
<td>Final Cleaning</td>
<td></td>
</tr>
<tr>
<td>Visual Inspection</td>
<td></td>
</tr>
<tr>
<td>Final Clearance (visual and air sampling)</td>
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<tr>
<td>Teardown</td>
<td></td>
</tr>
<tr>
<td>Demobilization</td>
<td></td>
</tr>
</tbody>
</table>

IV. Equipment and Materials
List all equipment and materials to be used, such as the following:

- HEPA Vacuums
- Negative air filtration units
- Scrapers
- Manometers
- Power saws
- Shower facilities
- Pry bars
- Airless sprayers/compressors
- Cutting shears
- Cleaning detergents
- Other hand tools
- Solvents (must be approved by District)
- Encapsulants/sealants
- Roller/brushes
- Gloves
- Disposable coveralls
- Respiratory protection
- Eye & foot protection
- Fall Protection
- Scaffolds/Ladders
- Gas/Diesel Powered Equipment
V. Crew
List all workers and supervisors with emergency contact names and phone numbers.

*Clearly identify the supervisor and competent person who have authority for all safety and health.*

VI. Control Measures and Work Practices

*Describe in a narrative format specific work procedures, exposure/contamination controls, and engineering controls. This description should include, but not be limited to, the following:*

- OSHA Class I, II, III and IV work
- Wet methods
- Negative pressure enclosure
- Glovebag removal
- Respiratory protection
- HEPA vacuums
- Mini-containments
- Solvent removal of mastic
- List other procedures

VII. Respiratory Protection and Protective Clothing/Personal Protective Equipment

*List all respiratory protection including types and manufacturers which are anticipated for this project. Identify the phases of the project for which respirators will be required or likely to be required. List all personal protective equipment anticipated to be used on the project.*

VIII. Decontamination/Hygiene Facilities

*Identify the types and locations of decontamination or hygiene facilities to be used on this project. Specify use of disposable towels, soap, hot and cold water, and other supplies. Specify the required use of the facilities, including use of the facilities prior to eating, drinking, smoking and before leaving the project site. Describe handling or treatment of asbestos-contaminated solid waste and wastewater.*

IX. Air Monitoring Data

*Identify general worker air monitoring protocols to be followed on this project, including worker category classifications, frequency of monitoring, anticipated laboratory to be used for analysis, pump calibration techniques, etc. Identify the competent person responsible for conducting personal air monitoring and proposed consultant if air sampling requirements are not meet from two consecutive shifts.*

X. Containment Diagram

*Include a diagram (hand written is acceptable) of the containment(s) showing the containment perimeter in relation to the surrounding areas, locations of negative air machines and exhaust locations, direction of airflow, and decontamination areas.*
XI. Waste

Describe how all waste on this project will be packaged, labeled, stored, transported, manifested and disposed

XII. Preparation of Asbestos Abatement Work Plan

Date Prepared and Prepared By (signature, name and title)
MINUTES
PRE-BID MEETING & SITE WALK (MANDATORY)

PROJECT NUMBER/NAME:  L-1120- Gymnasium Roof Replacement Project
CAMPUS: Los Medanos College at 2700 E Leland Rd, Pittsburg, CA 94565

DATE: March 8, 2017
TIME: 10:00 AM
LOCATION: Los Medanos College - PS2 20

Important Note: An on-site job walk follows the meeting. Attendance at the job walk for this project is mandatory. At completion of the job walk, be sure to obtain a Certification of Site Visit (Section 00450), signed by the District. This signed form must be submitted with your bid.

1. Opening Remarks – Rob Mohr, Construction Manager
   • Introductions
   • DIR Registration requirement

2. Project Team Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alex Gourtzelis</td>
<td>Project Manager - Critical Solutions, Inc. (CSI)</td>
</tr>
<tr>
<td>Rob Mohr</td>
<td>Construction Manager - Critical Solutions, Inc. (CSI)</td>
</tr>
<tr>
<td>Alan E. Burnett</td>
<td>CIVIL ENGINEER - GALE ASSOCIATES, INC.</td>
</tr>
<tr>
<td>Ken Pilgrim</td>
<td>Hazardous Materials Testing - RGA Environmental/Terracon Consultants, Inc.</td>
</tr>
<tr>
<td>Russell Holt</td>
<td>Buildings and Grounds (B&amp;G) Manager, LMC</td>
</tr>
<tr>
<td></td>
<td>Inspector of Record (TBD)</td>
</tr>
</tbody>
</table>

3. Brief Project Description: - In general, the Work consists of removal of the existing built-up roofs at upper, lower and penthouse roofs (see Hazardous Materials Report) and installation of a new Title-24 compliant modified bitumen roof system on the College Gymnasium Roof as shown in drawings and specifications prepared by Steelhead Engineers, Inc. The Work also includes the removal of existing coating from two existing pads and replacing it with new fiber-reinforced coating system.

