**AGREEMENT FOR APPLIED ARTS BUILDING MECHANICAL SYSTEMS UPGRADE ENERGY CONSERVATION PROJECT**

This AGREEMENT FOR APPLIED ARTS BUILDING MECHANCIAL SYSTEMS UPGRADE ENERGY CONSERVATION PROJECT ("Agreement") is made as of _____, 2020, by and between the CONTRA COSTA COMMUNITY COLLEGE DISTRICT, a California public community college district ("District"), and _____ ("Design-Builder").

**RECITALS**

**WHEREAS**, Redevelopment Agency (RDA) funds combined with Local and State Scheduled Maintenance funds are to be used; and

**WHEREAS**, District desires to reduce its facilities' energy costs at the Project Sites and improve the Project Sites' facilities' energy quality, reliability, and efficiency by contracting to implement and modify energy efficiency measures that enhance the District's energy and cost savings; and

**WHEREAS**, Design-Builder is a full-service design-build energy services firm with the technical capabilities to provide services to the District, including, but not limited to, EEP and energy efficiency consultation services, energy and energy system engineering, design, procurement, construction management, installation, construction, commissioning, training, monitoring, measurement and verification, and audit compliance services; and

**WHEREAS**, pursuant to Section 26235, subdivision (c), of the California Public Resources Code, the District shall not use a sole source process to award funds; and

**WHEREAS,** Government Code section 4217.12 authorizes a public agency to enter into an energy service contract with respect to an energy conservation facility on terms that the public agency's governing board determines are in the best interests of the public agency and if the governing board finds that the anticipated cost to the public agency for the energy provided by the energy conservation facility will be less than the anticipated marginal cost to the District of thermal, electrical or other energy that would have been consumed by the public agency in the absence of those purchases;

**WHEREAS,** the District is a public agency under the provision of Government Code section 4217.10 *et seq*. pertaining to energy service contracts; and

**WHEREAS**, the District has engaged in a process to select a qualified full-service design-build energy services firm based on several criteria, including, without limitation, firm qualifications and financial viability, experience working on energy efficiency projects and with school districts, and proposed scope of work and price; and

**WHEREAS,** the Parties intend to enter into this agreement as provided under those statutory guidelines; and

**WHEREAS,** _____, was selected by the District by means of responses to the Request for Qualifications/Proposals ("RFQ/P") for Applied Arts Building Mechanical Systems Upgrade Energy Conservation Project, RFQ/P dated **June 30, 2020** and all associated addenda.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, Design-Builder and the District each agree to the following:

## AGREEMENT

1. **Services**. Design-Builder shall furnish to the District the labor, equipment, material, and services as described in **Appendix "A"** ("Scope of Work") and **Appendix "B"** ("Special Conditions") attached hereto and incorporated herein by this reference (collectively "Services" or "Work" or "Project") located at the Project Sites identified in Section 9, below ("Site" or "Sites").

2. **Term**. It is hereby understood and agreed that the Work under this Agreement shall be completed by **(to be inserted)**. It is hereby understood and agreed that design-builder will complete work under this agreement according to the timelines detailed in Appendix A. Should the Design-Builder fail to complete this Agreement, and the Work provided herein, within the time fixed for completion, due allowance being made for the contingencies provided for herein, the Design-Builder shall become liable to the District for all loss and damage that the District may suffer on account thereof.

3. **Liquidated Damages.** Time is of the essence for all Work under this Agreement. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that the District will sustain in the event of and by reason of Design Builder's delay; therefore, Design-Builder agrees that it shall pay to the District the sum of one thousand DOLLARS ($1,000.00) per day as liquidated damages for each and every day's delay beyond the Contract Time that final completion is not achieved. Such Liquidated Damages shall be the sole measure of damages due to solely to delay.

   It is hereby understood and agreed that this amount is not a penalty.

   In the event any portion of the liquidated damages is not paid to the District, the District may deduct that amount from any money due or that may become due the Design-Builder under this Agreement, the District may seek recovery of Liquidated Damages from the Design-Builder's Performance Bond Surety and/or the District may seek recovery of Liquidated Damages from the Design-Builder or the Performance Bond Surety without having exhausted remedies against the other.

4. **Grants/Rebates/Incentives**. Design-Builder shall use commercially reasonable efforts to support the District in obtaining or maintaining grants/rebates/incentives for the Project. Design-Builder shall use commercially reasonable efforts to support the District in obtaining an extension, if allowed and if necessary. If the District does not obtain extensions for the grants/rebates/incentives on terms satisfactory to the District on its sole discretion, the District may terminate the Contract Documents upon written notice to Design-Builder without liability to either Party.

**5. Contract Documents**. The following documents comprise the "Contract Documents" for the Work under this Agreement:

| | |
|---|---|
| _X_ Signed Agreement | _X_ Insurance Certificates and Endorsements |
| _X_ Request for Qualifications/Proposals and all addenda including District PSA | _X_ Performance Bond |
| _X_ Notice of Award | _X_ Payment Bond |
| _X_ Notices to Proceed | _X_ Specifications |
| _X_ Prevailing Wage Certification | _X_ Plans |
| _X_ Workers' Compensation Certification | _X_ Project Schedule |
| _X_ Drug-Free Workplace Certification | _X_ Appendix "A" ("Scope of Work") |
| _X_ Tobacco-Free Environment Certification | _X_ Appendix "B" ("Special Conditions") |
| _X_ Asbestos & Other Hazardous Materials Certification | _X_ Appendix "C" ("Registered Subcontractors List) |
| _X_ Lead-Product(s) Certification | _________[Other] |
| _X_ Iran Contracting Act Certification | _________[Other] |
| | _________[Other] |

The complete Agreement consists of all Contract Documents as defined above and incorporated herein by this reference. Any and all obligations of the District and Design-Builder are fully set forth and described in the Contract Documents. All Contract Documents are intended to cooperate so that any Work called for in one and not mentioned in the other or vice versa is to be executed the same as if mentioned in all Contract Documents.

Should any question arise concerning the intent or meaning of Contract Documents, including the Drawings or Specifications, the question shall be submitted to the District for interpretation. If a conflict exists in the Contract Documents, modifications, beginning with the most recent, shall control over this Agreement (if any). In no case shall a document calling for lower quality and/or quantity material or workmanship control. The decision of the District in the matter shall be final.

**6. Submittal of Contract Documents.** Those documents identified in the Notice of Award shall be presented to the District for approval within seven (7) business days after execution of the Agreement. Design-Builder shall not commence the Work under this Agreement until the Design-Builder has submitted and the District has approved the performance bond, payment (labor and material) bond, the certificate(s) and affidavit(s), and the endorsement(s) of insurance required and the District issues the Notice to Proceed with Services.

**7. Project Inspector.** The project inspector on the Project is TBD ("Project Inspector"). Design-Builder hereby acknowledges that the Construction Manager, the Project Inspector, and the Division of the State Architect have authority to approve and/or stop Work if the Design-Builder's Work does not comply with the requirements of the Contract Documents, Title 24 of the California Code of Regulations, and all applicable laws. No work shall be carried on except with the knowledge and under the inspection of said Project Inspector. Project Inspector shall have free access to any or all parts of work at any time.

Design-Builder shall furnish Project Inspector reasonable opportunities for obtaining such information as may be necessary to keep Project Inspector fully informed respecting progress, manner of work, and character of materials. The Design-Builder shall be liable for any delay caused by its non-compliant Work or its failure to provide proper notification for inspection.

**8.** Inspection and acceptance of the Work shall be performed by College B&G Manager and District Project Manager, upon the recommendation of the Construction Manager and Inspector of Record.

**9. Compensation**. As compensation for the Work, the District shall pay to the Design-Builder an amount not to exceed _____ Dollars and ____ Cents **($____.00)** ("Total Contract Price") which includes a District's Allowance of _____ Dollars and ____ Cents **($____.00).**

**9.1.** The Total Contract Price shall not be increased without the express approval of the District's governing board. The District's Allowance shall only be utilized for approved project work as stipulated in the contract, unforeseen conditions and Site-Specific scopes of work as reviewed and approved by the District.

**10. Expenses**. District shall not be liable to Design-Builder for any costs or expenses paid or incurred by Design-Builder in performing Services for District.

**11. Payment**. On a monthly basis, Design-Builder shall submit an application for payment based upon the estimated value for materials delivered or services performed under the Agreement as of the date of submission pursuant to a separate schedule of values to be agreed upon by the Parties ("Application for Payment"); Payment Application shall include a schedule of values, including allocation of the District's Allowance amount and backup documentation necessary to substantiate the total amount claimed in the Payment Application. Within thirty (30) days after District's approval of the Application for Payment, Design-Builder shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as verified by the District's designated representative and Inspector and certified by Design-Builder) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. The District may deduct from any payment an amount necessary to protect the District from loss because of: (a) any sums expended by the District in performing any of Design-Builder's obligations under the Agreement which Design-Builder has failed to perform or has performed inadequately; (b) defective Work not remedied; (c) stop payment notices as allowed by state law; (d) reasonable doubt that the Work can be completed for the unpaid balance of the Total Contract Price or by the scheduled completion date; (e) unsatisfactory prosecution of the Work by Design-Builder; (f) unauthorized deviations from the Agreement; (g) failure of the Design-Builder to maintain or submit on a timely basis proper and sufficient documentation as required by the Agreement or by the District during the prosecution of the Work; (h) erroneous or false estimates by the Design-Builder of the value of the Work performed; (i) cost of purchasing additional insurance due to Design-Builder's failure to maintain the required insurance coverage set forth herein; (j) any sums representing expenses, losses, or damages, as reasonably determined by the District, incurred by the District for which Design-Builder is liable under the Agreement; and (k) any other sums which the District is entitled to recover from Design-Builder under the terms of the Agreement or pursuant to state law, including section 1727 of the Labor Code. The failure by the District to deduct any of these sums from a progress payment shall not constitute a waiver of the District's right to such sums. The District shall retain 5% from all amounts owing as retention. Retention shall be paid pursuant to Public Contract Code sections 7107, 7200 and 7201.

**12. Independent Contractor**. Design-Builder, in the performance of this Agreement, shall be and act as an independent contractor. Design-Builder understands and agrees that he and all of his employees shall not be considered officers, employees, agents, partner, or joint venture of the District, and are not entitled to benefits of any kind or nature normally provided employees of the District and/or to which District's employees are normally entitled, including, but not limited to, State Unemployment Compensation or Worker's Compensation. Design-Builder shall assume full responsibility for payment of all federal, state and local taxes or contributions, including unemployment insurance, social security and income taxes with respect to Design-Builder's employees. Design-Builder shall be liable for its own actions, including its negligence or gross negligence, and shall be liable for the acts, omissions, or errors of its agents or employees.

**13. Licensing**. Design-Builder certifies that the design professional is properly certified or licensed under the laws and regulations of the State of California to provide the professional services that it has herein agreed to perform. Design-Builder and all Subcontractors shall be properly licensed and regulated by the Contractors State License Board, 3132 Bradshaw Road, Post Office Box 2600, Sacramento, California 98826, http://www.cslb.ca.gov throughout the duration of the Work. Design-Builder hereby acknowledges that it or its subcontractors performing the work hold valid B Classification Contractor's license and a C-20 license.

**14. Registration as Public Works Contractor**: Design-Builder and all Subcontractors currently are registered as public works contractors with the Department of Industrial Relations, State of California, in accordance with Labor Code section 1771.4.

**14.1. SUBMISSION OF UPDATED REGISTERED SUBCONTRACTORS LIST.** Design-Builder further acknowledges and agrees that it shall timely submit updated Registered Subcontractors List, attached hereto as Appendix "C," and as detailed further therein.

**15. Standard of Care**. Design-Builder's Services will be performed, findings obtained, reports and recommendations prepared in accordance with generally and currently accepted principles and practices of the industry and all applicable law, including the applicable provisions of California Code of Regulations, Title 24, the requirements of the DSA and CEC, and any applicable District Design Guides and Technical Specifications. Design-Builder represents and warrants that it is fully experienced in projects of the nature and scope of Work, and that it is properly qualified, licensed and equipped to supply and perform the Work. The Work completed herein must meet the approval of the District and shall be subject to the District's general right of inspection and supervision to secure the satisfactory completion thereof.

**16.** Project Stabilization Agreement: "Project Stabilization Agreement" (hereinafter "PSA") means the pre-hire collective bargaining agreement between the Contra Costa Community College District and the Contra Costa Building and Construction Trades Council attached to these Contract Documents which establishes the terms and conditions of employment for the Project.

**16.1.** Contracts: The Contractor/Employer shall maintain in a current status, throughout the life of this Contract, the PSA included in these Contract Documents. By accepting the award of this Construction Contract for the Project, whether as Contractor or subcontractor, the Contractor/Employer agrees to be bound by each and every provision of the PSA, and evidence its acceptance prior to the commencement of work by executing the PSA Agreement to be Bound in the form attached to the PSA found in these Contract Documents.

**16.2.** Subcontracts: At the time that any Contractor/Employer enters into a subcontract with any subcontractor providing for the performance of the construction subcontract, the Contractor/Employer shall provide a copy of the PSA to said subcontractor and shall require the subcontractor, as a part of accepting an award of a construction subcontract, to agree in writing to be bound by each and every provision of the PSA, and agree that it will evidence its acceptance prior to the commencement of work by executing the PSA Agreement to be Bound in the form attached to the PSA found in these Contract Documents.

**16.3.** Reporting.

**16.3.1.** PSA Preconstruction Conference. The Contractor/Employer shall, prior to the commencement of work under this Contract, hold a Preconstruction Conference in accordance with PSA Article 5 PRECONSTRUCTION CONFERENCE which shall be attended by a representative from each Contractor/Employer, the Unions, and the District. The Contractor/Employer shall contact the Contra Costa Building and Construction Trades Council at least two (2) weeks prior to scheduling the Preconstruction Conference so that the Unions can be notified of the date, time, and place of the Conference.

**16.3.2.** The Contractor/Employer shall lead the Preconstruction Conference and take minutes of the meeting.

**16.3.3.** The Contractor/Employer shall submit written meeting minutes of the Conference in a form preapproved by the District within five (5) working days. The minutes shall include the names and organizations of each person attending the Conference. The minutes shall also include copies of the Agreements to be Bound required by this Contract and the PSA.

**16.4.** Monthly Reporting. During each month in which construction work is performed by the Contractor/Employer or by any subcontractor, from Notice to Proceed through Notice of Completion, report the information required below to the District as a monthly administrative Submittal. These reports shall be submitted with each regularly scheduled payment application, or the application will be returned to the Contractor/Employer for resubmittal with the required reports.

**16.4.1.** New Agreements to be Bound resulting from new subcontracts, if any, entered into by each Contractor/Employer.

**16.4.2.** Each instance during the reporting period of which a Union is unable to fill a requisition for employees thereby causing the Contractor/Employer to apply Article 8 REFERRAL Clause 8.3, to obtain qualified work persons for the Contract work.

**16.4.3.** A summary of efforts during the reporting period to comply with the goals of Article 10 LOCAL HIRE, including a spreadsheet report of the number of hours worked by all journeymen and by all apprentices on site, and the subset of the number of hours worked by journeymen and by apprentices who are residents of Contra Costa County.

**16.4.4.** A summary of efforts to utilize the Center for Military Recruitment, Assessment and Veterans Employment, in accordance with Article 15 HELMETS TO HARDHATS.

**17. Originality of Services**. Design-Builder agrees that all technologies, formulae, procedures, processes, methods, writings, ideas, dialogue, compositions, recordings, teleplays and video productions prepared for, written for, or submitted to the District and/or used in connection with this Agreement, shall be wholly original to Design-Builder and shall not be copied in whole or in part from any other source, except that submitted to Design-Builder by District as a basis for such services.

18. **Ownership of Data.** This Agreement creates a non-exclusive and perpetual license for the District to use, at its discretion, all plans including, but not limited to, record drawings, specifications, estimates and other documents that Design-Builder prepared or cause to be prepared pursuant to this Agreement. Design-Builder retains all rights to all copyrights over designs and other intellectual property embodied in the plans, record drawings, specifications, estimates, and other documents that Design-Builder prepares or cause to be prepared pursuant to this Agreement.

    In the event the District changes or uses any fully or partially completed documents without Design-Builder's knowledge or participation or both, the District agrees to release Design-Builder of responsibility for such changes or use, and shall hold Design-Builder harmless from and against any and all claims on account of any damages or losses to property or persons, or economic losses, arising out of that change or use. In the event that the District uses any fully or partially completed documents without the Design-Builder's full involvement, the District shall remove all title blocks and other information that might identify Design-Builder.

19. **Site Examination**. Design-Builder has examined the Site and certifies that it accepts all measurements, specifications and conditions affecting the Work to be performed at the Site. By submitting its quote, Design-Builder warrants that it has made all Site examination(s) that it deems necessary as to the condition of the Site, its accessibility for materials, workers and utilities, and Design-Builder's ability to protect existing surface and subsurface improvements. No claim for allowance of time or money will be allowed as to any other undiscovered condition on the Site.

20. **Materials**. Design-Builder shall furnish, at his own expense, all labor, materials, equipment, supplies and other items necessary to complete the Services to be provided pursuant to this Agreement. Design-Builder shall use all new components (photovoltaic panels and inverters) that have not been previously placed in service in any other location or for any other application. Rebuilt, refurbished, or relocated equipment is not acceptable under this Agreement.

    **20.1. Anti-Trust Claim**. Design-Builder and its subcontractor(s) agree to assign to the District all rights, title, and interest in and to all causes of action they may have under section 4 of 15 U.S.C. Title 15 or under the Cartwright Act (commencing with section 16700 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Agreement or a subcontract. This assignment shall be made and become effective at the time the District tenders final payment to the Design-Builder, without further acknowledgment by the parties.

    **20.2. Substitutions**. No substitutions of material from those specified in the Work Specifications shall be made without the prior written approval of the District.

    **20.3. Codes, Standards, and Methodologies**. All products and components outlined in this Agreement must conform to all applicable codes, standards, and rating methodologies, including, without limitation, all applicable building and electrical codes.

21. **Equipment and Labor**. Design-Builder shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material necessary to furnish the services herein described, the services to be performed at such times and places as directed by and subject to the approval of the authorized District representative indicated in the Work specifications attached hereto.

**22. Warranty / Quality**. Unless a longer warranty is called for below, or elsewhere in this Agreement, the Design-Builder, manufacturer, or their assigned agents shall guarantee the workmanship, product or service performed against defective workmanship, defects or failures of materials for a period of one (1) year from filing the Notice of Completion with the county in which the Project is located. All workmanship and merchandise must be warranted to be in compliance with applicable California energy, conservation, environmental, and educational standards.

**22.1.** Design-Builder shall provide a copy of the installation and product warranties prior to installation. Upon completion of the Project, Design-Builder shall transfer and convey to the District, all warranty documentation and shall assist the District in completing any warranty or submittal forms which are required in order to effectuate coverage of the warranties required herein and all my otherwise be available to the District.

**23. Correction of Errors**. Design-Builder shall perform, at its own cost and expense and without reimbursement from the District, any work necessary to correct errors or omissions which are caused by the Design-Builder's failure to comply with the standard of care required herein. Notwithstanding the expiration of the warranty period, Design-builder may still have liability to District as allowed under California law for breach of the standard of care, or any latent or patent defect pursuant to California Code of Civil Procedure, §§337.1 and 337.15.

**24.** If this Agreement is in excess of $25,000 and is for the excavation of any trench deeper than five (5) feet, Design-Builder must submit and obtain District acceptance, in advance of excavation, of a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If the plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

**25. Excavations Over Four Feet**. If this Agreement includes excavations over four (4) feet, Design-Builder shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any: (a) material that the Design-Builder believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (b) subsurface or latent physical conditions at the site differing from those indicated; or (c) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Agreement. The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Design-Builder's cost of, or the time required for, performance of any part of the Work shall issue a change order under the procedures described in the Agreement. In the event that a dispute arises between the District and the Design-Builder whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Design-Builder's cost of, or time required for, performance of any part of the work, the Design-Builder shall not be excused from any scheduled completion date provided for by the Agreement, but shall proceed with all Work to be performed under the Agreement. Design-Builder shall retain any and all rights provided either by the Agreement or by law which pertain to the resolution of disputes and protests between the contracting parties.

**26. Lead-Based Paint**. Pursuant to the Lead-Safe Schools Protection Act (Education Code section 32240 et seq.) and other applicable law, no lead-based paint, lead plumbing and solders, or other potential sources of lead contamination shall be utilized on this Project,

and only trained and state-certified contractors, inspectors and workers shall undertake any action to abate existing risk factors for lead. Design-Builder must execute the Lead-Based Paint Certification, if applicable.

27. **Change in Scope of Work**. Any change in the scope of the Work, method of performance, nature of materials or price thereof, or any other matter materially affecting the performance or nature of the Work shall not be paid for or accepted unless such change, addition, or deletion is approved in advance and in writing by a valid change order executed by the District and Design-Builder. Design-Builder specifically understands, acknowledges, and agrees that the District shall have the right to request any alterations, deviations, reductions, or additions to the Project and the cost thereof shall be added to or deducted from the amount of the Total Contract Price by fair and reasonable valuations. Design-Builder also agrees to provide the District with all information requested to substantiate the cost of the change order and to inform the District whether the Work will be done by the Design-Builder or a subcontractor. In addition to any other information requested, Design-Builder shall submit, prior to approval of the change order, its request for a time extension (if any), as well as all information necessary to substantiate its belief that such change will delay the completion of the Work. If Design-Builder fails to submit its request for a time extension or the necessary supporting information, it shall be deemed to have waived its right to request such extension.

    For all approved changes in the scope of work that result in a net increase in costs to Design-Builder, the following format shall be used, supported by attached documentation.

[REMAINDER OF PAGE INTENTIONALLY BLANK]

| | WORK PERFORMED BY OTHER THAN DESIGN-BUILDER: | ADD: |
|---|---|---|
| (a) | Material (attach itemized quantity & unit cost plus sales tax) | $ |
| (b) | Add Labor (attach itemized hours & rates, fully encumbered) | $ |
| (c) | Add Equipment (attach suppliers' invoice) | $ |
| (d) | Subtotal | $ |
| (e) | Add overhead and profit for any and all tiers of subcontractor, the total not to exceed 10% of item (d) | $ |
| (f) | Subtotal | $ |
| (g) | Add overhead and profit for Design-Builder, not to exceed 5% of Item (f) | $ |
| (h) | Subtotal | $ |
| (i) | Add Bond and Insurance, not to exceed 2% of Item (h) | $ |
| (j) | TOTAL | $ |
| | | |
| (k) | Time | ___ Days |

| | WORK PERFORMED BY DESIGN-BUILDER: | ADD: |
|---|---|---|
| (a) | Material (attach itemized quantity & unit cost plus sales tax) | |
| (b) | Add Labor (attach itemized hours & rates, fully encumbered) | |
| (c) | Add Equipment (attach suppliers' invoice) | |
| (d) | Subtotal | |
| (e) | Add overhead and profit for Design-Builder, not to exceed 15% of item (d). | |
| (f) | Subtotal | |
| (g) | Add Bond and Insurance, not to exceed 2% of Item (f) | |
| (h) | TOTAL | |
| | | |
| (i) | Time | ___ Days |

All deductive Change Order(s) must be prepared pursuant to the provisions herein. Where a portion of the Work is deleted from the scope of Work, the reasonable value of the deducted Work less the value of Work performed shall be considered the appropriate deduction. The amount submitted on the Application for Payment shall be used to calculate the credit amount unless the bid documentation is being held in escrow as part of the Contract Documents. Unit Prices, if any, may be used in District's discretion in calculating reasonable value. If Design-Builder offers a proposed amount for a deductive Change Order(s), Design-Builder shall include a minimum of five percent (5%) total profit and overhead to be deducted with the amount of the Work of the Change Order(s). If subcontractor work is involved, subcontractors shall also include a minimum of five percent (5%) profit and overhead to be deducted with the amount of its deducted work. Any deviation from this provision shall not be allowed.

**28. Workers**. Design-Builder shall at all times enforce strict discipline and good order among its employees and the employees of its subcontractors and shall not employ or work any unfit person or anyone not skilled in work assigned to him. The District may evaluate the Design-Builder in any manner which is permissible under the law. Any person in the employ of the Design-Builder or a subcontractor whom the District may deem incompetent or unfit shall be dismissed from the Project and shall not again be employed at Project without written consent from the District.

**29. Design-Builder Supervision.** Design-Builder shall provide competent supervision of personnel employed on the job Site, use of equipment, and quality of workmanship.

30. **Safety and Security**. Design-Builder is responsible for maintaining safety in the performance of this Agreement. Design-Builder shall be responsible to ascertain from the District the rules and regulations pertaining to safety, security, and driving on school grounds, particularly when pupils are present.

31. **Clean Up**. Debris shall be removed from the Site(s). The Site(s) shall be in order at all times when work is not actually being performed and shall be maintained in a reasonably clean condition. See Appendix B: Special Conditions for additional cleaning requirements.

32. **Access to Work**. District representatives shall at all times have access to the Work wherever it is in preparation or in progress. Design-Builder shall provide safe and proper facilities for such access.

33. **Protection of Work and Property**. Design-Builder shall erect and properly maintain at all times, as required by conditions and progress of the Work, all necessary safeguards, signs, barriers, lights, and security persons for protection of workers and the public, and shall post danger signs warning against hazards created by the Work. In an emergency affecting life and safety of life or of Work or of adjoining property, Design-Builder, without special instruction or authorization from District, is permitted to act at his discretion to prevent such threatened loss or injury.

34. **Occupancy**. District reserves the right to occupy the Site at any time before formal completion and such occupancy shall not constitute final acceptance or approval of any part of the Work covered by this Agreement, nor shall such occupancy extend the date specified for completion of the Work.

35. **Continuous Electrical Service While Classes Are in Session**. Design-Builder shall ensure that campus facilities are not without power at any time while classes are in session. All work must be closely coordinated with operations staff at the District to ensure continuity of service while the campus facilities are in use.

36. **Force Majeure**. Design-Builder shall be excused from performance hereunder during the time and to the extent that it is prevented from obtaining delivery, or performing by act of God, fire, pandemic, strike, loss, or shortage of transportation facilities, lock-out, commandeering of materials, product, plant, Agencies having Jurisdiction, adverse weather conditions, when satisfactory evidence thereof is presented to the District, provided that it is satisfactorily established that the non-performance is not due to the fault or neglect of the Design-Builder. Design-Builder shall be entitled to a non-compensable time-extension for Force Majeure delays determined.

37. **Termination**.

    **37.1. For Convenience by District**. District may, at any time, with or without reason, terminate this Agreement and compensate Design-Builder only for services satisfactorily rendered to the date of termination. Written notice by District shall be sufficient to stop further performance of services by Design-Builder. Notice shall be deemed given when received by the Design-Builder or no later than three (3) days after the day of mailing, whichever is sooner. In the event that District terminates this Agreement pursuant to this section, District shall compensate Design-Builder for work completed to date as a pro-rata amount of the full fees, costs, and expenses.

    **37.2. With Cause by District**. District may terminate this Agreement upon giving of written notice of intention to terminate for cause. Cause shall include:

**37.2.1.** material violation of this Agreement by the Design-Builder; or

**37.2.2.** any act by Design-Builder exposing the District to liability to others for personal injury or property damage; or

**37.2.3.** Design-Builder is adjudged a bankrupt, Design-Builder makes a general assignment for the benefit of creditors or a receiver is appointed on account of Design-Builder's insolvency.

Written notice by District shall contain the reasons for such intention to terminate and unless within five (5) calendar days after that notice the condition or violation shall cease, or satisfactory arrangements for the correction thereof be made, this Agreement shall upon the expiration of the five (5) calendar days cease and terminate. In the event of this termination, the District may secure the required services from another Design-Builder. If the expense, fees, and costs to the District exceed the cost of providing the Service pursuant to this Agreement, Design-Builder shall immediately pay the excess expense, fees, and/or costs to the District upon the receipt of the District's notice of these expense, fees, and/or costs. The foregoing provisions are in addition to and not a limitation of any other rights or remedies available to District.

**37.3.** Upon termination, Design-Builder shall provide the District with all documents produced maintained or collected by Design-Builder pursuant to this Agreement, whether or not such documents are final or draft documents.

**38. Indemnification**. To the furthest extent permitted by California law, Design-Builder shall indemnify and hold harmless the District, its Governing Board, agents, representatives, officers, consultants, employees, trustees, and volunteers (the "Indemnified Parties") from any and all claims arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of the Design-Builder. Design-Builder shall also, to the furthest extent permitted by California law, defend the Indemnified Parties at Design-Builder's own expense, including attorneys' fees and costs, from any and all Claim(s) and allegations relating thereto. The District shall have the right to accept or reject any legal representation that Design-Builder proposes to defend the indemnified parties.

**39. Insurance**.

**39.1.** The Design-Builder shall procure and maintain at all times it performs any portion of the Services the following insurance:

**39.1.1. General Liability.** One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) general aggregate for bodily injury, personal injury and property damage in the form of Comprehensive General Liability and Contractual Liability. If Commercial General Liability or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to each project/location or the general aggregate limit shall be twice the required occurrence limit.

**39.1.2. Automobile Liability Insurance**. One Million Dollars ($1,000,000) combined single limit for any automobile that shall protect the Design-Builder and the District from all claims of bodily injury, property damage, personal injury, death, and medical payments arising performing any portion of the Services by Design-Builder.

**39.1.3. Workers' Compensation and Employers' Liability Insurance**. For all of the Design-Builder's employees who are subject to this Agreement and to the extent required by the applicable state or federal law, Design-Builder shall keep in full force and effect, a Workers' Compensation policy. That policy shall provide employers' liability coverage with minimum liability coverage of One Million Dollars ($1,000,000) per accident for bodily injury or disease. Design-Builder shall provide an endorsement that the insurer waives the right of subrogation against the District and its respective elected officials, officers, employees, agents, representatives, consultants, trustees, and volunteers.

**39.1.4. Professional Liability (Errors and Omissions)**. Four Million Dollars ($4,000,000) aggregate for errors and omissions as appropriate to profession of engineer designing energy efficiency measures, coverage to continue through completion of construction plus two (2) years thereafter.

**39.1.5. Builder's Risk Insurance.** On a replacement cost value basis, Design-Builder shall procure and maintain, during the life of this Agreement, Builder's Risk (Course of Construction), or similar first party property coverage to insure against all risks of accidental physical loss and shall include without limitation the perils of vandalism and/or malicious mischief (both without any limitation regarding vacancy or occupancy), sprinkler leakage, civil authority, theft, sonic disturbance, earthquake, flood, collapse, wind, fire, war, terrorism, lightning, smoke, and rioting. Coverage shall include debris removal, demolition, increased costs due to enforcement of all applicable ordinances and/or laws in the repair and replacement of damaged and undamaged portions of the property, and reasonable costs for engineering services and expenses required as a result of any insured loss upon the Work and Project, including completed Work and Work in progress, to the full insurable value thereof.

**39.1.6. Excess Liability.** Ten Million Dollars ($10,000,000) per occurrence to meet the policy limit requirements of the required policies if Design Builder's underlying policy limits are less than required. There shall be no gap between the per occurrence amount of any underlying policy and the start of the coverage under the Excess Liability Insurance Policy. Any Excess Liability Insurance Policy shall protect Design-Builder, District, State, and Project Manager(s) in amounts, and that complies with all requirements for Commercial General Liability and Automobile Liability and Employers' Liability Insurance.

**39.1.7. Other Insurance Provisions**: The policies are to contain, or be endorsed to contain, the following provisions:

**39.1.7.1.** For the general liability and automobile liability policies:

**39.1.7.1.1.** The District, their representatives, consultants, trustees, officers, officials, employees, agents, and volunteers ("Additional Insureds") are to be covered as additional insureds with respect to liability arising out of activities performed by or on behalf of Design-Builder; instruments of Service and completed operations of the Design-Builder; premises owned, occupied or used by Design-

Builder; or automobiles owned, leased, hired or borrowed by Design-Builder. The coverage shall contain no special limitations on the scope of protection afforded to the Additional Insureds.

**39.1.7.1.2.** For any claims related to the projects, Design-Builder's insurance coverage shall be primary insurance with respect to the Additional Insureds. Any insurance or self-insurance maintained by the Additional Insureds shall be in excess of the Design-Builder's insurance and shall not contribute with it.

**39.1.7.1.3.** Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the Additional Insureds.

**39.1.7.2.** Design-Builder's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

**39.1.7.3.** Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either Party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the District.

**39.1.7.4.** Design-Builder shall furnish the District with Certificates of Insurance showing maintenance of the required insurance coverage and original endorsements affecting coverage. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements are to be received and approved by the District before Work commences. Design-Builder must provide updates on the insurance coverage throughout the term of the Agreement to ensure that there is no break in coverage during the performance of the Work. Failure to provide evidence of current coverage shall be grounds for termination for breach of contract.

**39.1.8. Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII, unless otherwise acceptable to the District.

**40. Payment Bond and Performance Bond**. Design-Builder shall not commence the Work until it has provided to the District, in a form acceptable to the District, a Payment (Labor and Material) Bond and a Performance Bond, each in an amount equivalent to One Hundred Percent (100%) of the Total Contract Price issued by a surety admitted to issue bonds in the State of California and otherwise acceptable to the District.

**41. Permits and Licenses**. Design-Builder and all Design-Builder's employees or agents shall secure and maintain in force, at Design-Builder's sole cost and expense, such permits, licenses and registrations as are required by law in connection with the furnishing of materials, supplies, or services pursuant to this Agreement. Design-Builder is responsible for obtaining, on behalf of District and at Design-Builder's expense, permits and approvals (including CEC and DSA approval) required for the building, installation,

and start-up of the Work hereunder which are required to complete the Project, and District shall provide reasonable assistance to Design-Builder regarding the same. District shall hire and pay for all inspectors, including DSA and other special inspectors, however, if Design-Builder requires overtime inspections, including but not limited to acceleration of the Work, Design-Builder shall reimburse District for overtime and/or additional fees and expenses for inspectors, including DSA and other special inspectors.

**42. Assignment**. The rights, burdens, duties, or obligations of Design-Builder pursuant to this Agreement shall not be assigned by the Design-Builder without the prior written consent of the District.

**43. Subcontractors**. Subcontractors, if any, engaged by the Design-Builder for any Service or Work under this Agreement shall be subject to the approval of the District. Design-Builder agrees to bind every subcontractor by the terms of the Agreement as far as such terms are applicable to subcontractor's work, including, without limitation, all indemnification, insurance, bond, and warranty requirements. If Design-Builder shall subcontract any part of this Agreement, Design-Builder shall be fully responsible to the District for acts and omissions of its subcontractor(s) and of persons either directly or indirectly employed by it. Nothing contained in this Agreement shall create any contractual relations between any subcontractor and the District.

**44. Compliance with Laws**. Design-Builder shall observe and comply with all rules and regulations of the governing board of the District and all federal, state, and local laws, ordinances and regulations. Design-Builder shall give all notices required by any law, ordinance, rule and regulation bearing on conduct of the Work as indicated or specified. If Design-Builder observes that any of the Work required by this Agreement is at variance with any such laws, ordinance, rules or regulations, Design-Builder shall notify the District, in writing, and any necessary changes to the scope of the Work shall be made and this Agreement shall be appropriately amended in writing, or this Agreement shall be terminated effective upon Design-Builder's receipt of a written termination notice from the District. If Design-Builder performs any work that is in violation of any laws, ordinances, rules or regulations, without first notifying the District of the violation, Design-Builder shall bear all costs arising therefrom.

**44.1.** Design-Builder hereby acknowledges that the Construction Manager(s), the Project Inspector(s), and the Division of the State Architect have authority to approve and/or stop Work if the Design-Builder's Work does not comply with the requirements of the Contract Documents, Title 24 of the California Code of Regulations, and all applicable laws. Design-Builder shall be liable for any delay caused by its non-compliant Work.

**44.2. Labor Code Requirements**. Design-Builder shall familiarize itself with and comply with all applicable provisions of the Labor Code, sections 1720 through 1861. Design-Builder and its subcontractors shall pay all workers on all work performed not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations ("DIR") for the type of work performed and the locality in which the Work is to be performed within the boundaries of the Contra Costa Community College District, pursuant to sections 1770, et seq., of the California Labor Code. Willful failure to comply may result in penalties, including loss of the right to bid on or receive public works contracts.

**44.2.1. Certified Payroll Records**. Design-Builder and its subcontractor(s) shall keep accurate certified payroll records ("CPRs") of workers and shall

electronically submit certified payroll records directly to the Labor Commissioner using DIR's eCPR System by uploading the CPRs by electronic XML file or entering each record manually using the DIR's iForm (or current form) online on a weekly basis and within ten (10) days of any request by the District or the Labor Commissioner. (See http://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html).

**44.2.2. Labor Compliance**: Design-Builder shall perform the Work of the Project while complying with all the applicable regulations, including section 16000, et seq., of Title 8 of the California Code of Regulations and is subject to labor compliance monitoring and enforcement by the Department of Industrial Relations.

**45. Audit.** Design-Builder shall establish and maintain books, records, and systems of account, in accordance with generally accepted accounting principles, reflecting all business operations of Design-Builder transacted under this Agreement. Design-Builder shall retain these books, records, and systems of account during the Term of this Agreement and for three (3) years thereafter. Design-Builder shall permit the District, its agent, other representatives, or an independent auditor to audit, examine, and make excerpts, copies, and transcripts from all books and records, and to make audit(s) of all billing statements, invoices, records, and other data related to the Services covered by this Agreement. Audit(s) may be performed at any time, provided that the District shall give reasonable prior notice to Design-Builder and shall conduct audit(s) during Design-Builder's normal business hours, unless Design-Builder otherwise consents.

**46. Anti-Discrimination**. It is the policy of the District that in connection with all work performed under contracts there be no discrimination against any employee engaged in the work because of race, color, ancestry, national origin, religious creed, physical disability, medical condition, marital status, sexual orientation, gender, or age and therefore the Design-Builder agrees to comply with applicable Federal and California laws including, but not limited to the California Fair Employment and Housing Act (beginning with Government Code section 12900) and Labor Code section 1735. In addition, the Design-Builder agrees to require like compliance by all its subcontractors.

**47. Environmental Attributes and Energy Credits**. District shall own all right, title, and interest associated with or resulting from the development, construction, installation and ownership of any facilities installed on the Project. This ownership includes without limitation, all rights, credits (including tax credits), rebates, reporting rights, benefits, reductions, offsets and allowances and entitlements of any kind, howsoever entitled or named (including carbon credits and allowances), whether arising under federal, state or local law, international treaty, trade association membership or the like arising from the energy efficiency measures and Project.

**48. Limitation of District Liability**. Other than as provided in this Agreement, District's financial obligations under this Agreement shall be limited to the payment of the compensation provided in this Agreement. Notwithstanding any other provision of this Agreement, in no event, shall District be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of or in connection with this Agreement for the services performed in connection with this Agreement.

**49. Confidentiality**. Design-Builder and all Design-Builder's agents, personnel, employee(s), and/or subcontractor(s) shall maintain the confidentiality of all information received in the

course of performing the Services to the extent allowed by law. This requirement to maintain confidentiality shall extend beyond the termination of this Agreement.

**50. Claims & Disputes.** In the event of any demand by Design-Builder for (A) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District under the Agreement, (B) payment by the District of money or damages arising from work done by, or on behalf of, the Design-Builder pursuant to the Agreement and payment of which is not otherwise expressly provided for or to which Design-Builder is not otherwise entitled to, or (C) an amount of payment disputed by the District, the parties shall attempt to resolve the dispute by those procedures set forth in Public Contract Code section 9204 and/or Article 1.5 (commencing with section 20104) of Chapter 1, Part, 3, Division 2, of the Public Contract Code, if applicable, the provisions of which are each attached hereto and incorporated herein by this reference. If a claim, or any portion thereof, remains in dispute upon satisfaction of all applicable dispute resolution requirements, the Design-Builder shall comply with all claims presentation requirements as provided in Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of Government Code as a condition precedent to the Design-Builder's right to bring a civil action against the District. For purposes of those provisions, the running of the time within which a claim must be presented to the District shall be tolled from the time the Design-Builder submits its written claim until the time the claim is denied, including any time utilized by any applicable meet and confer process. Pending resolution of the dispute, Design-Builder and its subcontractors shall continue to perform the Work under the Agreement and shall not cause a delay of the Work during any dispute, claim, negotiation, mediation, or arbitration proceeding, except by written agreement of the District.

**51. Attorney Fees and Costs**. Should litigation be necessary to enforce any terms or provisions of this Agreement, then each Party shall bear its own litigation and collection expenses, witness fees, court costs, and attorney's fees.

**52. Notice**. Any notice required or permitted to be given under this Agreement shall be deemed to have been given, served, and received if given in writing and either personally delivered or deposited in the United States mail, registered or certified mail, postage prepaid, return receipt required, or sent by overnight delivery service, or email, addressed as follows:

| To District: | To Design-Builder: |
|---|---|
| Contra Costa Community College District | _____ |
| ATTN: Ines Zildzic | Attn: _____ |
| Vice Chancellor, Facilities Planning | _____ |
| and Construction | Email: _____ |
| Email: izildzic@4cd.edu | |

Any notice personally given or sent by email shall be effective upon receipt. Any notice sent by overnight delivery service shall be effective the business day next following delivery thereof to the overnight delivery service. Any notice given by mail shall be effective three (3) days after deposit in the United States mail.

**53. Governing Law**. This Agreement shall be governed by, and the rights, duties and obligations of the Parties shall be determined and enforced in accordance with, the laws of the State of California. The Parties further agree that any action or proceeding brought to enforce the terms and conditions of this Agreement shall be maintained in the county in which the District's administrative offices are located.

54. **Severability**. If any term, condition or provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force and effect, and shall not be affected, impaired or invalidated in any way.

55. **Waiver**. The waiver by either Party of any breach of any term, covenant, or condition herein contained shall not be deemed to be a waiver of such term, covenant, condition, or any subsequent breach of the same or any other term, covenant, or condition herein contained.

56. **Captions and Interpretations**. Paragraph headings in this Agreement are used solely for convenience and shall be wholly disregarded in the construction of this Agreement. No provision of this Agreement shall be interpreted for or against a Party because that Party of its legal representative drafted such provision, and this Agreement shall be construed as if jointly prepared by the Parties.

57. **Use of Pronouns**. All personal pronouns used in this Agreement, whether used in the masculine, feminine, or neuter gender, will include all other genders; the singular will include the plural and the plural will include the singular.

58. **Incorporation of Recitals and Appendices**. The Recitals and each Appendix attached hereto are hereby incorporated herein by reference.

59. **Cooperation**. The Parties hereby agree to execute all such other documents and to take all such other action as may be reasonably necessary to effect the purposes of this Agreement.

60. **Binding Contract**. This Agreement shall be binding upon the Parties and upon their successors and assigns, and shall inure to the benefit of said Parties and their successors and assigns.

61. **Authority to Bind Parties**. Neither Party in the performance of any and all duties under this Agreement, except as otherwise provided in this Agreement, has any authority to bind the other to any agreements or undertakings.

62. **No Rights in Third Parties**. This Agreement does not create any rights in, or inure to the benefit of, any third party except as expressly provided herein.

63. **Signature Authority**. Each Party has the full power and authority to enter into and perform this Agreement, and the person signing this Agreement on behalf of each Party has been properly authorized and empowered to enter into this Agreement.

64. **Counterparts**. This Agreement and all amendments to it may be executed in counterparts, each of which shall be deemed an original. A facsimile or electronic signature shall be deemed to be the equivalent of the actual original signature. All counterparts so executed shall constitute one document binding all the Parties.

65. **Provisions Required By Law Deemed Inserted**. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and this Agreement shall be read and enforced as though it were included therein.

66. **Entire Contract**. This Agreement sets forth the entire contract between the parties hereto and fully supersedes any and all prior agreements, understanding, written or oral, between the parties hereto pertaining to the subject matter thereof. This Agreement may be modified only in writing upon mutual consent.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the dates indicated below.

| **Contra Costa Community College District** | **[_____]** |
|---|---|
| Date: _____, 20__ | Date: _____, 20__ |
| By: _____ | By: _____ |
| Print Name: David S. Wetmore | Print Name: _____ |
| Print Title: Director of Purchasing & Contracts | Print Title: _____ |
| : | |

---

**Information Regarding Design-Builder:**

Proper Name: _____
License No.: _____
Registration No.: _____
Address: _____
_____
Telephone: _____
Facsimile: _____
E-Mail: _____

Type of Business Entity:
____ Individual
____ Sole Proprietorship
____ Partnership
____ Limited Partnership
____ Corporation, State:_____

____ Limited Liability Company
____ Other: _____

_____:
Employer Identification and/or Social Security Number

**NOTE: Section 6041 of the Internal Revenue Code (26 U.S.C. 6041) and Section 1.6041-1 of Title 26 of the Code of Federal Regulations (26 C.F.R. 1.6041-1) requires the recipients of $600.00 or more to furnish their taxpayer information to the payer. In order to comply with these requirements, the District requires the Design-Builder to furnish the information requested in this section.**

## Public Contract Code section 9204

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) (A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

## Public Contract Code sections 20104 – 20104.6

**§ 20104.**

(a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars ($375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b) (1) "Public work" means "public works contract" as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

**§ 20104.2.**

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars ($50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

(d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

**§ 20104.4.**

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

**§ 20104.6.**

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

## PREVAILING WAGE CERTIFICATION

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Work on the Project.

Date: _____
Name of Design-Builder: _____
Signature: _____
Print Name: _____
Title: _____

## WORKERS' COMPENSATION CERTIFICATION

Labor Code section 3700 in relevant part provides:

> Every employer except the State shall secure the payment of compensation in one or more of the following ways:
>
> 1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.
>
> 2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Agreement.

Date: _____
Name of Design-Builder: _____
Signature: _____
Print Name: _____
Title: _____

(In accordance with Article 5 - commencing at section 1860 of the Labor Code, Division 2, Part 7, Chapter 1, the above certificate must be signed and filed with the District to performing any Work under this Agreement.)

DOCUMENT 00 45 46.03

# DRUG-FREE WORKPLACE CERTIFICATION

PROJECT/CONTRACT NO.: C-1168 AA Building Mechanical Systems Upgrade – Energy Conservation Project between the Contra Costa Community College District ("District") and _____ ("Design-Builder" or "Bidder") ("Contract" or "Project").