4. Project Work Restrictions
   • Refer to General Conditions Section 00700
5. **Bid Phase Communications & Correspondence**
   - All questions related to this Project must be in writing and directed to:
     
     **Jovan Esprit, Contracts Manager**
     Contra Costa Community College District
     500 Court St., Martinez, CA 94553
     Email: jesprit@4cd.edu
     Facsimile: 925-370-6517

6. **Addenda Update**
   - No addenda issued

7. **Bid Phase Schedule Milestones**
   - Last day for RFI: March 15, 2017, 2:00 PM
   - Last Addendum Issued: March 22, 2017, 2:00 PM
   - Bid Opening: March 29, 2017, prior to 2:00 PM
   - Award of Contract: April 27, 2017
   - Notice to Proceed: May 5, 2017

8. **Bid Opening**
   - **Bids must be received at the Contra Costa Community College District Office at 500 Court St, Martinez, CA by Wednesday, March 29, 2017, prior to 2:00 PM.**
   - All bids will be time stamped at the reception counter in the building lobby.
   - Any bid received after the bid opening time will be rejected.
   - An announcement will be made at the 2-minute mark prior to the bid opening deadline.

9. **Bid Package**
   - Review your bid package carefully before submitting it. **Be sure to include all required documentation.**

10. **Contract Duration Discussion**
    - See Section 00600, Construction Agreement
    - Completion Time:
      - **Phase I Completion:** 21 Calendar Days from the Notice to Proceed;
      - **Phase II 40 Calendar Days** from completion of Phase I work to Substantial Completion, and **30 Calendar Days** from Substantial Completion to Final Completion.

11. **Substitution requests MUST comply with Contract Documents**
    - Within three (3) work days of bid opening on District form; acceptance at District’s sole discretion – form is provided on page 4 of section 01340 Administrative Forms & Logs.

12. **Site Job Walk**
    - Review Construction Site
    - Distribute signed Certificate of Site Visit forms
# Pre-Bid Meeting Sign-In Sheet

## Project Title:
L-1120- Gym Roof Replacement

## Date / Time:
March 8, 2017 at 10:00 AM

## Location:
Los Medanos College

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stronger Building</td>
<td>Ismael Avila</td>
<td>Estimator</td>
</tr>
<tr>
<td><strong>Please provide business card</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Phone</td>
<td>510) 487-8363</td>
<td></td>
</tr>
<tr>
<td>Cell Phone</td>
<td>415) 823-6355</td>
<td></td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:Ismael@strongerbuilding.com">Ismael@strongerbuilding.com</a></td>
<td></td>
</tr>
</tbody>
</table>

| Roofers Compliance | David Miller  | Compliance Officer   |
| **Please provide business card** |
| Office Phone       | 510) 459-0175 |
| Cell Phone         |                |
| Email Address      | rooterscompliance@gmail.com |

| Andy's Roofing | Jesus Garcia  | Estimator            |
| **Please provide business card** |
| Office Phone    | 510) 777-1100 |
| Cell Phone      |                |
| Email Address   |                |

<p>| Graham Prewett Inc. | Victor Maravilla | P.M. |
| <strong>Please provide business card</strong> |
| Office Phone        | (559) 291-3741  |
| Cell Phone          | (559) 274-8266  |
| Email Address       | <a href="mailto:vmaravilla@grahamprewett.com">vmaravilla@grahamprewett.com</a> |</p>
<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>NAME</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEST CONTRACTING</td>
<td>Chonco Hernandez</td>
<td></td>
</tr>
<tr>
<td>Please provide business card</td>
<td></td>
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</tr>
<tr>
<td>Office Phone</td>
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</tr>
<tr>
<td>Cell Phone</td>
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<tr>
<td>Email Address</td>
<td>TRYAN@BESTCONTRACTING</td>
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<tr>
<td>B&amp;M Tearoff</td>
<td>Jose Vega</td>
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<tr>
<td>Office Phone</td>
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<td><a href="mailto:Felipe@bmtearoff.com">Felipe@bmtearoff.com</a></td>
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<tr>
<td>Joseph Mosby Cons. Inc.</td>
<td>Gerry Rodriguez</td>
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<tr>
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<td>Mark Blakeson (PM)</td>
<td>Western Roofing Service</td>
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<tr>
<td>Please provide business card</td>
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<tr>
<td>Office Phone</td>
<td>415-648-6472</td>
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<tr>
<td>Cell Phone</td>
<td>415-716-8920, 415-716-6410</td>
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<tr>
<td>Email Address</td>
<td><a href="mailto:aramirez@westroof.com">aramirez@westroof.com</a>; <a href="mailto:mark@westroof.com">mark@westroof.com</a></td>
<td>(primary contact)</td>
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