This Drug-Free Workplace Certification form is required from the successful Bidder pursuant to Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the Design-Builder or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

The District is not a "state agency" as defined in the applicable section(s) of the Government Code, but the District is a local agency and community college district under California law and requires all Design-Builders on District projects to comply with the provisions and requirements of the Drug-Free Workplace Act of 1990.

Design-Builder must also comply with the provisions of Health & Safety Code section 11362.3 which prohibits the consumption or possession of cannabis or cannabis products in any public place, including on campus.

Design-Builder shall certify that it will provide a drug-free workplace by doing all of the following:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition.

b. Establishing a drug-free awareness program to inform employees about all of the following:

   (1) The dangers of drug abuse in the workplace.

   (2) The person's or organization's policy of maintaining a drug-free workplace.

   (3) The availability of drug counseling, rehabilitation, and employee-assistance programs.

   (4) The penalties that may be imposed upon employees for drug abuse violations.

c. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required above, and that, as a

condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by section 8355(a), and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of section 8355, that the Contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of the aforementioned Act.

I acknowledge that I am aware of the provisions of and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990 and Health and Safety Code section 11362.3.

Date: _____

Proper Name of Design-Builder: _____

Signature: _____

Print Name: _____

Title: _____

DOCUMENT 00 45 46.04

# TOBACCO-FREE ENVIRONMENT CERTIFICATION

PROJECT/CONTRACT NO.: C-1168 AA Building Mechanical Systems Upgrade – Energy Conservation Project between the Contra Costa Community College District ("District") and _____ ("Design-Builder" or "Bidder") ("Contract" or "Project").

This Tobacco-Free Environment Certification form is required from the successful Bidder.

Pursuant to, without limitation, 20 U.S.C. section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq., Business and Professions Code section 22950 et seq., and District Board policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school-owned vehicles and vehicles owned by others while on District property. The prohibition on smoking includes the use of any electronic smoking device that creates an aerosol or vapor, in any manner or in any form, and the use of any oral smoking device for the purpose of circumventing the prohibition of tobacco smoking. Further, Health & Safety Code section 11362.3 prohibits the smoking or use of cannabis or cannabis products in any place where smoking tobacco is prohibited.

I acknowledge that I am aware of the District's policy regarding tobacco-free environments at District sites, including the Project site and hereby certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents, to use tobacco and/or smoke on the Project site.

Date: _____

Proper Name of Design-Builder: _____

Signature: _____

Print Name: _____

Title: _____

DOCUMENT 00 45 46.05

# HAZARDOUS MATERIALS CERTIFICATION

PROJECT/CONTRACT NO.: C-1168 AA Building Mechanical Systems Upgrade – Energy Conservation Project between the Contra Costa Community College District ("District") and _____ ("Design-Builder" or "Bidder") ("Contract" or "Project").

**1.** Design-Builder hereby certifies that no asbestos, or asbestos-containing materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations, ("New Hazardous Material"), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Design-Builder's work on the Project for District.

**2.** Design-Builder further certifies that it has instructed its employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

**3.** Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (0.1%) asbestos shall be defined as asbestos-containing material.

**4.** Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Design-Builder if the material is found to be New Hazardous Material.

**5.** All Work or materials found to be "New Hazardous Material" or Work or material installed with equipment containing "New Hazardous Material" will be immediately rejected and this Work will be removed at Design-Builder's expense at no additional cost to the District.

**6.** Design-Builder has read and understood the document titled Hazardous Materials Procedures & Requirements, and shall comply with all the provisions outlined therein. Design-Builder certifies that it is knowledgeable of, and shall comply with, all laws applicable to the Work, including, but not limited to, all federal, state, and local laws, statutes, standards, rules, regulations, and ordinances applicable to the Work.

Date: _____

Proper Name of Design-Builder: _____

Signature: _____

Print Name: _____

Title: _____

DOCUMENT 00 45 46.06

# LEAD-BASED MATERIALS CERTIFICATION

PROJECT/CONTRACT NO.: C-1168 AA Building Mechanical Systems Upgrade – Energy Conservation Project between the Contra Costa Community College District ("District") and _____ ("Design-Builder" or "Bidder") ("Contract" or "Project").

This certification provides notice to the Design-Builder that:

(1) Design-Builder's work may disturb lead-containing building materials.

(2) Design-Builder shall notify the District if any work may result in the disturbance of lead-containing building materials.

(3) Design-Builder shall comply with the Renovation, Repair and Painting Rule, if lead-based paint is disturbed in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors.

## 1. Lead as a Health Hazard

Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child's central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disburses when paint chips, chalks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child's hands and toys and then into a child's mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Design-Builder and its employees will be providing services for the District, and because the Design-Builder's work may disturb lead-containing building materials, DESIGN-BUILDER IS HEREBY NOTIFIED of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1978 are presumed to contain some lead-based paint until sampling proves otherwise.

## 2. Overview of Law

Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a Design-Builder's employee may be occupationally exposed to lead.

The OSHA Regulations apply to all construction work where a Design-Builder's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on Design-Builders subject to those regulations. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. Regulated construction work includes, but is not limited to, the following:

a. Demolition or salvage of structures where lead or materials containing lead are present;

b. Removal or encapsulation of materials containing lead;

c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;

d. Installation of products containing lead;

e. Lead contamination/emergency cleanup;

f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and

g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Design-Builder, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532.1).

**Design-Builder shall notify the District if any Work may result in the disturbance of lead-containing building materials. Any and all Work that may result in the disturbance of lead-containing building materials shall be coordinated through the District. A signed copy of this Certification shall be on file prior to beginning Work on the Project, along with all current insurance certificates.**

**3. <u>Renovation, Repair and Painting Rule, Section 402(c)(3) of the Toxic Substances Control Act</u>**

The EPA requires lead safe work practices to reduce exposure to lead hazards created by renovation, repair and painting activities that disturb lead-based paint. Pursuant to the Renovation, Repair and Painting Rule (RRP), renovations in homes, childcare facilities, and schools built prior to 1978 must be conducted by certified renovations firms, using renovators with training by a EPA-accredited training provider, and fully and adequately complying with all applicable laws, rules and regulations governing lead-based materials, including those rules and regulations appearing within title 40 of the Code of Federal Regulations as part 745 (40 CFR 745).

The RRP requirements apply to all contractors who disturb lead-based paint in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors. If a DPH-certified inspector or risk assessor determines that a home constructed before

1978 is lead-free, the federal certification is not required for anyone working on that particular building.

**4. Design-Builder's Liability**

If the Design-Builder fails to comply with any applicable laws, rules, or regulations, and that failure results in a site or worker contamination, the Design-Builder will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify, and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom.

If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses, and training shall conduct this Work.

It shall be the responsibility of the Design-Builder to properly dispose of any and all waste products, including, but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Design-Builder to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

The Design-Builder shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Design-Builder.

THE DESIGN-BUILDER HEREBY ACKNOWLEDGES, UNDER PENALTY OF PERJURY, THAT IT:

1. HAS RECEIVED NOTIFICATION OF POTENTIAL LEAD-BASED MATERIALS ON THE OWNER'S PROPERTY;

2. IS KNOWLEDGEABLE REGARDING AND WILL COMPLY WITH ALL APPLICABLE LAWS, RULES, AND REGULATIONS GOVERNING WORK WITH, AND DISPOSAL, OF LEAD.

THE UNDERSIGNED WARRANTS THAT HE/SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF AND BIND THE DESIGN-BUILDER. THE DISTRICT MAY REQUIRE PROOF OF SUCH AUTHORITY.

Date: _____

Proper Name of Design-Builder: _____

Signature: _____

Print Name: _____

Title: _____

DOCUMENT 00 45 19.01

# IRAN CONTRACTING ACT CERTIFICATION
# (Public Contract Code Sections 2202-2208)

PROJECT/CONTRACT NO.: C-1168 AA Building Mechanical Systems Upgrade – Energy Conservation Project between the Contra Costa Community College District ("District") and _____ ("Design-Builder" or "Bidder") ("Contract" or "Project").

Prior to bidding on or submitting a proposal for a contract for goods or services of $1,000,000 or more, the bidder/proposer must submit this certification pursuant to Public Contract Code section 2204.

The bidder/proposer must complete **ONLY ONE** of the following two options. To complete OPTION 1, check the corresponding box **and** complete the certification below. To complete OPTION 2, check the corresponding box, complete the certification below, and attach documentation demonstrating the exemption approval.

☐ **OPTION 1**. Bidder/Proposer is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b), and we are not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

☐ **OPTION 2**. Bidder/Proposer has received a written exemption from the certification requirement pursuant to Public Contract Code sections 2203(c) and (d). *A copy of the written documentation demonstrating the exemption approval is included with our bid/proposal*.

**CERTIFICATION:**

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY, that I am duly authorized to legally bind the bidder/proposer to the OPTION selected above. This certification is made under the laws of the State of California.

| *Vendor Name/Financial Institution (Printed)* | *Federal ID Number (or n/a)* |
|---|---|
| *By (Authorized Signature)* | |
| *Printed Name and Title of Person Signing* | *Date Executed* |

**PERFORMANCE BOND**

**(100% of Total Contract Price)**

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of **Contra Costa Community College District** ("District") and _____ ("Principal)" have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

**Applied Arts Building Mechanical Systems Upgrade Energy Conservation Project**

("Project"), which Agreement dated _____, 2020, and all of the Contract Documents attached to or forming a part of the Agreement, are hereby referred to and made a part hereof ("Agreement"), and

WHEREAS, said Principal is required under the terms of the Agreement to furnish a bond for the faithful performance of the Agreement;

NOW, THEREFORE, the Principal and _____ _____ ("Surety") are held and firmly bound unto the Board of the District in the penal sum of _____ **Dollars ($_____)**, lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

1. Perform all the work required to complete the Project; and

2. Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

Or, at the District's sole discretion and election, the Surety shall obtain a bid or bids for completing the Agreement in accordance with its terms and conditions, and upon determination by the District of the lowest responsible bidder, arrange for a contract between such bidder and the District and make available as Work progresses sufficient funds to pay the cost of completion less the "balance of the Total Contract Price," and to pay and perform all obligations of Principals under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Total Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by the District under the Agreement and any modifications thereto, less the amount previously paid by the District to the Principal, less any withholdings by the District allowed under the Contract. Surety shall not utilize Principal in completing the Project nor shall Surety accept a Bid from Principal for completion of the Work if the District, when declaring the Principal in default, notifies Surety of the District's objection to Principal's further participation in the completion of the Work. Surety expressly agrees that the District may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Agreement and any alteration thereof made as therein provided, on his or its part to be kept

and performed at the time and in the intent and meaning, including all contractual guarantees and warrantees of materials and workmanship, and shall indemnify and save harmless the District, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Agreement, the above obligation shall hold good for a period ending one year after the date of Final Completion during which time Surety's obligation shall continue if Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The above obligation is separate from and does not affect to the obligations under a performance guarantee, a maintenance services agreement, or any warranty obligations that are effective for any period longer than one year following the Final Completion date.

Nothing herein shall limit the District's rights or the Principal's or Surety's obligations under the Agreement, law or equity, including, but not limited to, the District's rights against Principal under California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Agreement or to the work or to the specifications.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 2020.

_____
Principal

_____
By

_____
Surety

_____
By

_____
Name of California Agent of Surety

_____
Address of California Agent of Surety

_____
Telephone Number of California Agent of Surety

**Please attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.**

## PAYMENT BOND

### Design-Builder's Labor & Material Bond
### (100% of Total Contract Price)

KNOW ALL PERSONS BY THESE PRESENTS:

That WHEREAS, the governing board ("Board") of **Contra Costa Community College District** ("District") and _____ ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

**Applied Art Building Mechanical Systems Upgrade Energy Conservation Project**

("Project") which Agreement dated _____, 2020, and all of the Contract Documents attached to or forming a part of the Agreement, are hereby referred to and made a part hereof ("Agreement"), and

WHEREAS, pursuant to law and the Agreement, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Agreement is awarded in an amount equal to one hundred percent (100%) of the Total Contract Price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the California Civil Code, and division 2, part 7, of the Labor Code.

NOW, THEREFORE, the Principal and _____ _____, ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of _____ **Dollars ($_____)**, lawful money of the United States, being a sum not less than the total amount payable by the terms of Agreement, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of its subcontractors, or the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under section 9100 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Agreement or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 2020.

_____
Principal

_____
By

_____
Surety

_____
By

_____
Name of California Agent of Surety

_____
Address of California Agent of Surety

_____
Telephone Number of California Agent of Surety

**Please attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.**

## Appendix "A"

## Scope of Work

Design-Builder's *entire* Proposal is not made part of this Agreement.

Design-Builder shall provide all professional services and work ("Services" or "Work") necessary for completing the following for each and every Project Site identified in this Agreement:

a. The DESIGN-BUILDER, including DESIGN-BUILDER'S designees, selected for contracting services shall be responsible for the design, procurement and implementation of specified energy efficiency and capital improvement projects at Contra Costa College Applied Arts building. Timely implementation of this project is of the essence. DESIGN-BUILDER shall also be responsible for obtaining all declared rebates from the public utility (PG&E or MCE) or any other declared source naming the District as the Payee.

b. Specific projects that are included in the scope of work as part of the Mechanical and Controls Design-Build Project are listed below, along with corresponding funding sources:

C-1168 Contra Costa College Applied Arts Building Mechanical Systems Upgrade Energy Conservation Project – Redevelopment Agency and Schedule Maintenance Funds.

***RFQ/P Exhibit A Section 23 00 00-1.15 and 1.16, 25 00 00-1.3 and 1.4, Exhibit B, Exhibit C are all made a part of the agreement scope of work.***

c. The DESIGN-BUILDER shall be responsible for developing a schedule to complete the work. All work is being performed on an occupied community college site. The Applied Arts building shall be available for class. During spring and summer months there will be classes which require the Design-Builder to coordinate around class schedules.

d. To support this scheduled completion date, the following schedule is established for the DESIGN-BUILDERS:

**C-1168 to be substantially completed no later than August 9, 2021, with a final completion of August 23, 2021**

e. DESIGN-BUILDER shall be responsible for the generation of all bid documents and the bid management process for any subcontractors hired by DESIGN-BUILDER for this project.

f. DESIGN-BUILDER understands they are proposing a complete turn-key project, inclusive of all trades and components necessary to provide a quality installation to District standards. DESIGN-BUILDER also understands DESIGN-BUILDER's proposed costs represent the total cost for all services provided including materials, labor, taxes, and delivery, Payment & Performance Bonds, insurance and any other ancillary services and materials.

g. In the event that DESIGN-BUILDER fails to correct a performance deficiency within 48 hours of District notification, excluding weekends, District may, without prejudice to any other remedy, (1) withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss or (2) make good such deficiencies and adjust the total Contract Price by reducing the amount thereof by the cost of making good such deficiencies.

h. DESIGN-BUILDER shall be responsible for scheduling work between 7am and 5pm Monday thru Friday, where possible. The DESIGN-BUILDER's work shall occur so as not to cause any disruption to College operations (e.g. classes and related activities, etc.). Work may have to occur before 7am or after 5pm and on weekends in certain circumstances to reduce the effect on College operations. No additional cost beyond cost proposal in the SOQ/P will be incurred by the District due to work done outside normal work hours. DESIGN-BUILDER shall also be responsible for coordinating scheduling with the District, College Police, and Building & Grounds. DESIGN-BUILDER shall provide a construction schedule acceptable to the District prior to the commencement of any work. Three week look ahead schedules shall be provided to the District so that sufficient time is available for planning and notification purposes with the College. Pending District approval and appropriate advance notice, classes may be able to temporarily shift to other classroom locations in the building for short durations (e.g. a few days or over a weekend).

i. It is understood and agreed that the DESIGN-BUILDER and its subcontractors shall pay its employees and/or subcontract workers in accordance with the provisions of Section 1770 *et seq.* of the California Labor Code and shall be registered as public work contractors with the Department of Industrial Relations in accordance with Section 1725.5 of the California Labor Code.

j. This project is under the Project Stabilization Agreement (PSA) and those documents are provided as part of the RFQ/P package and made part of this agreement.

k. The DESIGN-BUILDER shall obtain all required permits and DSA approval where required including close out with DSA once the project is completed.

l. The DESGIN-BUILDER shall comply with all guidelines under the Contra Costa Health Services Order for construction project safety protocol and will adhere to all future orders. Refer to the following link for the latest updates - https://www.coronavirus.cchealth.org/health-orders. Appendix B-2 Large Construction Project Safety Protocol applies to this project. The District will provide the 3rd party Jobsite Safety Accountability Supervisor (JSAS).

[END OF APPENDIX]

**Appendix "B"**
**Special Conditions**

1.1 SUBMITTALS

A. Provide submittals in the format, and as described below:

1. Submittals shall be submitted to the District, electronically in PDF format, within three (3) Calendar Days from the Notice to proceed, except as otherwise noted. Refer to specifications for further submission procedures.
2. Submittals that require local and State agency approval, shall conform to this Specification and the requirements of the local or State agency.
3. District will review and provide a response to submittals within eight (8) workdays (excluding holidays). Submittals that include design documents prepared by a licensed California Engineer will be submitted for the District's records. Any District review and response to the Design-Builder's design documents by a licensed California Engineer will be for format and general compliance only.

B. Provide submittals for all equipment, if any, listed on the drawings and performance documents.

C. The Schedule of Values shall be submitted to the District within seven (7) calendar days after the Notice of Award. The Schedule of Values shall include the following minimum categories and be coordinated with the agreement language:

1. *Bonds & Insurance*
2. *Special Conditions and Requirements*
3. *Design Documents*
4. *Design DSA Approved Documents*
5. *Mobilization at Site*
6. *Construction Submittals*
7. *Construction*
    a. *Per AHU & VAV*
        i) *Abatement*
        ii) *Demo*
        iii) *Install*
        iv) *Controls*
        v) *Commissioning (Performance Verification)*
4. *Closeout Documents*
    a. *O&M and Warranties*
    b. *As-Built Drawings*
    c. *Training*

The District will only pay for Work installed at the Site for items 5 through 8.

D. CPM Design-Build Schedule shall be submitted within three (3) work days from the Notice to Proceed of the Contract electronically in Adobe PDF format and Microsoft Project file format. District and Design-Builder shall meet and review the schedule. The CPM Design-Build Schedule is required to demonstrate that the work can be performed within the

Term of the Agreement, and for the District's adequate monitoring of the progress of the Work and shall be prepared in accordance with the time frame described in Article 2 of the Agreement. The District may disapprove or require modification to the schedule if, in the opinion of the District, adherence to the Design-Build schedule will not cause the Work to be completed in accordance with the Agreement. Below are the minimum activity types that shall be included in the schedule:

1. Design-Builder Submittals at 50 %, 100%, and DSA
   a. Include Submittal Reviews by District Performance Criteria Engineer and District
2. DSA Approval
3. Construction Submittals
4. Procurement and Fabrication
5. Mobilization at Site
6. Installation activities corresponding to the Schedule of Values
   a. Include temporary interruptions or shutdown of any utilities.
   b. Include proposed class move coordination.
7. Substantial Completion Milestone
8. Project Closeout activities
9. Final Completion Milestone

Submittals are for review of conformance with the requirements of the Contract.

Development of schedules, and schedule updates, and project status reporting requirements of the Contract shall employ computerized Critical Path Method (CPM) scheduling utilizing Microsoft Project. All activities shall have predecessors and successors to generate a project critical path and total float for each activity.

Design-Builder must submit a monthly update in Microsoft Project file format along with payment requisition.

**1.2** SUMMARY OF STAGING AND WORK RESTRICTION REQUIREMENTS

A. Prior to the start of Work, Design-Builder shall familiarize itself with the Work Restrictions as they relate to all Work required by the Contract Documents.

B. Temporary Work Activity Plan shall include:

1. Full size drawing (36"x42") and email Adobe PDF format of site plan showing the proposed locations and dimensions of temporary facilities and activities, including but not limited to, all proposed trailers, equipment and material storage areas on the Project Site; safe and ADA complaint access (ingress/egress) for pedestrians and vehicles around the construction areas; proposed haul routes; all temporary construction, and way-finding signage; temporary fenced area(s), noise and safety barriers, and dust partitions; and temporary measures to maintain continuous and uninterrupted code compliant use of all occupied and surrounding areas impacted by construction activities. Identify any areas that require temporary paving for stabilization or prevention of tracking of mud, and for ADA complaint ingress and egress. Indicate if the use of supplemental or other staging areas might be required. Also see performance documents for Temporary Facilities and Control for additional requirements.
2. Prior to starting work the Design-Builder shall provide a proposed schedule of temporary interruptions or shutdown of any utility or electrical/mechanical systems to the District Representatives as part of the Temporary Work Plan. The Work Activity Plan shall be prepared in conjunction with the Design-Builder's Schedule and include dates for tasks

that limit building use, impact utilities and/or services, and/or require College personnel assistance.

3. Design-Builder shall submit two (2) hard copies at the pre-construction meeting, and email Adobe PDF Format of the initial submittal of the Temporary Work Activity Plan for review by the District and District Representatives and by personnel from the Campus (e.g., Buildings & Grounds, Police Department, and other representatives).
4. The Design-Builder shall provide written request (10) working days prior to the desired time for the proposed interruption(s). Work shall be performed at times other than the Campus's normal hours of operation, or as directed by the District's Representatives. Temporary interruptions shall be completed prior to the start of the next business day at the Campus to maintain continuous and uninterrupted use of Campus facilities and utility systems

C. Design-Builder shall perform and complete all Temporary Work Activities to ensure the following:

1. Protection of students, staff, faculty and personnel in occupied areas and surrounding and adjacent areas from the hazards and dust associated with construction.
2. The work areas, roads, parking lots, and streets are to be kept clear, clean, and free of loose debris, construction materials and partially installed work which would create a safety hazard or interfere with subcontractor and personnel duties and traffic. The Design-Builder shall sweep the areas clean at the end of each work day and make every effort to keep dust and noise to a minimum at all times.
3. Design-Builder shall construct dust partitions and other barriers as required prior to the start of abatement or demolition activities, whichever may occur first, and they must remain in place until the completion of that activity where required.
    a. Corridor and Classroom zones shall be left clean and ready for occupancy whenever work occurs in those zones. The Contractor shall provide a professional cleaning service for this purpose. The College may clean these areas at the Design-Builder's expense if the area is not ready for class after the work by the Design-Builder.

**1.3** SUMMARY OF WORK RESTRICTIONS

A. General: All Temporary Work Activities must be completed within the timelines, work shift times, and the scheduled time period as required by the Contract Documents. Comply with the following:

1. The Temporary Work Activity Plan shall be approved by the District prior to any Work starting on the Project Site.
2. Design-Builder shall have all temporary fencing, signage, ADA compliant pathways and other temporary measures described in Paragraph 1.2 above installed, operational and accepted by the District prior to starting demolition or other Work as applicable.
3. The Design-Builder will be working in an existing buildings which will be occupied. Existing buildings and their contents must be kept secure at all times.
4. Provide temporary closures as required to maintain security as directed by the Campus Police Services.
5. Provide dust covers or protective enclosures to protect existing work, equipment and materials during the construction period.
6. Relocate movable furniture [approximately [ 1.8 m (6 feet)] away from the Design-Builder's working area; protect the furniture and replace the furniture in [its] [their] original location[s] upon completion of the work. Existing equipment that is to remain attached in place, must be protected against damage, or temporarily disconnect, relocate, protect, and reinstall at the completion of the work.

B. Time Related Work Restrictions within the Contract Time

Contract Time is as articulated in the Agreement, and Work by the Design Builder is restricted and limited to those specific time periods at specific locations during this contract duration. Design Builder is responsible for scheduling work at mutually agreed hours. The majority of Design-Builder's work shall occur so as not to cause any disruption to College operations (e.g. classes, programs, and related activities, etc.). Work may have to occur before 7am or after 5pm and on weekends in certain circumstances to reduce the effect on College operations. No additional cost beyond cost proposal in the SOQ/P will be incurred by District due to work done outside normal work hours. Design-Builder shall also be responsible for coordinating scheduling with the District, College Police, and Buildings & Grounds.

1.1. **All Work at the Campus Project Sites**: Physical activities which occurs on the College Campus must be coordinated around College operations and event schedules. Project activities which are non-invasive; silent and do not impact College operations (e.g. classes, programs, and related activities, etc.) may be conducted during instruction but must be shown as such on the Work Activity Plan.

1.2. **Weekend and Holiday Work**: Design-Builder shall include in its base bid the cost to work weekends as stated so within the performance specifications. All overtime work for critical and near critical path schedule activities at the Project Site to ensure that physical activities are completed to mitigate any disruption to the campus will be accounted for and made part of the total contract price. (i.e., near critical path schedule activities include any schedule activity with less than 5 work days of total float). Design-Builder shall not include in its base bid the cost to work holidays.

The Academic Calendar for session dates for each term are available at the following link: http://www.4cd.edu/hr/academic_calendar/Forms/AllItems.aspx. The academic calendar provides the recesses which both District and Campus are closed; e.g. Winter Break, Spring Recess and the interval between Spring and Summer terms.

1.3. Stay out dates may be subject to change.

1.3.1. Not Used.

1.4. Abatement and demolition **CANNOT** be conducted in any occupied spaces or where occupancy is planned. Scheduled abatement and demolition activities will be shown in the Design-Builders schedule and the Activity plan where building occupancy is impacted.

1.5. The Design-Builder is responsible for its own means and methods to comply with these work restrictions, and to submit a schedule in accordance with schedule requirements in the Agreement.

1.6. During periods of darkness, lighting used for the Work shall not be aimed towards residential areas.

1.7. Utility Cutovers and Interruptions

1.7.1. Make utility cutovers after normal working hours or on Saturdays, Sundays that do not impact College operations, and Campus holidays unless otherwise approved.

1.7.2. Ensure that new utility lines are complete, except for the connection, before interrupting existing service.

1.7.3. Interruption to water, sanitary sewer, storm drain, communications, data, electric service, air conditioning, heating, fire sprinkler alarm,

compressed air, and are considered utility cutovers pursuant to the paragraph Time Related Work Restrictions

1.7.4. Work plans must include mitigations for hazards and their controls during the interruptions of service.

1.7.5. Such delays must be incorporated into the Design-Builder's construction schedule and will be at no additional cost or time to the District

1.7.6. The Design-Builder is responsible for its own means and methods to comply with these work restrictions, and to submit a schedule in accordance with schedule requirements in the agreement.

C. Other Project Requirements to Meet the Contract Time

1. Staging Areas: The Contractor's staging area for trailers, construction vehicles, construction equipment and materials is restricted to the approved staging and laydown area. Refer to Construction Work Zone for proposed staging and laydown areas upon final College approval.

2. Parking (refer to the Construction Work Zone plans)

2.1. Working trucks may be parked in the staging as show on the Construction Work Zone or public parking areas. Space is limited and fire lanes shall be kept open.

2.2. All other parking on Campus requires the purchase of a daily or monthly parking pass. Campus police will issue parking tickets for anyone using campus parking lots or roadways without a parking pass.

3. Access and Deliveries:

3.1. Contractor may accept normal deliveries inside the construction staging areas.

3.2. Contractor shall schedule deliveries outside the construction staging areas in advance with approval from the District.

3.3. Submit a traffic control plan to the District for large deliveries unloaded outside the construction staging areas for coordination and approval by the College.

3.4. Campus Drive adjacent to the AA building is one-way and a fire lane. The Contractor is cautioned not to attempt to drive the wrong way on this road. Campus police will issue tickets for driving the wrong direction or blocking the fire lane.

3.5. Material and equipment deliveries on this one-way road to the construction site shall be closely monitored and controlled by the Contractor to avoid any delays to other vehicles using this road. The Contractor shall include delivery milestones in its Project CPM Design-Build Schedule, and provide written notice at least two (2) work days to the District and to the Police Services for all deliveries. Any material or equipment deliveries that could potentially delay traffic on this one-way road will have to be delivered after normal business hours, unless otherwise approved by the District. Contractor truck deliveries that stop traffic on this road or other roads on Campus could be subjected to being ticketed by the Police Services.

4. Clean up:

4.1. Work areas shall be left clean at the end of each day.

Corridor and Classroom zones shall be left clean and ready for occupancy whenever work occurs in those zones. The Contractor shall provide a professional cleaning service for this purpose. The District may clean these areas at the Contractor's expense if the area is not ready for class after the work by the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All labor, equipment, materials, and all other requirements shall be provided and will be the sole responsibility of the Design-Builder for execution of entire work described in this specification section.

PART 3 - EXECUTION

3.1 MEANS AND METHODS OF CONSTRUCTION

A. Design-Builder to provide and shall be responsible for any and all means and methods that will be constructed, implemented and/or maintained on the site for all work described above

PART 4 - TESTS AND INSPECTIONS

1.1 Compliance.

A. Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

1.2 Independent Testing Laboratory.

The District will select and pay an independent testing laboratory to conduct all tests and inspections required by regulatory agencies. Selection of the materials required to be tested shall be made by the laboratory, and not by the Design-Builder. All costs for all other tests shall be included in the Bid Price and shall be paid for by the Design-Builder. Any costs or expenses of inspection or testing required by regulatory agencies, incurred outside of a fifty (50) mile radius from the Project Site or not located in a contiguous county to the Site, whichever distance is greater, shall be paid for by the District, invoiced by the District to the Design-Builder, and deducted from the next Progress Payment.

1.3. Design-Builder Responsibilities.

A. Make samples available to the Independent Testing Laboratory. Samples shall be selected by laboratory personnel. Allow proper time for selecting samples, and making tests or considerations.

B. Cooperate with laboratory personnel, and provide access to work and to manufacturer's facilities.

C. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples as selected by laboratory personnel at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.

D. Schedule all tests and inspections with the testing and inspections firm and to notify Construction Manager and Project Inspector a minimum of 3 working days prior to expected time for operations requiring inspection and testing services. Do not allow work to be covered prior to inspection and testing.

E. Cooperate fully with the testing laboratory's personnel and with special inspectors in inspection any part of the construction and in taking any samples of materials required to be tested. Provide access to the work. The Contractor's personnel shall furnish and cut or prepare all samples in the presence of either the testing laboratory personnel or the special inspectors and secure the witness's initial on each sample prepared.

F. Notify the testing laboratory to pick up the initialed samples the same day the samples were prepared. Alert the testing laboratory 3 working days in advance as to the times and location of the required sampling, tests and inspections so as to not delay the work

of the project, and make sure that the required sampling, tests inspections are promptly completed.

1.4 Contractor Paid Test/Inspection Reports not required by regulatory agencies:

1.4.1 Reports will comply with Section 4-335(d), Part 1, Title 24, CCR.

1.4.2 Include every test and inspection made regardless of whether such tests and inspections indicate that the material and procedures are satisfactory or unsatisfactory.

1.4.3 Include records of special sampling operations as required.

1.4.4 Indicate that materials were sampled and tested in accordance with requirements of CCR regulations and Construction Documents.

1.4.5 Indicate specified design strength of materials such as masonry, concrete and steel.

1.4.6 State whether or not materials and procedures comply with requirements of the Construction Documents.

1.4.7 Submit copies of reports to District, Architect, Project Inspector, Structural Engineer, Civil Engineer, Soils Engineer and Contractor within 14 days of tests. Submit copies of reports of non-complying materials and procedures immediately.

1.5 Advance Notice to Inspector.

The Contractor shall notify the Inspector a sufficient time in advance of its readiness for required observation or inspection so that the Inspector may arrange for same, but no less than 2 work days. The Contractor shall notify the Inspector a sufficient time in advance, but no less than 2 work days, of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

1.5.1 Testing Off-Site.

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

1.5.2 Additional Testing or Inspection.

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under Paragraph 13.5.1, the Inspector will, upon written authorization from the District, make arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in Paragraph 13.5.4.

1.5.3 Costs for Retesting.

If such procedures for testing, inspection, or approval under Paragraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next Progress Payment.

1.5.4 Retesting Covered Work.

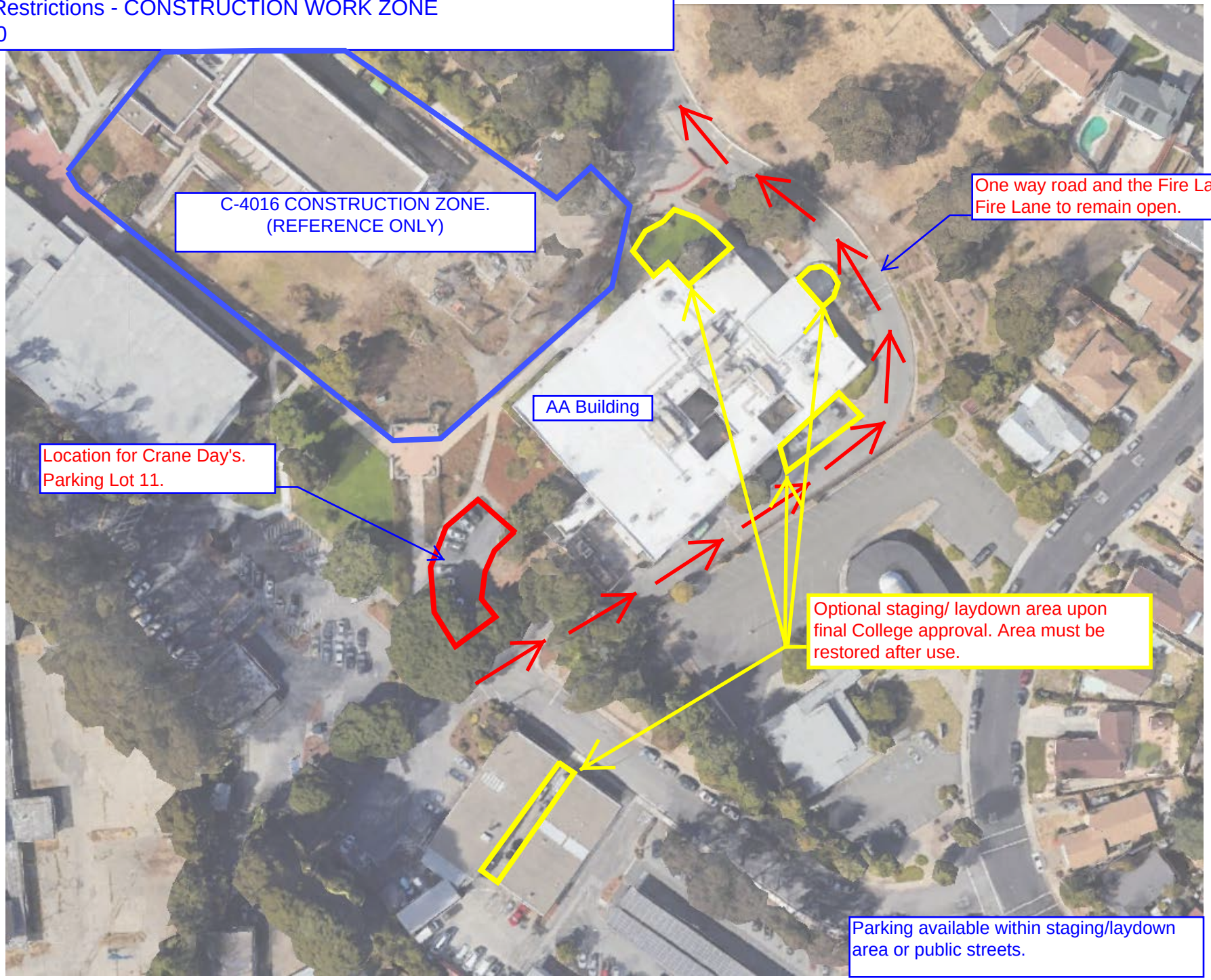
Re-examination of previously tested and inspected work may be ordered by the District, Architect, or by the Project Inspector. The Contractor shall uncover such work if retesting is

ordered. If work is found in accordance with Contract Documents, the District will pay costs of uncovering, removing, retesting and replacing. If work is found not in accordance with Contract Documents, the District will deduct the cost of retesting from the Contract Sum by Change Order and the Contractor will bear the costs of uncovering, removing and replacing work.

1.5.5 Costs for Premature Test.

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Inspector's and Architect's fees and expenses, and the amount of the invoice of shall be deducted from the next Progress Payment.

C-1168 **AA Building Mechanical Systems Upgrade - Energy Conservation Project**
Work Restrictions - CONSTRUCTION WORK ZONE
6/30/20



# SECTION 01321

# PHOTOGRAPHIC DOCUMENTATION

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

### 1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS

A. Section 01010 – "Summary of Work"

B. Section 01140 – "Work Restrictions"

C. Section 01330 – "Submittal Procedures"

D. Section 01770 – "Contract Closeout Procedures"

E. Section 01820 – "Demonstration and Training"

F. Divisions 2 through 33 sections for Photographic Documentation requirements for the work in these sections.

### 1.3 SUMMARY

A. This section specifies administrative and procedural requirements for the following:

1. Preconstruction digital photographs.

2. Preconstruction video

### 1.4 COSTS OF PHOTOGRAPHY, PRINTING AND WEB CAM SYSTEM

A. Design-Builder shall pay all costs for specified photography and prints.

### 1.5 SUBMITTALS

A. Qualification Data: Design-Builder shall provide a person with experience for taking digital photographs.

B. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each (photograph.)

C. Construction Photographs: Submit (15) digital photographs each month, and (25) digital photographs at the end of Project completion.

1. Digital Images: Submit a complete set of digital image electronic files, USB Flash Drive, (with each submittal of prints as a Project Record Document). Identify electronic media with date photographs were taken. Submit images that have the same aspect ratio as the sensor, un-cropped.

## PART 2 - PRODUCTS

### 2.1 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPEG format, with minimum sensor size of 10.0 megapixels.

## PART 3 - EXECUTION

### 3.1 PHOTOGRAPHS, GENERAL

A. Date Stamps: Unless otherwise indicated, date and time stamp each photograph as it is being taken so stamp is integral to photograph.

### 3.2 EXISTING CONDITIONS SURVEY VIDEO

A. Prior to commencement of Work on Site, jointly survey the existing and surrounding areas and structures with the District. Design-Builder shall note and recording existing damage such as cracks, sags, and other damage, on Site Plan/Floor Plans as appropriate.

B. This record shall serve as a basis for determination of subsequent damage to these items due to settlement, movement, demolition, or other Design-Builder operations.

C. Existing damage observed shall be marked and the completed record of existing damage shall be signed by the parties.

D. Cracks, sags, and damage to the area and other items not noted in the original survey but subsequently observed shall be reported immediately to the District Representative.

E. Design-Builder shall comply with requirements of this Section for photographic and/or video recording of existing conditions.

### 3.3 PRECONSTRUCTION PHOTOGRAPHS

A. Before starting construction, take color digital photographs of Project site and surrounding properties from different vantage points, as directed by and Architect and District.

B. Take photographs as necessary to show existing conditions adjacent to the building, spaces, and property before starting the work.

C. Take necessary photographs of existing buildings either on or adjoining the building, spaces, and property to accurately record the physical conditions prior to the start of construction.

**END OF SECTION 01321**

# SECTION 01412

# HAZARDOUS MATERIALS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provision in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

### 1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS

A. The "Agreement for Mechanical and Control Design-Build Project" apply to this section

B. Divisions 2 through 33 Sections for Hazardous Materials requirements for the work in those Sections.

### 1.3 SUMMARY

A. This Section describes Project requirements applicable to Work in connection with hazardous materials, hazardous waste, abatement and disposal including, but not limited to, asbestos and asbestos-containing materials, lead-based paint, polychlorinated biphenyls, petroleum-contaminated soils and materials, construction and demolition debris and any other hazardous substance or hazardous waste. This Section supplements the requirements elsewhere in the Contract Documents.

B. The Design-Builder shall review the hazardous building materials survey reports prepared by the District's representative, and included as Exhibit "C" of the RFQ/P package.

### 1.4 DISCOVERY OF HAZARDOUS MATERIALS

A. In the event the Design-Builder encounters or suspects the presence on the Site of material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by § 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Design-Builder shall immediately stop Work in the area affected and report the condition to the District and copy the Architect in writing, whether or not such material was generated by the Design-Builder or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Design-Builder, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Design-Builder.

B. If hazardous materials are encountered, they shall be handled in accordance with applicable local, state and federal regulation which may include: (1) CCR Title 8, Division 4, Chapter 4, Sections 5163 through 5167 and 5192 (Hazardous Waste Operations and Emergency Response); (2) CCR Title 22, Division 4.5, Chapters 10 through 13 and 18 (Environmental

Health Standards for Management of Hazardous Waste); and (3) CCR Title 23, Division 3, Chapter 15 (Discharges of Hazardous Waste to Land).

C. Should the discovery of contaminants cause delay to Design-Builder's operation, extension of Contract Time will be granted by District in accordance with Appendix B (Special Conditions). Design-Builder may not be entitled to damages or additional payment due to such delays. District may, if it believes appropriate in its sole discretion, grant an extension of Contract Time.

D. The Design-Builder shall take all measures to avoid and/or mitigate delays due to Hazardous Materials/Waste finds such as; avoiding the area of the find and proceeding with other work on the project; developing "work around" plans; and documenting his best efforts to avoid and/or mitigate delays.

## 1.5 SUBSURFACE HAZARDOUS MATERIALS

A. If Design-Builder encounters surface contamination, the following provisions and precautionary measures shall be implemented during construction.

1. Design-Builder's personnel shall be alert for and immediately report to the District any detectable chemical odors, unusual debris, or discolored soil.
2. Disposal requirements: Soils containing hazardous materials shall be disposed by Design-Builder at permitted treatment, recycling, or disposal facilities in accordance with CCR Title 23, Division 3, Chapter 15 (Discharge of Waste to Land). Determine to which permitted treatment, recycling, or disposal facilities the soil will be delivered.
3. Dewatering: Construct, operate and maintain as required by applicable laws, codes and standards and to complete the Work all necessary cofferdams, channels, pipes, flumes, drains, sumps, well points and protective works; and furnish, install, operate and maintain all necessary pumping and other equipment for dewatering the areas of Work suspected of containing hazardous materials; and control all surface flow and groundwater as may be encountered while performing the Work. Remove all water that may accumulate in the excavation while the Work progresses so that all Work can be performed in dry conditions. All contaminated water shall be removed from the excavation before it is backfilled. The excavation shall be kept free from water until backfilling has progressed to a height above the water source.
4. Water sampling and chemical analysis: Water samples shall be collected from the holding tanks and submitted to a State-Certified chemical analysis laboratory. Chemical analyses required for the samples shall at a minimum include: TPHg following EPA Test Methods 5030/8015 (modified); benzene, toluene, ethyl benzene and total xylenes (BTEX) following EPA Test Method 8020; and chlorinated solvents following EPA Test Method 8010. Perform additional chemical analyses that may be required for disposal or recycling of the water.
5. Laboratory chemical analysis reports associated with the water samples shall be provided to District's Representative.
6. Removal of dewatering equipment: After having served their purpose, all protective works and dewatering pumps, shall be decontaminated and removed from the Site. Design-Builder is responsible for permanent disposal of all equipment that cannot be decontaminated or recycled in accordance with all applicable laws and regulations.

7. Fees: Pay for any fees associated with the treatment, recycling, or disposal of these soils. Any additional soil sampling and chemical analyses required for acceptance of the soil at facilities other than those described above may be deemed to be the responsibility of the Design-Builder.
8. Transport: Transport the soils to the selected facilities under approved manifests and submit copies of these manifests and the facility weight tickets to District's Representative.

## 1.6 HAZARDOUS MATERIAL WORK LIMITATIONS

A. In the event that the presence of hazardous materials is suspected or discovered on the Site (except in cases where asbestos and other hazardous material work is the Design-Builder's responsibility), the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Design-Builder shall not be required pursuant to Specification Section 01250 to perform without consent any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and approved by the appropriate government agency.

B. To protect construction workers and members of the public from known or undiscovered hazardous building materials, including asbestos and lead, undertake all demolition activities in accordance with Cal-OSHA standards, contained in Title 8 of the California Code of Regulations (CCR). See Hazardous Materials Removal Specifications (02080, 02081, 02082 and 02085) and Reports for additional requirements.

C. During demolition activities, all building materials containing lead paint shall be removed in accordance with Cal-OSHA Lead in Construction Standard, title 8 and California Code of Regulations 1532.1.

D. All potentially friable asbestos-containing materials (ACMs) shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials. Applicable standards include the following:

1. The facility shall be inspected before any renovation occurs in which 160 square feet or more of building materials or 260 linear feet or more of pipe insulation will be disturbed at a regulated facility or any demolition occurs at a regulated facility.

2. An asbestos notification form shall be submitted to the Bay Area Air Quality Management District (BAAQMD) for any regulated asbestos abatement project or regulated demolition 10 working days before the activity begins.
3. If ACMs are discovered during a renovation or demolition, they must be removed before the project may proceed. Also, the Cal-OSHA and California Environmental Protection Agency (Cal-EPA) hazardous waste regulation apply in most cases.

E. No Work will be accepted until asbestos contamination is reduced to levels deemed acceptable by the District's asbestos consultant.

F. Interface of Work under this Contract with work containing asbestos shall be executed by the Design-Builder at his risk and at his discretion, with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos-containing products. By execution of this Contract, the Design-Builder acknowledges the above and agrees to hold harmless District and its assigns for all asbestos liability which may be associated with this work and agrees to instruct his employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

## 1.7 INDEMNIFICATION BY DESIGN-BUILDER FOR HAZARDOUS MATERIAL CAUSED BY DESIGN-BUILDER

A. In the event the hazardous materials on the Site is caused by the Design-Builder, the Design-Builder shall pay for all costs of testing and remediation, if any, and shall compensate the District for any additional costs incurred as a result of Design-Builder's generation of hazardous material on the t Site. In addition, the Design-Builder shall defend, indemnify and hold harmless District and its agents, officers, and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Site.

## 1.8 TERMS OF HAZARDOUS MATERIAL PROVISION

A. The terms of this Hazardous Material provision shall survive the completion of the Work and/or any termination of this Contract.

## 1.9 NON-UTILIZATION OF ASBESTOS MATERIAL

A. NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE USED IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

B. Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

C. Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

## 1.10 REMOVAL OF DESIGN-BUILDER INSTALLED ASBESTOS MATERIALS

A. All Work or materials found to contain asbestos or Work or material installed with asbestos-containing equipment will be immediately rejected and this Work will be removed at no additional cost to the District.

1. Decontamination and removal of Work found to contain asbestos or Work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency.
2. The asbestos removal design-builder shall be appropriately licensed and registered, qualified in the removal of asbestos and shall be approved by the asbestos consultant, who shall have sole discretion and final determination in this matter.

3. The asbestos consultant shall be approved by the District, who shall have sole discretion and final determination in this matter.

## 1.11 NATURALLY OCCURRING ASBESTOS

A. To protect construction workers and members of the public from exposure to known areas of naturally-occurring asbestos (NOA), all ground disturbing activities will be undertaken in accordance with all applicable Cal-OSHA standards, contained in Title 8 of the California Code of Regulations (CCR). In addition, any ground-disturbing activity in an area that meets one or more of the applicability criteria for the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operations, as adopted by the California Air Resources Board (CARB), is subject to the requirements therein, Per Section 93105 (b) of the ATCM, these criteria are as follows:

1. The area to be disturbed is located in a geographic ultramafic rock unit; or
2. The area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the District, or the Air Pollution Control Officer (APCO); or
3. Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the District, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.

## 1.12 GUIDELINES FOR MINIMIZATION OF SILICA EXPOSURE DURING CONSTRUCTION

A. Types of Silica

1. Quartz
2. Cristobalite
3. Tridymite

B. The following activities can expose construction workers to respirable crystalline silica:

1. Chipping, hammering, and drilling of rock
2. Crushing, loading, hauling, and dumping of rock
3. Abrasive blasting using silica sand as the abrasive
4. Abrasive blasting of concrete (regardless of abrasive used)
5. Sawing, hammering, drilling, grinding, and chipping of concrete or masonry
6. Demolition of concrete and masonry structures
7. Dry sweeping or pressurized air blowing of concrete, rock, or sand dust

C. Health Effects of Silica Exposure

1. When crystalline silica is inhaled by workers, the lung tissue reacts by developing fibrotic nodules and scarring around the trapped silica particles. This fibrotic condition of the lung is called silicosis. As the nodules become larger, breathing becomes difficult and death may result.

D. Recommended Control Measures from the National Institute of Safety and Health:

1. Dust Control

a. The key to preventing silicosis is to keep dust out of the air. Dust controls can be as simple as a water hose to wet the dust before it becomes airborne. Use the following methods to control respirable crystalline silica:

1) Use equipment with dust collection systems. Use local exhaust ventilation to prevent dust from being released into the air. Always use the dust control system, and keep it well maintained. Do not use equipment if the dust control system is not working properly.

2) During rock or concrete drilling, use water through the drill stem to reduce the amount of dust in the air, or use a drill with a dust collection system. Use drills that have a positive-pressure cab with air conditioning and filtered air supply to isolate the driller from the dust.

3) When sawing concrete or masonry, use saws that provide water to the blade.

4) Use good work practices to minimize exposures and to prevent nearby workers from being exposed. For example, remove dust from equipment with a water hose rather than with compressed air. Use vacuums with high- efficiency particulate air (HEPA) filters, or use wet sweeping instead of dry sweeping.

5) Use abrasives containing less than 1% crystalline silica during abrasive blasting to prevent quartz dust from being released in the air.

6) Use containment methods such as blast-cleaning machines and cabinets to prevent dust from being released into the air.

2. Personal Hygiene

a. The following personal hygiene practices are essential for protecting workers from respirable crystalline silica and other contaminants such as lead, particularly during abrasive-blasting operations:

1) Do not eat, drink, or use tobacco products in dusty areas.

2) Wash hands and face before eating, drinking, or smoking outside dusty areas.

3) Park cars where they will not be contaminated with silica and other substances such as lead.

3. Protective Clothing

a. Take the following steps to assure that dusty clothes do not contaminate cars, homes, or worksites outside the dusty area:

1) Change into disposable or washable work clothes at the worksite.

2) Shower and change into clean clothes before leaving the worksite.

4. Air Monitoring

a. Air monitoring is needed to measure worker exposures to respirable crystalline silica and to select appropriate engineering controls and respiratory protection. Air samples should be collected and analyzed according to NIOSH Method Nos. 7500 and 7602 or their equivalent. Air sampling usually involves the use of a combination device called a cyclone assembly and a sampling pump to trap tiny respirable silica particles from the air in the work environment. The cyclone assembly and sampling pump can be placed on an employee, who will wear the device throughout the work shift for up to 8 hours. All employees may be fitted with the sampling device or just a select few who are closest to the silica source may be fitted. The air sample is then analyzed by a laboratory using x-ray diffraction or infrared spectroscopy. The NIOSH recommended exposure limit (REL) for respirable crystalline silica is 0.05 mg/m3 (50 µg/m3) as a Time Weighted Average (TWA) for up to 10 hours/day during a 40-hour work week. The OSHA PEL is

$$\frac{10\ \text{mg/m}^3}{(\%SiO_2+2)}$$

5. Respiratory Protection

a. The primary means for preventing and minimizing silica exposure should be engineering and source controls such as substitution of non-silica containing materials during sand blasting, automation, enclosed systems, local exhaust ventilation, wet methods, and good work practices. Respiratory protection must also be used as a means to prevent exposures. Any half-mask, air-purifying respirator with a high-efficiency particulate filter is acceptable for most operations, but greater respiratory protection may be necessary in some cases. For example:

1) For exposures 50-1,000 times the REL (2.5-50 mg/m3), NIOSH recommends using a supplied-air respirator that has a half-mask. The respirator should be set on pressure-demand or one of the other positive-pressure settings.

2) For exposures 10- 50 times the REL (0.5-2.5 mg/m3), NIOSH recommends using either an air-purifying, full-face respirator with a high-efficiency particulate air filter or a P100 filter, or a powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate air filter or a P100 filter.

3) For exposures less than 10 times the REL (0.5 mg/m3), NIOSH recommends using a half-mask, air- purifying respirator that has a P100 filter.

4) NIOSH recommends workers wear a Type CE, pressure-demand or positive-pressure, abrasive-blasting respirator (APF of 1,000 or 2,000) during abrasive-blasting operations that involve crystalline silica.

b. Exposure monitoring is essential to ensure correct selection of the proper respiratory protection. When respirators are necessary, the design-builder must have a respiratory protection program that includes:

1) Periodic environmental monitoring

2) Regular training of personnel

3) Selection of proper NIOSH-approved respirators

4) An evaluation of the worker's ability to perform the work while wearing a respirator

5) Respirator fit testing

6) Maintenance, inspection, cleaning, and storage of respiratory protection equipment.

## 1.13 REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in the Contract Documents. Codes, laws, ordinances, rules and regulations are not furnished to Design-Builder, because Design-Builder is assumed to be familiar with their requirements. The listing herein of applicable codes, laws, and regulations for hazardous waste abatement work is supplied to Design-Builder as a courtesy and shall not limit Design-Builder’s responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these Contract Documents exists, the most stringent requirements shall be used.

B. Conform to all applicable codes, laws, ordinances, rules and regulations that are in effect on date of contracting.

**1.14 LAWS, ORDINANCES, RULES, AND REGULATIONS**

A. During prosecution of Work under Contract Documents, Design-Builder shall comply with applicable laws, ordinances, rules and regulations including, but not limited to, those listed below.

B. Federal:

1. Statutory Requirements:
    a. Resource Conservation and Recovery Act, 42 U.S.C. Sections 6901 *et seq*.
    b. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U. S.C. Sections 9601 *et seq.*
    c. Toxic Substances Control Act of 1976, 15 U.S.C., Sections 2601 *et seq*.
    d. Hazardous Materials Transportation Act of 1975, 49 U.S.C. Sections 1801 *et seq.*
    e. Clean Water Act, 33 U.S.C. Sections 1251 *et seq.*
    f. Safe Drinking Water Act, 42 U.S.C., Sections 3001 *et seq.*
    g. Clean Air Act, Section 112, 42 U.S.C., Section 7412
    h. Occupational Safety and Health Act of 1970, 29 U.S.C., Sections 651 *et seq.*
    i. Underground Storage Tank Law, 42 U.S.C., Sections 6991 *et seq.*
    j. The Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C., Sections 11011 *et seq.*
2. Environmental Protection Agency (EPA):
    a. 40 C.F.R. Parts 260, 264, 265, 268, 270
    b. 40 C.F.R. Parts 258 *et seq.*
    c. 40 C.F.R. Part 761
    d. 40 C.F.R. Parts 122-124
3. Occupational Safety and Health Administration (OSHA):
    a. OSHA Worker Protection Standards, Title 29 C.F.R. Part 1926.58, Construction Standards and 29 C.F.R. 1910.1001 General Industry Standard
    b. OSHA, 29 C.F.R. Part 1926.1101, Construction Standards for Asbestos
    c. OSHA, Lead Exposure in Construction: Interim Final Rule, 29 C.F.R. 1926.62
    d. National Emission Standard for Hazardous Air Pollutants, Title 40 C.F.R. Part 61
    e. Asbestos Hazardous Emergency Response Act, Title 40 C.F.R. 763
4. Department of Transportation:
    a. Title 49 C.F.R. 173.1090
    b. Title 49 C.F.R. 172
    c. Title 49 C.F.R. 173

d. DOT, HM 181 and MH126f

C. State of California Requirements:

1. Statutory Law:

a. The Carpenter-Presley-Tanner Hazardous Substance Account Act, Health & Safety Code, Sections 25300 *et seq.*

b. Health and Safety Code, Section 25359.4

c. Hazardous Waste Control Law, Health & Safety Code, Sections 25100 *et seq.*

d. Porter-Cologne Water Quality Control Act, Water Code, Sections 13000 *et seq.*

e. Health and Safety Code, Sections 25915-25924

f. California Labor Code Chapter 6, including, without limitation, Sections 6382, 6501.5-6501.9, 6503.5, 9021.5, 9080

g. Business and Professions Code, including without limitation, Sections 7058.5, 7065.01, 7118.5

h. Underground Storage of Hazardous Substance Act, Health and Safety Code, Sections 25280 *et seq.*

i. Petroleum Underground Storage Tank Cleanup, Health and Safety Code, Sections 25299.10 *et seq.*

j. Safe Drinking Water and Toxic Enforcement Act of 1986, Health & Safety Code, Sections 25249.5 *et seq.* (Proposition 65)

k. Above Ground Petroleum Storage Act, Health and Safety Code, Sections 25270 *et seq.*

l. Hazardous Materials Release Response Plans and Inventory, Health and Safety Code, Chapter 6.95

2. Administrative Code and Regulations:

a. Title 22 CCR Division 4.5, Environmental Health Standards for the Management of Hazardous Waste, Sections 6600 *et seq.*

b. Title 8 CCR, Section 1529, Asbestos

c. Title 8 CCR, Section 1532.1, Lead in Construction

d. Title 23 CCR, Sections 2610 *et seq.*

3. Local Agency Requirements:

a. Bay Area Air Quality Management District, Fugitive Dust Rules

b. Bay Area Air Quality Management District Regulation 11, Rule 2

c. State Water Resource Control Board, General Construction and Land Disturbance Activities (Order 2009-009 DWQ)

4. Local Agency Requirements:

a. Contra Costa Fire Protection District

b. City of San Pablo, CA

## PART 2 - PRODUCTS

Not Used.

## PART 3 - EXECUTION

Not Used.

**END OF SECTION 01412**

SECTION 01520

FIRE SAFETY

PART 1 - GENERAL

1.01 GENERAL

A. The Safety Program exists to minimize the dangers of fire, panic and explosion.

PART 2 - POLICY

2.01 POLICY

A. Corridors are to be designed, constructed and maintained as required by the Regulations in Title 19 of the California Code of Regulations. Corridors may not be used for storage. Corridors are not to be used as temporary storage during renovation projects. Corridors may not be used as an extension of workspace or for the installation of electrical provisions for equipment. Maintain egress system and fire protection system continuously throughout the Project.

PART 3 - PROCEDURE

3.01 CONSTRUCTION

A. Plans and documents relating to new construction as well as remodeling projects shall be reviewed by Contra Costa County Fire Protection District (CCCFPD) to confirm adherence to applicable building and fire regulations.

3.02 FLAMMABLE MATERIALS

A. Trash, debris, lumber or other materials considered to be flammable or hazardous are not to be stored or allowed to accumulate in quantities that endanger life or property.

B. Storage and use of flammable liquids to be in accordance with State, Federal and Campus Standards.

C. Flammable liquids mean any liquid having a flash point below 140 degrees F.

D. Containers used for the temporary storage of combustible waste must be of solid metal, such as steel, or made of material approved by the CCCFPD.

3.03 FIRE AND PANIC SAFETY

A. Corridors and Exits:

1. The placement of any item in exits and corridors without CCCFPD approval is not permitted. Corridors and exitways have been designed and constructed to provide safe passage for building occupants in both normal circulation and under emergency conditions.

B. Guide for Temporary Construction Barriers in Exit Corridors: Subject to compliance with performance requirements including but not limited to fire safety and the absence of hazardous material reused materials may be acceptable for temporary construction. Reused materials shall be clean and in a condition suitable for the use intended. Temporary construction shall be installed to facilitate subsequent removal and reuse.

1. Barriers must be constructed of fire retardant treated plywood, gypsum wallboard, non-combustible plastic film on metal studs, or a combination of these materials to create a one-hour fire-rated assembly. Plastic non- combustible material must be clearly marked as such. One (1) or two (2) hour fire-rated assembly as required.

2. Barriers must be installed to insure that a minimum of 48" clear corridor width is maintained. Exceptions to this must be specifically approved by CCCFPD.

3. All barriers must be constructed from the floor to the underside of floor slab above. Access doors through barriers must be labeled and have a sign indicating construction. Doors must be maintained in the closed position or equipped with a self-closing device.

4. Door and frames shall be hollow metal of one or two-hour construction, labeled. Door shall be equipped with a self-closing device. Install a sign on the door indicating “Construction Area”.

    a. Side exposed to public shall be taped, topped and sanded smooth and painted to match adjacent surfaces. Door and frame shall be painted.

5. Barriers constructed to control dust and vapors are to be constructed in conformance with the above, and the following:

    a. Only non-combustible plastic film may be used. This film must be clearly marked as non-combustible.

    b. All plastic film must be securely attached to or placed entirely on the construction side of the barrier.

6. Barriers which must remain in place more than 30 days must receive specific approval from CCCFPD. Depict on sequencing plan and submit to CCCFPD within 10 days of Notice of Selection of Design-Builder.

C. Exit Corridors, Demolition Materials and Items Delivered during Construction:

1. No material may be stored in the exitway.

2. Equipment temporarily removed from the construction space may be stored in the corridor provided it is acceptable to the Building Manager and CCCFPD. The items must be described and an acceptable period of storage time established.

3. When approved by CCCFPD, items delivered to the site for installation may remain in the corridor for 48 hours maximum provided they are not of a highly combustible nature or the packing materials are not combustible. Every possible action must be taken to have these items delivered when needed and placed in the construction space upon arrival. Design-Builder shall remain responsible and liable for security and replacement of all deliveries for project.

4. No permitted demolition material, construction material and equipment may be placed in any corridor in such a manner as to restrict the minimum corridor width to less than 48 inches.

5. No exit stairway, smoke tower or smoke tower vestibule may be used for storage.

6. Security of deliveries remains the responsibility of the design-builder wherever they are deposited.

3.04 FIRE FIGHTING EQUIPMENT AND DEVICES:

A. Direct access to fire hydrants, fire department connections, and fire alarm stations must be maintained at all times. Hydrants, connections and fire alarm stations must be easily visible at all times and identified with sign.

B. Provide fire extinguishers, number and type suitable for type of fire associated with the hazards present.

3.05 EMERGENCY FIRE PROCEDURES:

A. Provide and post an emergency fire procedure plan.

B. Evacuate anyone seriously endangered by the fire.

C. Activate the nearest fire alarm station.

D. Call the emergency number 9-911 if campus phone, and give building, floor level, and room number of fire. If non-campus phone, call the local fire department (911).

1. Confine fire by closing all doors and windows.

2. If it is safe to do so, use fire-extinguishing equipment (portable fire extinguishers, in-house fire hose, etc.) to contain or extinguish the fire.

3.06 WELDING, CUTTING OR HOT WORK PERMIT POLICY

A. References: California Code of Regulations, Title 19, Article 1, Section 1.09, Standard Fire Prevention Practices. California Code of Regulations, Title 24, Part 9-California Fire Code, and Article 49: Hot Work.

B. Welding, Cutting and Hot Work operations permit.

1. Hot Work Permit must be obtained from CCCFPD prior to the start of any cutting or welding operations on campus.

2. The individual responsible for hot work must obtain a Hot Work Permit and must personally examine the location or area inspection where the work is to be done and insure that all safety requirements must be met before work will be permitted to begin. The specific fire safety requirements are outlined on the back of the Hot Work Permit (Attachment A). The permit will be issued to the person responsible for the work to be accomplished.

3. Permits issued to the individual will be issued for the duration of a contract or specific job (see Attachment A). Periodic inspections will be made to assure that

fire safety requirements are being followed. If the individual fails to comply with fire safety regulations, their permit will be revoked, and cutting and welding will be prohibited in those areas.

4. This permit requirement applies to ALL cutting and welding work performed by anyone on campus.

5. The Hot Work Permit must be conspicuously displayed at the job site, preferably attach to, or near, the welding equipment.

6. Shop areas that have a permanent set up as a welding area will be issued a permit on an annual basis. Permits issued to the shops shall be displayed in a prominent place at the approved work area. Renewal requests will require a fire safety inspection prior to issuance. However, periodic spot checks will be made to assure that fire safety requirements are being followed. If shop-welding areas fail to comply with fire safety regulations, their permits will be revoked, and cutting and welding will be prohibited in those areas.

3.07 GENERAL SAFETY RULES FOR WELDING, CUTTING AND HOT WORK

A. All employees involved in cutting and welding operations shall be carefully trained, properly supervised, and authorized to perform each job.

B. Permits must be obtained from the CCCFPD prior to each job, as outlined above.

C. A fire watch must be provided on all cutting and welding jobs. Assign a second worker to “watch” where the sparks fly and be on the lookout for an outbreak of a fire. Individuals assigned to fire watch duty must be trained in fire extinguisher use, familiar with how to notify campus emergencies personnel and sound the fire alarm. Individuals assigned to fire watch duty must also be trained in first aid and may not perform other work while the cutting and welding is taking place. The fire watch must continue thirty (30) minutes after the actual cutting or welding has ceased.

D. Three (3) 5-lb. ABC or CO2 fire extinguishers must be located at the job site, within easy reach of the fire watch.

E. The area where the cutting and welding is taking place must be free of combustible material; or, if it is impractical to move away the combustibles, they must be covered with asbestos tarpaulins or metal shields. ALL FLAMMABLE LIQUIDS must be removed from where cutting involves wall or floors, and combustibles must be protected on BOTH sides of the wall or floor.

F. Other detailed precautions, as outlined in California Code of Regulations, CCR-Part 9, California Fire Code, Article 49, must also be followed on all cutting and welding jobs.

G. Welding and cutting are not allowed in confined spaces.

H. No device or attachment facilitating or permitting mixture of air or oxygen with combustible gases prior to consumption except at the burner or in a standard torch or blowpipe, shall be allowed unless approved for the purpose.

I. Do not transfer gases from one cylinder to another or mix gases in a cylinder.

J. Under no conditions shall acetylene gas be generated, piped (except in approved cylinder manifolds), or utilized at a pressure, except when dissolved in a suitable solvent in cylinders manufactured according to Interstate Commerce Commission requirements.

K. The use of liquid acetylene is prohibited.

L. Acetylene gas shall not be brought in contact with unalloyed copper except in a blowpipe or torch.

M. Oxygen shall not be used from cylinders through torches or other devices equipped with shutoff valves, without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold.

N. Fuel gas shall not be used from cylinders through torches or other devices equipped with shutoff valves.

END OF SECTION

# SECTION 01540

# SITE SECURITY AND SAFETY

## PART 1 – GENERAL

### 1.1 RELATED DOCUMENTS

A. All Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in Performance Documents and Specification Sections as applicable to this Section without limitation.

### 1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS

A. Section 01412 – "Hazardous Materials"

B. Section 01520 - "Fire Safety"

C. Section 01700 – "Closeout Procedures"

### 1.3 SUMMARY

A. This Section specifies the requirements for Site safety and security.

### 1.4 RESPONSIBILITIES

A. All work shall be solely at the Design-Builder's risk, with the exception of damage to the work caused by "acts of God" as defined in Public Contract Code Section 7105(b)(2).

B. The Design-Builder shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work.

C. Without limiting or relieving the Design-Builder of its obligations hereunder, the Design-Builder shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs.

D. Design-Builder shall take, and require all subcontractors to take, all necessary precautions for safety of workers on the Work and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment.

E. In addition to meeting all requirements of OSHA, Cal-OSHA, state, and local codes, Design-Builder shall furnish, erect and properly maintain at all times, as directed by District or Architect or required by conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction.

F. The Design-Builder and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Design-Builder and Subcontractors, at their own expense, shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

G. Design-Builder shall maintain protection as necessary to protect the Work, as a whole and in part, and adjacent property and improvements from accidents, injuries or damage.

H. Design-Builder shall protect the Work, material, and/or equipment to be incorporated therein, whether in storage on or off the Site, and under the care, custody, or control of the Design-Builder or the Design-Builder's Subcontractors.

I. Design-Builder shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected promptly.

J. Design-Builder shall require that Subcontractors participate in, and enforce, the safety and loss prevention programs established by the Design-Builder for the Project, which will cover all Work performed by the Design-Builder and its Subcontractors.

## 1.5 SAFETY PROGRAM

A. Prior to commencing Work at the Site, Design-Builder shall submit a Safety Program Plan specifically tailored for this Project and this Site that has been reviewed and approved by an Industrial Hygienist certified by the American Board of Industrial Hygiene or a Certified Safety Professional. The Safety Program Plan shall include the name, certification number, and certification seal of the Industrial Hygienist or Certified Safety Professional. Comply with the Safety Program and all applicable federal, state, and local regulation codes, rules, law and ordinances during the course of the Work.

B. The Design-Builder's Safety Program Plan shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code SS 8350 et seq).

C. Plan shall comply with the requirements of the Occupational Safety and Health Act, and other applicable federal, state and local standards.

D. Design-Builder shall keep copies of all health and safety-related plans on the Project Site at all times.

E. Receipt and/or review of the Safety Program Plan by District or Architect shall not relieve Design-Builder of any responsibility for complying with all applicable safety regulations.

F. It is essential that Design-Builder and each Subcontractor implement an effective and vigorous site-specific Safety Program for the Work.

G. The Design-Builder shall have sole responsibility for Project safety, and shall be solely responsible for providing a safe workplace

H. Safety Program Plan Components:

1. Injury and Illness Prevention Program (IIPP): Conforming to the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 3203), and the California Labor Code (Section 6401.7).
2. Site-Specific Safety and Health Plan (SSHP): This Plan shall describe the health and safety procedures that shall be implemented during the Work in order to ensure safety of the public and those performing the Work. Follow the guidelines for a SSHP listed in CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5192, Item (b)(4) f.
3. Permit-Required Confined Space Program: (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5157). Permit-required space entry is allowed only through compliance with a permit-required confined space program meeting the requirements of Section 5157 of the General Industrial Safety Orders. During entry operations, or at the conclusion of entry operations, verbally notify Engineer of the permit space program followed, and of any hazards confronted or created in permit-required spaces during entry operations.
4. A written and certified workplace hazard assessment as required by OSHA and Cal OSHA, updated on a regular basis, and maintained on site. The certified hazard assessment shall be made available immediately upon request by the District, the Architect, or the Inspector of Record.

I. Supply sufficient hard hats to properly equip all employees, workers, and visitors. Hard hats shall be mandatory as per CAL OSHA Construction Safety orders.

J. Whenever an exposure exists, appropriate personal protective equipment (PPE) shall be used by all affected personnel. Design-Builder shall provide PPE to all personnel under Design-Builder's direction and responsibilities.

K. After review by District and Architect, the implementation and enforcement of all Safety-related plans shall become the responsibility of the Design-Builder and Site Safety Officer. The Design-Builder shall notify the District in writing of any changes to Safety-related plans.

## 1.6 SAFETY PRECAUTIONS

A. The Design-Builder shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage injury or loss to:

1. Employees on the Work and other persons who may be affected thereby
2. The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Design-Builder or the Design-Builder's Subcontractors or Sub-subcontractors
3. Other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Design-Builder shall take adequate precautions and measures to protect existing roads, sidewalks, curbs, pavement, utilities, adjoining property and improvements thereon (including without limitation, protection from settlement or loss of lateral support) and to avoid damage thereto. Without adjustment of the Contract Price or the Contract Time, the Design-Builder shall repair, replace or restore any damage or destruction of the foregoing items as a result of performance or installation of the Work.

4. The Design-Builder shall at all times maintain good housekeeping practices to reduce the risk of fire damage.
5. Good housekeeping practices shall be maintained continually on all areas of the Project Site and the Work. District may request that the Design-Builder hire additional staff or help until housekeeping in a work or storage area is improved. All scrap materials, rubbish and trash shall be removed daily from in and about the building and shall not be permitted to be scattered on adjacent property.

B. Suitable storage space shall be provided outside immediate building areas for storing flammable materials and paints. Excess flammable liquids being used inside the building shall be kept in closed metal containers and be removed from the building during unused periods.

C. A fire extinguisher shall be available at each location where cutting or welding is being performed. Where electric or gas welding or cutting work is done, interposed shields of incombustible material shall be used to protect against fire damage due to sparks and hot metal. When temporary heating devices are used, a watchman shall be present to cover periods when other workmen are not on the premises.

D. The Design-Builder shall provide fire extinguishers in accordance with all OSHA and Cal OSHA requirements, and the recommendations NFPA Bulletins Nos. 10 and 241.

## 1.7 REQUIREMENTS FOR EXISTING SITES

A. Provide substantial barricades as required to protect site occupants and assets

B. Deliver materials to building area over route(s) designated by Drawings and coordinated with the District.

C. Take preventive measures to eliminate objectionable dust, noise, or other disturbances.

D. Confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect; and not interfere with the Work or unreasonably encumber premises or overload any structure with materials; and enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on the Project site.

E. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by a licensed land surveyor or civil engineer, and all lawfully required

maps and records shall be filed with county and local authorities at no cost to the District. All related filing and plan check fees shall be paid by Design-Builder.

F. Design-Builder shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations. All permits, licenses, or inspection fees required for such repair Work shall be obtained and paid for by Design-Builder.

G. The Design-Builder, at Design-Builder's expense, will remove all mud, water, or other elements as may be required for the proper protection of existing improvements, and prosecution of the Work.

H. Protect all other property at the Site or adjacent thereto as required, such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

## 1.8 SAFETY AND EMERGENCY CONDITIONS

A. Emergency Action: In an emergency affecting the safety of persons or property, the Design-Builder shall take any action necessary, at the Design-Builder's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Design-Builder on account of an emergency shall be determined as provided herein. Emergency conditions shall be any condition at the Site which has the actual or potential for significant adverse effects to persons or property, whether or not resulting from the Design-Builder's operations.

B. Accident Reports: The Design-Builder shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately by telephone or messenger to the District and Campus Police Department.

C. The District's Representatives and Project Inspector, as appropriate, shall be notified of the existence of such a condition, but shall not be called upon to perform any emergency service. The fact that the District may not respond to the emergency condition shall not be used as an excuse by the Design-Builder to neglect immediate action; nor will the District or its Representatives be liable for any resulting condition. The fact that a representative of the Design-Builder may not be present when emergency conditions occur shall not relieve the Design-Builder from an immediate response to the situation which shall return the disruption to normalcy.

D. If the emergency circumstances are not the result of any fault or neglect of the Design-Builder, the Contract time shall be adjusted to reflect the actual direct effect of such actions to the then critical path of the Construction Progress Schedule. The foregoing notwithstanding, adjustments of the Contract Price or the Contract Time for actions taken by the Design-Builder in response to emergency circumstances shall be subject to the Design-Builder's strict compliance with all other applicable provisions of the Contract Documents relating to notices and time for delivery of notices.

## 1.9 SAFETY SIGNS AND BARRICADES

A. The Design-Builder shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.

B. Design-Builder shall properly protect the Work:

1. With lights, guard rails, fencing, temporary covers and barricades.
2. Enclose excavations with proper barricades.
3. Brace and secure all parts of the Work against to protect against inclement weather and to prevent accidents.

C. Provide such additional forms of protection that may be necessary under during the course of the Work.

D. Design-Builder shall provide and maintain in good condition all protective measures required to adequately protect the public from hazards resulting from the Work. When regulated by Building Code, Cal OSHA, or other authority, such legal requirements for protection shall be considered as minimum requirements. Design-Builder shall be responsible for the protection in excess of such minimum requirements as required.

E. Design-Builder shall prevent unauthorized persons from the entering the Work Site(s).

## 1.10 CONTROL OF SITE

A. Design-Builder shall ensure that no alcohol, firearms, weapons, or controlled substances are present on the Project Site. Design-Builder shall immediately remove from the Site and terminate from this Project the employment of any employee found in violation of this provision.

## 1.11 SITE SECURITY

A. Design-Builder shall take and be fully responsible for all reasonably required measures to protect and maintain the security of persons, existing facilities, and property at the Site, including prevention of theft, loss, and/or vandalism by persons lawfully present on the Site, including non-working times. Design-Builder's measures shall include, at a minimum, maintaining a log of all persons entering and leaving the Site, who they represent, what they are delivering, and to whom.

B. No claim shall be made against District by reason of any act of an employee or trespasser, and Design-Builder shall repair all damage to District's property resulting from Design-Builder's failure to provide adequate security measures.

Design-Builder shall maintain a lock on all Construction access gate at all times. Design-Builder shall appoint one person to monitor access through the gate and maintain the sign-in/out list. Alternatively, Design-Builder may provide a full-time security guard at the gate to control access and maintain the sign-in/out list. The sign in/out list shall be available to District at anytime upon request. If District determines that the gate has been left unlocked, Design-Builder shall, if requested by District, provide a full-time guard at no additional expense to the District.

C. The Design-Builder and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District, park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District, such as furnishing license plate information and placing identifying stickers on vehicles.

D. Design-Builder shall supply all security fencing, barricades, lighting, and other security measures as required to protect and control the Site.

E. The Design-Builder shall be responsible for providing security services for the Site as needed for the protection of the Site and as determined in the District's sole discretion.

## 1.12 OPERATORS OF MOBILE EQUIPMENT SAFETY

A. Under Federal and State Safety requirements, Design-Builder must certify that all operators of mobile equipment including but not limited to forklifts, cranes, man-lifts, scissor and boom lifts, and similar equipment are required to have been trained and/or certified on the proper operation of such equipment. Copies of equipment training and certification records shall be forwarded, upon request, to District, Project Manager and Architect.

## 1.13 SAFETY REQUIREMENTS

A. Design-Builder shall meet and comply with requirements of current local, State and Federal regulations.

B. Design-Builder shall meet and comply with the following rules:

1. The Design-Builder will provide and maintain at the Site first-aid supplies that comply with the current Occupational Safety and Health Regulations.
2. Hard hats shall be worn at all times. (This includes welders when using welding hoods)
3. Sleeved shirts shall be worn at all times. (No tank tops)
4. If required, Fire Retardant Clothing (FRC) shall be supplied by Design-Builder for all their employees.
5. One Hundred Percent (100%) Fall Protection Policy: All subcontract employees shall comply with Fall Protection Policy. The Policy simply states, “Anytime employees are working from an unprotected elevation of six (6) feet or more, fall protection must be used.” Working, as stated above, means while traveling, stationary, or anytime exposed to a fall from a surface not protected by approved handrails, cable or some other approved fall elimination device. Adherence to this policy is a requirement of your Subcontract.

C. Hazards Control:

1. When use or storage of any hazardous materials or equipment, or unusual method is necessary for execution of the Work, the Design-Builder shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Design-Builder shall notify the District any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.
2. Store volatile wastes in covered metal containers and remove from premises daily.
3. Prevent accumulation of wastes that create hazardous conditions.
4. Provide adequate ventilation during use of volatile or noxious substances.

D. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish or waste material on the Site.
2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
3. Do not dispose of wastes into streams or waterways.

E. Provide accident information on the forms provided by Design-Builder. This information shall be provided on the same day as the occurrence of said incident, and shall be submitted to District within a reasonable time.

## 1.14 ADDITIONAL SAFETY CONTROLS

A. According to industry practices, it is the responsibility of the Design-Builder and subcontractors of every tier to exercise reasonable care to prevent work-related injuries and property and equipment damage at the Project site, as well as minimize risk to the public and third-party property. The Design-Builder, all sub-contractors, suppliers, and installers shall undertake loss control prevention practices according to the requirements set forth by federal, state and city laws, statutes, and the specific procedures developed for this Project.

B. Design-Builders and subcontractors participating in the project will be expected to comply with the following safety and loss control requirements:

1. All sub-contractors, suppliers, and installers shall identify their contact person(s) to the Design-Builder.
2. Follow District procedures regarding dealing with the media, including, but not limited to, TV, Radio, and Newspaper.
3. All construction employees will be required to be attired in workpants, shirt and appropriate boots or closed toe shoes.
4. Smoking is prohibited on the Project site.
5. Controlling access to the construction site is a very high priority, and Design-Builders will be required to take whatever preventative measure, such as barriers, fencing, etc., as outlined in the contract specifications.
6. Construction personnel cannot enter District property other than the construction site unless accompanied by District personnel, and they are allowed only 'incidental' contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.
7. Fall protection is mandatory on all projects in accordance with CAL OSHA, OSHA and any other Local, State, and Federal appropriate code and requirements.
8. All Design-Builders must attend the pre-construction safety meeting.
9. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice from the District.
10. Design-Builder personnel and subcontractor personnel at all levels will refrain from interacting with campus staff or students unless required to prevent an unsafe situation. Personnel found speaking to staff or students for any reason unrelated to the Work or Safety shall be removed from the site and not be allowed to return.
11. All Design-Builders' employees shall park in their designated parking area. Any sticker attached to the employees' vehicle that displays any form of sexual preference or reference shall be removed prior to parking at the site. Each employee will provide their license plate number to the Design-Builder. Any employee disregarding this policy shall be removed from the site until further notice from the District.

12. The Design-Builder shall control the break time activities of the employees to assure the cleanup of all soda cans, food wrappers, plastic bottles, or food containers from the break area. Such areas shall be cleaned immediately after the break and all waste placed in trash receptacles.
13. Theft or willful damage to any property of the District, student, or other campus or District personnel will be prosecuted fully by the District.
14. No guns, switchblades, or knives with blades greater than two inches shall be allowed on the job site. Any employee disregarding this policy shall be removed from the site until further notice from the district.

C. The Design-Builders and all sub-contractors, suppliers and installers participating in the Project will further be expected to comply with the following safety and loss control requirements:

1. The Emergency Response Plans (with particular emphasis on access and egress routes).
2. Any Design-Builders' employee observed providing or selling cigarettes or other smoking materials to students shall be removed from the job site until further notice from the District.
3. All Design-Builders will agree to conduct and fund post-injury drug screening of their employees. Those employees failing the test will be removed permanently from the job site.
4. The District has the right to instruct the Design-Builder to correct an unsafe act or condition. If the Design-Builder fails to correct the unsafe act or condition within the requested time frame, the District or its representative may have the condition corrected and bill the non-compliant Design-Builder for the costs associated with the correction.
5. The District may require a follow-up meeting or contact if there is a death, serious and willful claim, serious disabling injury, adverse loss experience, major fire, or serious third-party claim.
6. Any Design-Builder displaying, in the opinion of the Design-Builder or District, a repeated disregard for safety can be removed from the job-site.

D. All Design-Builders will advise those non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

## 1.15 HAZARD COMMUNICATION PROGRAM SAFETY

A. Design-Builder shall have a copy of the Design-Builder's Hazard Communication Program which shall be forwarded to the District, Project Manager and Owner's Rep/Engineer, and a copy is required to be in the possession of the Design-Builder on the Site. Documentation of employee Hazard Communication Training must be established by the Design-Builder prior to commencement of work.

B. Any potential hazardous material or chemical brought onto the project is required to be accompanied by a Material Safety Data Sheet (MSDS). Copies of the MSDS shall be forwarded to the District, Owner's Rep/Engineer Project Manager and Project Inspector before the product is brought onto the project.

C. Design-Builder is required to have material safety data sheets available in a readily accessible place at the job site for any material requiring a material safety data sheet per the Federal

"hazard communication" standard, or employees' "right-to-know law." The Design-Builder is also required to properly label any substance brought into the job site, and require that any person working with the material, or within the general area of the material, is informed of the hazards of the substance and follows proper handling and protection procedures.

D. Design-Builder is required to comply with the provisions of California Health and Safety Code section 25249, et seq., which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer. The Design-Builder agrees to familiarize itself with the provisions of this section, and to comply fully with its requirements.

E. Design-Builder shall notify the District, Architect, Project Manager and Project Inspector before any chemical/material creating noxious or toxic fumes is used.

## 1.16 SHORING AND STRUCTURAL LOADING

A. The Design-Builder shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of the Work.

B. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Design-Builder. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction.

C. The Design-Builder shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Design-Builder at no cost to the District.

## 1.17 TRENCH EXCAVATION

A. Trenches Greater Than Five Feet.

Pursuant to Labor Code § 6705, if the Contract Price exceeds $25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, submit to the District or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches. Said detailed plan shall be prepared by a California licensed civil or structural engineer employed by the Contractor.

B. Excavation Safety.

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted in writing by the District or by the person to whom authority to accept has been delegated by the District.

C. No Tort Liability of District.

Pursuant to Labor Code § 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

D. No Excavation Without Permits.

The Contractor shall not commence any excavation Work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

## 1.18 SAFETY AND ELECTRICAL STANDARDS

A. The Design-Builder shall comply with all safety and electrical standards to ensure that all its employees are protected by Ground Fault Circuit interrupters as required, throughout the course of the Design-Builder's work.

B. The Design-Builder is responsible for installation of any and all temporary power service for the project and shall provide it with Ground Fault Interrupter Protection with no additional cost to the District.

## 1.19 HAZARDOUS SUBSTANCES

A. Non-Utilization of Asbestos Material.

NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE **USED** IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

See Specification Section 01412 – Hazardous Materials, for requirements related to discovery and mitigation of hazardous materials

B. The Design-Builder shall not receive, use or store at the Site any hazardous substance unless contained in a container labeled with the original label applied by the Manufacturer of such substance. The Design-Builder shall maintain at the Site and forward to the District, Architect, Project Manager and Project Inspector copies of the most current material safety data sheets with respect to each hazardous substance received, used or stored at the Site by the Design-Builder.

C. The Design-Builder shall immediately forward to the District, Architect, Project Manager and Project Inspector any updated material safety data sheets.

D. The Design-Builder shall properly label and inform the District, Architect, Project Manager and Project Inspector of any systems containing hazardous substances used or maintained at the Site by the Design-Builder. Prior to the receipt of such materials at the Site, the Design-Builder shall submit a list of all materials which the Design-Builder intends to receive, use or store at the Site that are classified as hazardous substances pursuant to applicable federal, state or local Employee or Community Right to Know statutes, regulations or requirements.

## 1.20 SAFETY SURVEYS

A. Inspector of Record may conduct periodic safety surveys of the project. Any safety discrepancy observed will be reported to the appropriate Design-Builder Site Safety Representative for immediate correction.

B. District, Architect, and/or Inspector of Record safety surveys do not, without any limitation, relieve the Design-Builder of their primary responsibility to self-inspect the Work and equipment, and to conduct the Work in a safe manner.

C. Design-Builder shall provide the District, Architect, and Project Inspector with Monthly Design-Builder Accident Statistics Reports.

**PART 2 - PRODUCTS**

Not Used

**PART 3 - EXECUTION**

Not Used

**END OF SECTION 01540**

# SECTION 01700

# PROJECT CLOSEOUT

## PART 1 - GENERAL

### 1.01 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected and full-functional testing completed, and that Work is complete in accordance with Contract Documents and ready for College District's Representative review.

B. Provide submittals to College District's Representative that are required by governing or other authorities.

C. Submit Final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

D. Closeout documents and final payment shall be per District project ID number. All contractor close-out documents and final payments need to be completed by August 23, 2021.

E. Contractor will provide detailed itemized invoices after project completion to meet PG&E requirements. If invoices are found to not be in enough detail, the Contractor will be required to revise the invoices and submit new ones

## PART 2 - CLOSEOUT DOCUMENTS

### 2.01 PROJECT RECORD DOCUMENTS

A. Maintain during construction period, on site, one set of the following record documents; record actual revisions to the Work. Development and maintenance of documents shall be reviewed not less than monthly at a regularly scheduled progress meeting.

1. Contract Drawings

2. Contract Specifications

3. Addenda

4. Executed Change Orders and other modifications to the Contract.

5. Reviewed Shop Drawings, Product Data, and Samples

6. Manufacturer's Instructions for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by College District.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Record Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model number.

2. Product substitutions or alternates utilized.

3. Changes made by Addenda, Change Orders, or other modifications.

F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction, including:

1. Measured horizontal and vertical locations of below slab utilities and appurtenances referenced to permanent surface improvements.

2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

3. Field changes of dimension and detail.

4. Details not on original Contract Drawings.

G. Stamp Record Drawings and Specifications cover sheet with "RECORD DOCUMENTS" for identification.

H. Submit documents to College District's Representative prior to Request for Final Application for Payment.

I. All record and shop drawings shall be submitted in both electronic and full size paper sets.

1. Electronic Media Formats: Electronic media formats shall be Adobe PDF and AutoCAD.

a. Adobe PDF files shall have chapter markers and/or bookmarks inserted in place of the equivalent hard copy section tabs. Adobe PDF copy shall include all Project Record Drawings, updated Specification Manuals, tables, charts, drawings, codes and all other matters reflected in hard copies. Adobe PDF files shall be delivered on unique CD-ROMs or flash drives containing Adobe PDF files of each completed project AS-BUILT Record Drawing and the complete Specifications Manual with all changes made during the Project.

b. In addition to the Adobe PDF file copies, professionally drafted AutoCAD project AS-BUILT Record Drawing DWG files shall be delivered showing both design and as-built information. AutoCAD layouts shall be provided allowing for the reproduction of a complete set of plans as needed.

2.02 OPERATION AND MAINTENANCE DATA

A. Submit data on 8-1/2 x 11-inch text pages, bound in three-D side-ring binders with durable covers. Submit three (3) hard copy sets for each campus/location. Submit one electronic copy in word-searchable format such as Adobe pdf, with sections separated using bookmarks.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", Campus Name, Building Name, Title of Project (including 4CD project number), and subject matter of binder when multiple binders are required.

C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below, with tab titling clearly printed under reinforced laminated plastic tabs.

D. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed or printed on 24-pound white paper as follows:

1. Part 1: Directory, listing names, addresses, and telephone numbers of College District's Representative, Contractor, subcontractors and major equipment suppliers.

2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section, including a sequence of operations for systems. For each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the following:

    a. Significant design criteria.

    b. List of equipment.

    c. Parts list for each component.

    d. Operating instructions.

    e. Maintenance instructions for equipment and systems.

    f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

3. Part 3: Project documents and certificates, including the following:

    a. Shop drawings and product data.

    b. Air and water balance reports.

    c. Certificates,

    d. Photocopies of warranties and bonds.

E. Submit one (1) draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with College District's Representative's comment. Revise content of all document sets as required prior to final submission.

F. Submit three (3) sets of revised final volumes prior to Request for Final Application for Payment.

2.03 WARRANTIES

A. Provide duplicate copies.

B. Execute and assemble transferable warranty documents from subcontractors, suppliers and manufacturers.

C. Provide Table of Contents and assemble in three D-side ring binder with durable cover.

D. Submit warranties to College District's Representative prior to Request for Final Application for Payment.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

2.04 SPARE PARTS AND MAINTENANCE MATERIALS DATA

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.

B. Deliver to Project site, place in location as directed, and obtain receipt prior to Request for Final Application for Payment.

PART 3 - EXECUTION

3.01 FINAL CLEANING

A. Execute final cleaning prior to final project inspection.

B. Clean all existing surfaces; Remove dust and debris including areas previously concealed that have been exposed in the course of the Work, regardless of whether they will be concealed by subsequent work.

C. Clean equipment and fixtures with cleaning materials appropriate to the surface and material being cleaned. Remove all labels, not pertinent to identification or operation.

D. Replace filters of all operating equipment within or serving the construction area.

E. Clean debris from all drainage systems.

F. Remove waste and surplus materials, rubbish, and temporary construction facilities from the project site.

G. Failure to remove items as specified may result in payment being withheld until removal is accomplished or may result in a reduction in payment to compensate the College District for providing removal on behalf of the contractor.

3.02 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.03 TRAINING

A. See Section 01820.

END OF SECTION

# SECTION 01820

# DEMONSTRATION AND TRAINING

## PART 1 - GENERAL

### 1.01 SECTION INCLUDES

A. Procedures for demonstration of equipment and systems operation and instruction per section 23 00 00-3.15, G and 25 00 00-3.15 to District and College Building and Grounds maintenance personnel.

### 1.02 RELATED SECTIONS

A. The “Agreement for Mechanical and Control Design-Build Project” apply to this section

B. Individual sections: Specific requirements for demonstrating equipment and systems.

### 1.03 QUALITY ASSURANCE

A. When so specified in individual sections, provide demonstration and instruction to the District and College Building and Grounds personnel, performed by a representative recommended by the equipment or system manufacturer.

B. Demonstration and instruction shall be specific to each type of equipment or system. At a minimum, demonstration and instruction shall include: operations theory; maintenance; trouble shooting/repair; and calibration.

C. Submit reports within one week after completion of demonstrations indicating that demonstrations and instructions have been satisfactorily completed. List time and date of each demonstration and hours devoted to demonstration and instruction, and list names of persons present.

### 1.04 PREPARATION

A. Verify equipment and systems have been inspected and put into operation; testing, adjusting and balancing has been performed, and equipment and systems are fully operational.

B. Furnishing training materials, books, etc. to each participant attending the training classes and have copies of completed operation and maintenance manuals at hand for use in demonstrations and instructions.

### 1.05 DEMONSTRATION AND INSTRUCTION

A. Prior to acceptance of equipment or systems, demonstrate operation and maintenance of equipment and systems to the District and College Building and Grounds maintenance personnel as scheduled.

B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operations and maintenance.

C. Demonstrate start-up, operation, control adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment or system at agreed upon times, at equipment or systems location.

D. Prepare and insert additional data in operations and maintenance manuals when need for additional data become apparent during instruction.

E. Provide systems training to the District and College Building and Grounds maintenance personnel. Training shall include systems descriptions, control sequence of each system, and control, maintenance, and alarm set points. This training shall be performed in conjunction with the temperature control system training (see Specification Section 25 00 00-3.15). Provide training handouts for 12 participants. Conduct training in (2) 3-hour sessions for each system. See subsequent specification sections in Divisions 23 and 25 for additional training requirements.

1.06 TIME ALLOCATED FOR INSTRUCTIONS

A. Amount of time required for instruction on each item of equipment and system shall be as specified in individual sections.

END OF SECTION

# 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 documents including other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

### **1.2** COMPLIANCE AND INTENT

A. The Design Builder is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for abatement or demolition that become damaged as a result of the work.

B. Design Builder shall coordinate as needed removal with all site requirements related to protection of existing site buildings and utilities. Water and encapsulants used during abatement work must not migrate beyond established regulated work area barriers. Additional precautions must be followed when working adjacent to existing structures.

C. This project deals with as needed abatement of asbestos-containing materials (ACMs) associated with the Applied Arts Building Mechanical and Controls Design-Build Project on the Contra Costa Community College campus. It is necessary for the Design Builder to coordinate all as needed abatement work with the planned construction scope of the project. 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 and materials with asbestos content. All hazardous materials shall be removed and disposed of according to all federal, state, and local regulations. The Design Builder 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 and Asbestos Hazard Emergency Response Act (AHERA) accredited training and be certified for asbestos abatement work.

F. Any work that is likely to disturb ACMs remaining in the building must be completed by workers trained at minimum for Class III Asbestos O&M work.

G. 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.

H. Comply with all federal, state, and local regulations pertaining to asbestos removal, storage, transportation and disposal; employee health and safety; Design Builder certifications; and all licenses, permits, and training.

I. Work on the premises shall be confined to areas designated in the Project Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Design Builder shall request permission for additional space.

J. 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.

K. During removal activities, the Design Builder shall protect against contamination of soil, water, plant life, sensitive building finishes, and adjacent building areas. Design Builder shall ensure that there is no airborne release of asbestos fibers or visible dusts. The District may collect air samples in the building and in adjacent areas to evaluate the Design Builder's performance. Evidence of airborne levels of contaminants above background will require the implementation of additional controls.

L. It is the Design Builder's responsibility to determine the quantities of ACMs that will require removal based upon the scope of the mechanical and controls project. The Design Builder 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 and materials with asbestos content. All ACMs shall be removed according to the requirements outlined in this specification. If additional suspect ACMs are discovered during the abatement work, immediately notify the District and the consultant.

M. The work of this section shall be performed by an entity that holds a current, valid C-22 license issued by the California Design Builder's State License Board (CSLB) 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.

N. ACMs and materials with asbestos content 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 Design Builder "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 of any hazardous waste disposal site(s) prior to disposal for materials that may be disposed of in that manner.

O. All interior asbestos abatement work shall be conducted using a negative pressure enclosure and three stage decontamination unit unless otherwise specified. The removal of exterior applied ACMs do not require containment is the material is removed in a non-friable state and does not involve mechanical methods or aggressive methods that render the material friable. Materials that will or may be rendered friable during removal must be removed in a negative-pressure enclosure. Evidence of the release of asbestos above the background level will necessitate additional controls including but not limited to an enclosure.

**1.3** DEFINITIONS

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.
4. AHERA: Asbestos Hazard Emergency Response Act (40 CFR Part 763).
5. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.
6. Ambient Air Quality: The quality of air (in terms of airborne fiber content) that is present in a given space.
7. 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.
8. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.
9. 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.
10. 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.
11. 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.
12. 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.
13. Baseline: Refers to the background levels of asbestos monitored before abatement.
14. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.
15. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.
16. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.
17. Cal-OSHA: State of California, Department of Occupational Safety and Health (DOSH).
18. 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.
19. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.
20. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.
21. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

22. 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 aggressive or non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.
23. 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.
24. 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.
25. CSLB: Contractors State Licensing Board
26. 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.
27. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.
28. DOT: Federal Department of Transportation.
29. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)
30. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.
31. 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.
32. 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:

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST
RQ WASTE ASBESTOS, 9 NA 2212 PG III
(Class 9 placard)
HAZARDOUS WASTE
STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

33. District: Contra Costa Community College District.

34. 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).
35. 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.
36. Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the ACM to prevent the release of asbestos fibers into the air.
37. Environmental Consultant: CIH, Certified Asbestos Consultant (CAC), and/or Certified Site Surveillance Technician (CSST) retained by the District.
38. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.
39. Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept clean from asbestos-containing debris at all times.
40. 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.
41. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.
42. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.
43. 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.
44. 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.
45. Glove Bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an ACM is to be removed. Bags shall be seamless at the bottom, have a minimum thickness of 6 mils, and shall be labeled appropriately.
46. Glove Bag Technique: A method for removing ACM from heating, ventilation and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. Secondary containment shall be provided for all glove bag work unless otherwise noted.
47. Gross or Full Abatement: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.
48. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.
49. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.

50. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area.
51. 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.
52. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).
53. NESHAP: National Emission Standard for Hazardous Air Pollutants – EPA Regulation 40 CFR Subpart M, Part 61.
54. 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).
55. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.
56. NOA – Naturally Occurring Asbestos. Found in soil, fill and concrete.
57. NVLAP: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.
58. Passive Sampling: Refers to air sampling with no air agitation.
59. 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.
60. 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.
61. 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.
62. 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.
63. 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.
64. Remodel: Replacement or improvement of an existing building or potion 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.
65. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
66. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.

67. Surfactant: A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.
68. 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.
69. TSI – Thermal Systems Insulation
70. Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
71. Visual Inspection: A visual inspection by Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible PCB material, debris, and dust.
72. Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.
73. Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.
74. 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.
75. 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. Determine need for removal of ACMs and materials with asbestos content as specified in this section based upon the project scope and requirements. Reference all other sections of the Specifications included in the contract documents for information and requirements that affect the work of this Section. See Terracon's Supplemental Asbestos and Lead Survey Report, dated June 24, 2020 for a summary of materials with asbestos content, materials tested and limitations.

B. All workers that contact ACM shall be trained at minimum in accordance with Title 8 CCR 1529 for Class IV Work. Workers that will perform work that may disturb ACMs shall be trained at minimum in accordance with Title 8 CCR 1529 for Class III Work. Construction work that will create debris during removal of architectural or mechanical components or attachments to existing finishes with ACM is considered Class III work. Any limited abatement required to complete required construction must be coordinated with the construction documents.

C. Table 1 attached provides estimated quantities of ACMs that may require removal. The Design Builder is responsible for field verifying quantities of ACMs and difficulty in abating the same. Coordination and defined areas of abatement is required where ACMs will remain.

D. The following material shall be disposed of as regulated asbestos-containing material (RACM): None identified in building. Additionally, all Category I and Category II materials rendered friable

during the removal process such as use of mechanical removal methods will be managed and disposed as RACM.

E. The following materials can be disposed of as Category I Non-friable ACMs if they are not rendered friable during removal: None identified.

F. The following materials can be disposed of as Category II Non-friable ACMs if they are not rendered friable during removal: Sealant associated with mechanical louver.

**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)

1. ANSI Z9.2, 1979 (R 1991), Fundamentals Governing the Design and Operation of Local Exhaust Systems
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
7. ASTM C 732, 1982 (R 1987) Aging Effects of Artificial Weathering on Latex Sealants
8. ASTM D 522, 1993 (Rev. A) Mandrel Bend Test of Attached Organic Coatings
9. ASTM D 1331, Solutions of Surface-Active Agents
10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
11. ASTM E 84, 1991 (Rev. A) Surface Burning Characteristics of Building Materials
12. ASTM E 96, 1994 Water Vapor Transmission of Materials
13. ASTM E 119, 1988 Fire Tests of Building Construction and Materials
14. ASTM E 736, 1992 Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
15. ASTM E849, 1986 Safety and Health Requirement Relating to Occupational Exposure to Asbestos
16. ASTM E 1368, 1990 Visual Inspection of Asbestos Abatement Projects
17. ASTM E1494, 1992 Specifications for Encapsulants for Friable Asbestos-Containing Building Materials

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)

   CHSC 20
   1. 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. 29CFR 1910.1000, Air Contaminants
   9. 29 CFR 1926.1101, Asbestos
   10. 40 CFR 61-SUBPART A, General Provisions

11. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
12. 40 CFR 260, Hazardous Waste Management Systems: General
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

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 designated representative are intended to be only for general conformance with the requirements. The District or the District's designated representative 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 documents included in the contract documents.

B. Before commencing work involving the abatement of asbestos, submit the following for review by the District or District's designated representative:
   1. Provide a detailed asbestos abatement work plan that is specific for the material(s) to be removed.
   2. Provide an asbestos site safety plan prior to project initiation. The site safety plan shall deal with the following, 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; the Design Builder'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 individuals 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. 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.
10. Satisfactory proof that written notification and subsequent updates have been provided to the Bay Area Air Quality Management District, 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 needed for any friable removal, as applicable.
11. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.
12. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Design Builder must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.
13. Safety Data Sheets (SDSs)/Specification Sheets: The Design Builder shall submit SDSs 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, the Design Builder 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's representative 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 designated representative within ten working days after delivery.
   5. Personal air sample results.
   6. Pressure differential readings for each differential recording device on the site.
   7. 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. Name of project and project reference number.
      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(s) 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 designated representative reserves the right to perform air sampling in selected areas during the project. District or District's designated representative reserves the right to stop work within an area if while performing monitoring, 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 are observed. 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 containment area exceeding background or 0.01f/cc whichever is greater. Airborne concentrations as measured by TEM outside of the containment area exceeding background or 70 S/mm$^2$, whichever is greater.
   3. Loss of negative pressurization for more than two minutes.
   4. Breaches in containment resulting in potential release of asbestos to non-work areas.

B. The consultant shall perform visual inspections of each regulated area prior to abatement to verify proper containment and controls. A visual inspection(s) will be performed at the conclusion of the abatement to verify complete removal. The consultant will perform air sampling inside and outside the regulated work area to verify air quality beyond the work area during abatement and air quality inside the work area following abatement.

C. The District or District's designated CAC may perform visual inspections and air testing as requested to verify performance.

## **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 areas 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 DAMAGED TO LUNGS
AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORS AND
PROTECTIVE CLOTHING ARE REQUIRED 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 legend:

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. Dry mil thickness of bridging encapsulating systems (if used) shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.

D. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:
   1. Flame resistance/flame spread ~25 (ASTM E162) V6.
   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** DIFFERENTIAL PRESSURE RECORDER(S):

A. Where interior work areas are required, each shall have a minimum differential pressure of 0.025 inches of the water gauge at all times. Fluctuations below 0.025 inches of water column are unacceptable and may require temporary cessation of work until conditions are corrected.

B. Differential pressure recorder(s) shall be used to document the level of pressure difference between the containment space and all other spaces. Defective or non-operating instrumentation may require temporary cessation of work until instrumentation is repaired or replaced.

C. The differential pressure instrument will be checked a minimum of four times per day by a person familiar with the operation. Each check shall be documented with a time and date notation and the initials of the person performing the check. A copy of the differential pressure recordings shall be submitted daily to the consultant.

D. Differential air pressure systems shall be in accordance with Appendix J of EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-024. The Differential pressure system shall be continuously monitored by the Contractor using a recording instrument. The recording instrument shall be connected to an audible alarm that will activate at a pressure differential of -0.025 inches of the water gauge air pressure.

**2.6** VACUUM EQUIPMENT:

A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Design Builder shall provide on-site independent DOP-equivalent testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing. Provide documentation to the District or District's designated representative with 5 days of DOP-equivalent testing.

**2.7** LOCAL EXHAUST SYSTEM:

A. Where containments are required, sufficient High Efficiency Particulate Absolute (HEPA) ventilation units shall be used to maintain the negative pressure in each interior work area at 0.025 inches of water column and a minimum of four (4) air changes per hour.

B. The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air which is exhausted to maintain negative pressure shall be exhausted from the building at locations approved by the consultant and District or District's designated representative. Exhausted air shall not be near or adjacent to other building intake vents or louvers or at entrances to buildings.

C. The Design Builder shall provide on-site independent DOP-equivalent testing to document the effectiveness of the air filtration units. The test results shall be signed by the individual performing the testing. Repeat testing if the unit or the air filtration units have been repaired or replaced.

Provide documentation to the District or District's designated representative within 5 days of DOP-equivalent testing.

**2.8** RESERVE EQUIPMENT:

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

B. Provide authorized visitors, District, Consultants or other contractors 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 Design Builder shall have available and maintain adequate supplies of protective clothing and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

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

**2.9** SCAFFOLDING:

A. Scaffolding, as required to do the specified work, shall meet all applicable safety regulations and DOSH standards. A non-skid surface shall be furnished on all scaffold surfaces subject to foot traffic. Scaffolding shall be adequately protected to prevent contamination of planking and framing.

**2.10** 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.

**2.11** CONNECTIONS TO WATER SUPPLY:

A. Design Builder 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.

**2.12** WATER HEATER:

A. The hot water supply must be adequate to allow for 15 minutes of continuous usage while maintaining a water temperature of 85°F. At minimum provide UL rated 40-gallon electric water heater to supply hot water for the decontamination unit shower. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip

pans shall consist of a 24-inch X 24-inch X 6-inch-deep pan, made of 19-gauge galvanized steel with handles. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

**2.13** OTHER TOOLS AND EQUIPMENT:

A. The Design Builder 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 designated representative:

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. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the District or District's designated representative.
5. 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 designated representative.
6. Metal wire-brushes.
7. 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.
8. Non-fire-retardant polyethylene sheeting.
9. 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 the District's designated representative reserves the right to inspect and approve all containment setups before any abatement is undertaken.

B. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Design Builder shall take immediate action to control the breach and clean the area to the satisfaction of the District or the District's designated representative.

C. If sample results indicate that conditions have exceeded the baseline or clearance criteria, as determined by the District or District's designated representative, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

D. 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.

E. Design Builder shall conform to lockout requirements and secure the work area at all times. Area entrances and exits shall be secured by the Design Builder throughout the abatement phase.

Unauthorized visitors are strictly prohibited. Only the District or District's designative representatives are permitted at the job site. Design Builder 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.

F. Design Builder shall store all materials, equipment, and supplies for the project inside the building or in areas designated by the District and in accordance with District requirements.

G. As required, establish designated limits for the abatement work area with continuous barriers. Provide signs around the perimeter of all the interior works areas according to EPA and Cal-OSHA.

H. The Design Builder shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and 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 or equivalent, as applicable.

I. 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 required for removal of all interior ACMs and exterior ACMs (if not removed intact). Design Builder shall construct critical barrier containment(s) as needed to facilitate removal. The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period. Note: A three-chamber decontamination unit will not be required for removal. Cover ground or floors with 6-mil poly and secure with tape (as appropriate).

B. Protect all walls scheduled to remain with 4 - 6mil poly within the regulated work area.

C. Any disturbance of ACMs must be performed within a regulated area. If dust or debris is generated from asbestos related activity, work must be performed in a mini-enclosure with negative pressure or critical barrier containment.

D. To permit the inspector to view the majority of the work area, the Design Builder shall provide easily accessible viewing ports from the clean space into each contained abatement area. Viewing ports must be a minimum of 2' x 2', clear-see-through plastic with no scratches, tape or glue marks.

E. Pressure differential recorders are required to monitor the pressure differential in the contained work areas. The recorders must be calibrated prior to arriving on site. Calibration shall be performed by qualified technicians following the procedures outlined by the manufacturers. Provide documentation of calibration before beginning work.

F. A two-chamber decontamination unit will be required for critical barrier work areas. The unit shall be located immediately outside the contained area. A pre-fabricated unit is acceptable. Chambers shall be arranged as follows: (1) a clean/change room shall be the first chamber entered from outside the work area, and (2) a dirty/change room shall be the last chamber before entering the work area.

1. The clean/change room of the worker decontamination unit shall be of sufficient size to accommodate the work crew and their belongings. It shall include a respirator storage area

and be fully equipped with reserve equipment and materials such as clean suits, towels, soap, tape, and respirator filters.

2. Worker decontamination unit walls shall be a minimum of two layers of 6-mil fire retardant poly and floors shall be constructed with a minimum of three layers of fire-retardant poly. All entry and exit doorways shall consist of at least two sheets of overlapping, fire resistant poly. At no time shall the flapped doors be taped open to expedite material or personnel load-out.

G. A decontamination area may be allowed for uncontained, exterior work areas demarcated regulated area boundaries, unless noted elsewhere. The decontamination area shall be located immediately outside the regulated area and shall contain a wash down area.

H. 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 on the inside of the containment area. The emergency exit plan shall be approved by the 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 asbestos and ACMs and any other hazardous materials exposure present within the site. 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 Design Builder 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 regulated work area. The Design Builder shall provide a clean space, separated from the work area, for these activities.
2. Workers shall in the clean room or area and put on a respirator and clean protective clothing before entering the regulated work area. Upon exiting the regulated work area, remove gross contamination from clothing before leaving the work area; proceed to the change room and remove clothing except respirators; clean the outside of the respirator with soap and water; remove respirator and thoroughly wash. Proceed directly to the clean room. Do not wear disposable clothing outside the decontamination chamber or areas.
3. If data gathered by the consultant, District or District's designated representative 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.

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. Asbestos abatement of sealants and any Class III work: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).
4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.

Table 1 – Respiratory Protection

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

5. Provide Type C continuous flow or pressure-demand, supplied-air respirators if the average airborne concentration of asbestos exceeds 100 times the permissible exposure limit; i.e., 8-hour time-weighted average (TWA) and ceiling limit. Use the respirators presented in Title 8 CCR 1529 that afford adequate protection at such upper concentrations of airborne asbestos. When Type C Respirators are required provide the following:
   a. The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.
   b. Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

c. Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

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 worker's 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. Decontamination Requirements: Design Builder shall assure that all certified employees and visitors use protective equipment and decontamination facility following each entry into the regulated area following the start of the asbestos abatement.

G. 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 Design Builder'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 Design Builder shall implement fiber reduction techniques until the injured person has been removed from the work area.
3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Design Builder shall also institute fiber reduction controls until negative pressure is re-established to acceptable levels.

**3.4** ASBESTOS REMOVAL (GROSS REMOVAL TECHNIQUE)

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

B. The Design Builder 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 ACMs 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 brushed and/or wet cleaned to remove all visible material and residue from the building, furring materials, and/or mechanical components.

D. Wet clean the exterior surfaces of waste containers in the equipment decontamination enclosure system prior to removal from the work area. The Design Builder shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the District or District's designated representative. 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 waste shall be packaged in clear, leaktight containers and properly labeled while stored on-site. Asbestos-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Design Builder 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 containment and decontamination enclosure system 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/mm$^2$ (TEM) or background whichever is greater. 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 designated representative will be to detect possible release of fibers or dusts (asbestos or lead) 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 designated representative reserves the right to perform and/or observe final clearance inspection and sampling.

D. The method of analysis for pre-abatement and clearance air samples shall be via Phase Contrast Microscopy (PCM). The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the consultant and District or District's designated representative.

E. The Design Builder 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.

**3.7** CLEARANCE INSPECTIONS

A. The consultant shall conduct visual inspections. Design Builder shall notify the consultant when the decontamination process in each containment area is complete. Evidence of debris will require additional clean up by the Design Builder. Design Builder shall be responsible for re-cleaning all areas found to be deficient.

B. If the consultant determines that the work area is sufficiently clean, the Design Builder may proceed. If the consultant determines that certain areas require additional cleaning, the Design Builder shall re-clean the work area and request a second inspection of the recleaned area.

C. Once the initial visual is passed, the Design Builder shall remove all but the containment critical barriers.

D. Following the visual inspection, the Design Builder shall provide a coating of non-diluted encapsulant in the work area. The Design Builder shall allow the encapsulant to dry for the period specified by the manufacturer.

E. Asbestos Clearance Testing: Following encapsulation and drying time, the consultant shall conduct air clearance sampling. Clearance air sampling shall not take place until all encapsulant is dry. The District or District's designated representative reserves the right to approve the initiation of clearance sampling.

**3.8** ASBESTOS CLEARANCE CRITERIA:

A. The clearance level per containment shall be less than 0.01 fibers per cubic centimeter via phase contrast microscopy (PCM) or less than 70 structures per square millimeter via transmission electron microscopy (TEM). Aggressive air sampling shall be used for clearance purposes. Multiple samples shall be collected in large containment areas.

B. If air samples do not pass the required clearance criteria, the area shall be recleaned and new samples shall be collected by the consultant. The Design Builder shall be responsible for all costs associated with re-sampling and re-analyses.

C. The consultant will notify the Design Builder and District or District's designated representative in writing of acceptable asbestos fiber concentrations. The Design Builder shall then remove all the remaining barriers in the work area.

**3.9** ASBESTOS DISPOSAL

A. It is the responsibility of the Design Builder to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Design Builder 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 equipment decontamination enclosure system.

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 ten (10) days before final load-out of materials.

F. All friable asbestos waste shall be double-wrapped prior to transport from the site.

G. 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 and with vehicle at all times.

H. 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 and must be locked at all times when unattended.

I. All vehicles and containers used to transport waste are subject to inspection and approval of District or District's designated representative prior to departure from site.

J. Design Builder shall not throw bags into the truck in a way that may cause the bags to burst open.

K. Design Builder shall provide at minimum two (2) days advance notification to the District when signatures are required on manifest(s). The Design Builder shall ensure that the Hazardous Waste Manifest is correctly filled out. The Design Builder 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.

L. Design Builder is responsible for all coordination with the waste disposal site and with the waste hauling company. Design Builder shall ensure the District receives a final copy of the signed manifest.

M. Waste disposal shall be in a landfill approved by the District or District's designated representative that meets current federal EPA and state requirements.

TABLE I
ESTIMATED QUANTITIES
ASBESTOS-CONTAINING MATERIALS

| HM# / Material Description | Material Location(s) | Waste Category | Asbestos Result | Estimated Quantity* |
|---|---|---|---|---|
| Brown Caulk/Sealant | Perimeter of Mechanical Louver Wood Furring Former Cooling Tower Equipment Well | Cat. II | 10% CH | 30 lf or 3 sf |

None Detected, NA = Not Applicable, CH = Chrysotile, 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, lf = linear feet, ea = each, *Estimated quantity should be field verified prior to abatement or abatement design

END OF SECTION

# ATTACHMENT A
# ASBESTOS ABATEMENT WORK PLAN OUTLINE

In accordance with the contract documents, the Design Builder 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 Design Builder 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 Design Builder are aware of all hazardous materials locations)*

II. Description of Work:
Describe the anticipated work scope

III. Schedule:

| Phase/Task | Anticipated Date(s) |
|---|---|
| Mobilization | _____ |
| Set-up of work area(s), containments | _____ |
| Abatement | _____ |
| Final Cleaning | _____ |
| Visual Inspection | _____ |
| Final Clearance (visual and air sampling) | _____ |
| Teardown | _____ |
| Demobilization | _____ |

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 |

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 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.*

X. Containment/Regulated Work Area 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)*

# SECTION 02 83 00
# LEAD-CONTAINING PAINT REMOVAL AND LEAD-RELATED CONSTRUCTION

## **1.1** SUMMARY OF LEAD RELATED WORK

A. This section involves the requirements for removal and/or disturbance of building materials and painted components that contain detectable quantities of lead. Existing building materials and components with paint coatings considered to be lead containing paint (LCP) include, but are not limited to metal door and door frames, mechanical louver in former equipment well and the painted roof mounted air-handler units. All painted surfaces not specifically tested shall be assumed to contain lead. See Terracon's Supplemental Asbestos and Lead Survey Report, dated June 24, 2020 for a summary of materials with lead content, materials tested, and limitations. The intent of this work and the required procedures is to minimize lead emissions and contamination resulting from demolition and dismantling of finishes or equipment and construction related activities that will impact lead containing materials.

B. Lead-Related Construction Work: The Contractor's lead related construction work consists of any work activity or task which results in the coincidental removal or disturbance of paints or other lead containing materials. The Design Builder shall determine and implement applicable OSHA worker protection requirements (Title 8 CCR 1532.1) and ensure proper clean up and disposal of any resulting paint chips and lead wastes resulting (including water) from all lead-related construction activities including, but not limited to, the following:
   1. Removal of all damaged or peeling lead containing paint from painted finishes or equipment prior to demolition or impacting surfaces.
   2. Removal of intact paint from mechanical components prior to hot work.
   3. Demolition/dismantlement of finishes or equipment with lead containing paint.
   4. Tasks that will impact existing painted surfaces including but not limited to drilling, cutting, removal of existing of attachments (electrical, mechanical), and paint preparation of existing surfaces.

## **1.2** REGULATIONS

A. The Design Builder shall comply with the requirements of the current issue of the following regulations and guidelines governing lead removal, lead-related construction and disposal and other applicable Federal, State, and Local Government regulations. The regulations listed herein are incorporated by reference.
   1. Code of Federal Regulations (CFR):
      a. 29 CFR 1926, Construction Standards
      b. 29 CFR 1926.62, Lead in Construction
      c. 29 CFR 1910.94, Ventilation
      d. 29 CFR 1910.134, Respiratory Protection
      e. 29 CFR 1910.1025, Lead
      f. 29 CFR 1910.1200, Hazard Communication
      g. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
      h. 29 CFR 1926.57, Ventilation
      i. 40 CFR Part 50.12, Ambient Air Quality Standard for Lead
      j. 40 CFR Parts 260, 261, 262, 263, 264, 265 and 268, Hazardous Waste Management
      k. 49 CFR Parts 172, 173, 178, 179, Hazardous Material Transportation

2. California Code of Regulations:
   a. 8 CCR Division 1, Chapter 4, Subchapter 4, Construction Safety Orders
   b. 8 CCR 1532.1, Lead in Construction
   c. 8 CCR 1537, Welding, Cutting, and Heating of Coated Metals
   d. 8 CCR 5144, Respiratory Protection
   e. 17 CCR 35001 – 36100, Accreditation, Certification, and Work Practices for Lead-Based Paint and Lead Hazards
   f. 26 CCR Division 22, Hazardous Waste
3. Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing, U.S. Department of Housing and Urban Development (HUD), June 1995.

**1.3** DEFINITIONS

A. Definitions specific to the work of this section:
   1. Abatement: Procedures for control of lead exposures to the Design Builder's workers, District Employees, Public and the environment by removal, enclosure, and/or encapsulation of lead containing paints (LCPs), Lead Containing Construction Materials (LCCMs), and LCP coated components and proper clean up and disposal of resulting lead contaminated dust, chips, debris, and abatement wastes. Also include procedures for control of lead exposures resulting from welding or other hot work on surfaces with LCPs or residues.
   2. Action Level (AL): An exposure of 30 µg/m3 of airborne lead as an 8-hour TWA. When the AL is met or exceeded, certain protective health and safety measures are triggered per 8 CCR1532.1 Lead.
   3. Action Levels for Lead Content: The levels of lead concentration established for each type of analysis performed, which if the lead concentration equals or exceeds the action levels specified herein, renders the material hazardous.
      a. Action Level for Toxicity Characteristic Leaching Procedure (TCLP) by EPA 200.7: Action level for TCLP is 5.0 milligrams per liter.
      b. Action Level for Total Threshold Limit Concentration (TTLC) by EPA 6010: Action level for TTLC is 1,000 milligrams per kilogram.
      c. Action Level for Soluble Threshold Limit Concentration (STLC) by EPA 200.7: Action level for STLC is 5.0 milligrams per liter.
   4. Airlock: A system for permitting ingress or egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways at least three feet apart.
   5. Air Monitoring: The process of measuring the lead content of a specified volume of air in a stated period of time.
   6. Area Monitoring: Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations that may reach the breathing zone of personnel potentially exposed to lead.
   7. Authorized Visitor: District or District's Representative, Architect, or a representative of any regulatory or other agency having jurisdiction over the project.
   8. Change Room and Decontamination Facilities: Rooms within the designated boundary around the lead control area equipped with separate storage facilities for clean protective work clothing and equipment to reduce potential for cross-contamination.
   9. Clean Room: An uncontaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

10. Competent Person: An onsite supervisor who has been formally trained in lead abatement and who is capable of identifying lead hazards, substandard and improper lead abatement controls, procedures, practices, and conditions and who has sufficient experience and authority to take prompt corrective measures to eliminate them.
11. Decontamination Room: Room for removal of contaminated personal protective equipment (PPE).
12. District's Observation Service: Consultant retained by the District to inspect work areas, and collect environmental samples (air and bulk).
13. DOP Test: Test of a High Efficiency Particulate Absolute filter (HEPA) system to verify that a minimum of 99.97% of all particles 0.3 microns in diameter are captured by the filter system test must be conducted with dioctylphthalate (DOP) test aerosol in accordance with ANSI Z9.2 1979 and Federal Standard 209 B for Class 100 air and as indicated in UL 586.
14. Eight-Hour Time Weighted Average (TWA): Airborne concentrations of lead averaged over an 8-hour workday to which an employee is exposed.
15. Fixed Object: A unit of equipment or furniture in the Work Area which cannot be removed from the Work Area.
16. Hazardous Waste: Lead paint debris and materials shall be classified as hazardous due to the characteristic of toxicity, as determined by testing in accordance with the California Code of Regulations, Title 22, Division 4, Chapter 30, Article 11. Any substance(s) listed in Article 11 Section 66699 at concentrations greater than their listed Soluble Threshold Limit Concentration (STLC) or Total Threshold Limit Concentration (TTLC) may need to be further characterized by the Toxicity Characteristic Leaching Procedure (TCLP) in accordance with 40 CFR 261 and other tests prior to disposal as a hazardous waste.
17. HEPA Exhaust System: A portable local exhaust system equipped with HEPA filtration and capable of maintaining a constant, low velocity air flow into contained contaminated areas from adjacent uncontaminated areas when used as Differential Pressure Equipment. Also capable of use as local exhaust to control lead fumes generated from hot work.
18. HEPA Filter: A High Efficiency Particulate Absolute (HEPA) filter capable of trapping and retaining 99.97% of lead particles greater than 0.3 microns in diameter.
19. HEPA Vacuum Equipment: High efficiency particulate air (absolute) filtered vacuuming equipment with a filter system capable of collecting and retaining lead dust. Filters shall be certified to be of 99.97% efficiency for retaining particles of 0.3 microns diameter or larger.
20. Intact LCP Components: LCP components removed substantially intact with LCP firmly adhering to the surface. Examples are door, door trim, baseboards, etc., with intact paint. Also referred to as architectural debris with intact paint.
21. Lead Based Paint (LBP): Lead Containing Paint (LCP) that is at least 0.5% lead by weight when analyzed by AAS or ICP AES (equivalent to 5000 ppm of lead) or 1.0 milligrams of lead per square centimeter (mg/cm2) as determined by XRF testing or as identified by specification. LBP is also a Lead Containing Construction Material (LCCM).

22. Lead Containing Construction Materials (LCCM): Any construction material: (I) containing lead at analytically detectable levels greater or equal to 50 ppm; or (2) containing paints or other finishes with lead at levels greater than 600 ppm; or (3) consisting of paints containing lead at any level capable of posing an occupational or environmental hazard during any phase or process of the current construction or demolition project. Occupational hazards shall be considered evident when airborne exposure levels exceed or are likely to exceed the permissible exposure level (PEL) set by Cal/OSHA. Environmental hazards shall be considered evident when lead surface contamination levels exceed 800 µg/ft2 on Work Area surfaces and/or when any of the State or Federal hazardous waste criteria for lead is met or exceeded.
23. Lead Containing Paint (LCP): Any paint or finish coating with a detectable lead content. Cal/OSHA regulation requires assessment of employee exposure for all tasks where lead is present.
24. Lead Control Area: An enclosed area or structure with full containment to prevent the spread of lead dust, paint chips, or debris of LCP removal operations. The lead control area is isolated by physical boundaries to prevent unauthorized entry of personnel.
25. Lead Related Waste: Paint chips, vacuum dust, and debris, used cleaning articles, waste water, plastic sheets and other disposable items which were used during the LCP abatement process and as a result are considered lead contaminated waste or assumed hazardous waste pending further characterization.
26. Lead Impacted Construction: Any construction activity, excluding abatement, which disturbs lead or lead containing paints or coatings and which may, under specific circumstances, result in worker and or environmental exposure.
27. Lead Related Construction: Any construction activity or process including but not limited to lead abatement, LCCM (i.e. paint) removal lead impacted construction, or welding on lead containing surfaces which may expose workers, building occupants, or the environment to a release of airborne lead or surface lead contamination.
28. Mini containment or Mini enclosure: A small temporary enclosure constructed of impervious material (such as plastic sheeting) with at least one airlock to permit ingress and egress. The entire Work Area is contained or enclosed by this system to prevent the escape of contamination outside the Work Area.
29. Permissible Exposure Limit (PEL): An exposure to airborne lead of 50 micrograms of lead per cubic meter of air (50 µg/m3), averaged over an 8-hour workday which is referred to as a time weighted average (TWA). This is the highest level of Lead in air an employee can be permitted to be exposed to in an eight-hour work day. For longer work days, the PEL is lowered and can be determined by dividing 400 by the number of hours worked per day. When the PEL is exceeded, the Design Builder must take action to lower the exposure level and protect the worker per 8 CCR1532.1 Lead.
30. Personal Monitoring: Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour TWA concentration in accordance with Title 8 CCR 1532.1. Samples shall be representative of the employee's work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulder, with a radius of 6 to 9 inches and the center at the nose or mouth of an employee.
31. Physical Boundary: Area physically roped or partitioned off around an enclosed lead control area to limit unauthorized entry of personnel. As used in this section, "inside boundary" shall mean the same as "outside lead control area".

32. Qualified Person: The individual identified by the Design Builder to be responsible for conducting air sampling, calibration of air sampling pumps, evaluating sampling results, and conducting respirator fit tests.
33. Recognized Training/Educational Institution: University, college, Steel Structures Painting Council, or a professional training organization funded by or meeting U.S. Environmental Protection Agency (EPA) and/or California Department of Public Health (DPH) training accreditation requirements for contractors performing lead-based paint or construction related work that exceeds the Department of Occupational Safety and Health (DOSH) Permissible Exposure Limit (PEL) for lead.
34. Removal: All herein specified procedures necessary to remove and clean up all LCCM or LCP from the designated areas and to dispose of these materials at an acceptable site in accordance with Federal, State and Local Regulations. Removal of LCP may be by whole painted component or by removing LCP from painted components either onsite or offsite.
35. Trigger Task: Task specifically identified by the CAL/OSHA Lead standard as a potential exposure hazard requiring certain protective measures to be implemented prior to obtaining the results of an initial exposure assessment. Trigger tasks include, but are not limited to, any of the following tasks when materials or paints which contain lead are present and will be disturbed:
    a. Manual demolition
    b. Manual scraping or sanding
    c. Heat gun application
    d. Use of power cleaning tools
    e. Rivet busting
    f. Abrasive blasting
    g. Welding, cutting or torch burning
36. Visually Clean: Free of visible dust, paint chips, dirt, debris, or films removable by vacuuming or wet cleaning methods specified. For outside soil or ground cover areas, visually clean shall mean free of construction or paint debris, chips or dust distinguishable from the initial soil or ground conditions.
37. Washroom: A room or area established outside the Work Area for hand washing at minimum. Where the lead PEL is exceeded, the wash room shall contain a shower facility with hot and cold water and a water filtering system.
38. Wet Cleaning: The process of eliminating lead contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been washed with specified detergent solutions and rinsed with clean water.
39. Work Area: A designated and controlled area in which lead abatement actions are undertaken or which may become contaminated as a result of such actions. A Work Area is a controlled area delineated at minimum by barrier tape (or similar means) and signage to restrict access to Authorized Personnel. In some instances, a higher degree of physical isolation and control may be required and specified.

**1.4** SUBMITTALS AND NOTICES

A. Requirements are as set forth in the General Conditions and Division 1, for items required to be submitted under this section.

B. Product data shall include manufacturer's product data, specifications, samples and application instructions and other pertinent information necessary.

C. Project procedure submittal for LCP coating removal. Submit the following:
   1. Detailed work plan for all lead-related paint removal including:
      a. removal method to be employed;
      b. lead contamination controls for each different type of method or work operation involving lead containing paint removal;
      c. equipment and materials proposed to be used on LCP coatings;
      d. the procedures and practices for protection of building occupants and the environment; and
      e. detailed description of Work Area preparation and containment controls for lead-related construction work, cleaning and decontamination procedures, signage, and security measures.
   2. Detailed plan for disposal of lead contaminated wastes generated by this work in accordance with all applicable Federal, State and Local regulations. Each separate waste stream should be addressed including name of waste stream, methods of handling, packaging, labeling, storage, transportation, and disposal or recycling. For materials to be disposed, indicate the classification of the waste (RCRA hazardous, California hazardous or non-hazardous).
   3. Method of transport of hazardous waste including name, address, EPA I.D. number, and telephone number of the transporter and the name, class, address, EPA I.D. number, and telephone number of hazardous waste site(s) to be utilized for disposal of each waste stream.
   4. Proposed location, size and type of secured waste storage containers to be used. Include system that will be used for segregating different waste streams.
   5. Detailed schedule for completion of lead-related construction work to be updated on a weekly basis indicating tasks being performed until job completion.
   6. Detailed plan for protection of workers conducting lead-related construction work which includes all information required for the CAL/OSHA lead compliance plan per Title 8 CCR 1532.1. At minimum, for each removal method, the plan shall detail protective clothing and equipment and procedures and worker decontamination facilities and procedures.

D. Project Procedures Submittal for Hot Work on LCP Surfaces
   1. Detailed work plan for containment and removal of lead containing paint, capture of fumes from all hot work including welding and torch cutting on painted steel or painted mechanical components. Include equipment and materials proposed to remove paint, capture, HEPA filter, and exhaust all lead containing fumes for protection of workers, building occupants, and the environment.
   2. Cal/OSHA lead compliance plan for welders per 8 CCR 1532.1 Lead.
   3. Daily air monitoring plan to verify that airborne lead levels do not exceed the specified limits in any occupied areas of the building.

E. Project procedure submittal for lead-related construction demolition (removal of building finishes or painted mechanical components such as dismantlement with lead containing paint). Submit the following:
   1. Detailed work plan for all lead-related construction including:
      a. removal method to be employed;
      b. lead contamination controls for each different type of method or work operation involving lead containing materials;
      c. equipment and materials proposed to be used on lead containing materials;
      d. the procedures and practices for protection of building occupants and the environment; and

e. detailed description of Work Area preparation and containment controls for lead-related construction work, cleaning and decontamination procedures, signage, waste management and security measures.

2. Detailed plan for disposal of lead contaminated wastes generated by this work in accordance with all applicable Federal, State and Local regulations. Each separate waste stream should be addressed including name of waste stream, methods of handling, packaging, labeling, storage, transportation, and disposal or recycling. For materials to be disposed by landfilling, indicate the classification of the waste (RCRA hazardous, California hazardous or non-hazardous) verified by state and federal waste characterization testing. Note: painted metal finishes or mechanical equipment disposition through a recycler is not subject to waste characterization testing. for landfill disposal.
3. Method of transport of hazardous waste including name, address, EPA I.D. number, and telephone number of the transporter and the name, class, address, EPA I.D. number, and telephone number of hazardous waste site(s) to be utilized for disposal of each waste stream.
4. Proposed location, size and type of secured waste storage containers to be used. Include system that will be used for segregating different waste streams.
5. Detailed schedule for completion of lead-related construction work to be updated on a weekly basis indicating tasks being performed until job completion.
6. Detailed plan for protection of workers conducting lead-related construction work which includes all information required for the CAL/OSHA lead compliance plan per Title 8 CCR 1532.1. At minimum, for each removal method, the plan shall detail protective clothing and equipment and procedures and worker decontamination facilities and procedures.

F. Lead Paint Removal Personnel Qualification and Protection Submittal. Submit the following:

1. Employee training certifications demonstrating that all employees engaged in LCP removal or hot work activities have attended formal lead hazard and lead related construction training by a Recognized Training/Educational Institution. All training for other lead related construction activities shall be in accordance with the worker training provisions in the CAL/OSHA and California Department of Public Health (CDPH) lead regulations and this specification:
   a. The minimum acceptable training course duration is 40 hours for the Contractor's lead abatement Supervisor/Competent Person and all workers conducting removal of LCP.
   b. The minimum training course for workers conducting other lead related construction work shall meet all requirements of 8 CCR1532.1, Lead. Documentation shall consist of training institution certificates or certification by trainer for each employee with dates trained and a copy of the training syllabus.
   c. Updated information shall be provided in advance of on-site lead worker personnel changes.
2. Documentation that all employees engaged in lead-related construction activities or the "Trigger Tasks" have had the appropriate medical examinations specified in Title 8 CCR1532.1 within the prescribed time periods immediately preceding project start up. It shall be the Design Builder's responsibility to secure any and all medical and exposure information releases required for employee records in accordance with regulation. Evidence of medical requirement compliance shall include, but are not necessarily limited to:
   a. Documentation of medical surveillance examination by a licensed medical physician prior to commencement of onsite LCP related work including baseline blood lead levels performed within the last six (6) months.

b. Statement by the examining physician that employee is fit to wear a respirator in accordance with 8 CCR 1532.1 within the last twelve (12) months.

3. Documentation that all employees required to wear respirators has passed respirator fit tests within the past twelve (12) and has been assigned individual respirators which fit them.
4. Methods, procedures and plan for monitoring employee airborne lead exposure during lead abatement activities. Methods and procedures, at a minimum, shall comply with requirements outlined in Title 8 CCR 1532.1 Lead.

G. Lead Related Construction and Equipment Submittal. Submit the following;

1. Calibration data showing where secondary standards (rotameter) for personal air monitoring equipment have been calibrated from a primary standard within the last 30 days from the date of submittal.
2. Product data sheets and safety data sheets (SDSs) for each product proposed for use on this project such as wetting agents, chemical paint removers, detergents, adhesives, and abrasives.
3. Manufacturers certification that HEPA vacuums, HEPA ventilation equipment, and other equipment required to contain airborne dust and fume conform to ANSI Z 9.2
4. Certification that HEPA filter exhaust systems have been DOP tested in place after installation and been found to provide 99.97% efficient air cleaning for particulates greater or equal to 0.3 microns in diameter. All DOP filter certification testing shall be conducted on site by an independent testing firm.

H. Lead Related Construction/Paint Removal Daily Submittal. Submit the following documentation daily to the District's Observation Service within 24 hours of initiation:

1. An accurate daily entry log or roster of all authorized personnel entering and exiting the Work Area.
2. Copies of initial and periodic personnel air monitoring laboratory results and calculated eight-hour time weighted average results for each employee monitored shall be provided within 48 hours of sample collection.
3. Provide District's Observation Service at least 24 hours' notice prior to scheduling startup of each different by type of lead related construction operation including chemical paint removal, manual demolition of paint finishes or equipment, and hot work on lead containing surfaces.
4. Updated training and medical certifications (as required herein) shall be provided prior to assignment of new personnel and for existing personnel prior to the stated allowable time limits or expiration dates. The allowable intervals since the last medical examination (12 months), blood lead test (6 months), or fit test (12 months), shall not be exceeded.

**1.5** DISTICT'S OBSERVATION SERVICE

A. The District's Observation Service is authorized to provide lead removal and lead related construction compliance observation and monitoring, testing, and technical oversight services including, but not limited to:

1. Airborne lead monitoring to evaluate the effectiveness of the Design Builder's lead dust and fume control work practices, procedures, and dust containment methods. The results from this monitoring shall be used to evaluate the Design Builder's personal monitoring data and to evaluate the Design Builder's compliance with occupational and environmental regulations.

2. Visual inspections to verify if the Design Builder has met the requirements for various phases of the lead related construction process including Work Area preparation, removal, and clean up and decontamination.

B. The District's Observation Service will perform the following:
   1. Inspect the preparation of work areas prior to lead-related construction work.
   2. Review the Design Builder's initial and periodic lead exposure air monitoring results.
   3. Inspect paint removal on painted steel prior to hot work.
   4. Periodically, inspect lead-related construction work areas.
   5. Conduct a post work visual inspection of all work areas and post work surface wipe testing if requested by the District.
   6. Review and verify results of waste stream testing produced by lead-related construction work according to existing California and federal hazardous waste criteria.

**1.6** DESIGN BUILDER'S COMPLIANCE AND QUALITY ASSURANCE

A. The Design Builder shall have a Competent Person onsite at all times while lead-related construction work is in progress. The Design Builder's Competent Person shall communicate and coordinate with the District's Observation Service with regard to work schedule, inspections, daily submittals, and compliance issues.

B. The Design Builder's Competent Person shall:
   1. Ensure the Design Builder's compliance with the plans, specifications, and work plans.
   2. Conduct worker exposure monitoring using a Qualified Person and provide results to the District's Observation Service.
   3. Pre-inspect Work Areas for compliance and completion prior to notifying the District's Observation Service of the Work Area's readiness for inspection.
   4. Accompany the District's Observation Service during Work Area pre-start and clearance inspections upon request.
   5. Ensure all of the Design Builder's lead related construction workers have current valid medical, blood lead test, training, and respirator fit testing records where required and provide copies of all new or updated records to the District's Observation Service for approval before assigning the workers to any work within Work Areas.
   6. Take timely and appropriate corrective actions to ensure compliance with the lead-related construction specifications and to eliminate unsafe, unhealthy, and environmentally unsound work practices regardless of whether they are brought to the Design Builder's attention by the District's Observation Service.
   7. Perform initial waste characterization of any lead containing paint or painted building/mechanical equipment that is intended for landfill disposal. Appropriate waste characterization shall determine required packaging, labeling, storage, transportation, and disposal of waste. Ensure proper temporary storage, shipping and timely disposal of all waste.

**2.1** PROTECTIVE COVERING

A. Polyethylene sheets, fire resistant, of 6 mil thickness in size (dimensions) to minimize the frequency of joints.

**2.2** CLEANERS

A. For cleanup and decontamination, a tri-sodium phosphate (TSP) wash solution containing at least five percent (5%) TSP shall be used. Alternative cleaning and decontamination agents shall be subject to approval by the District's Observation Service and District's Representative.

**2.3** TAPE

A. Duct tape (or approved equivalent) two (2) inches or wider, capable of sealing joints of adjacent sheets of polyethylene sheeting and for attachment of polyethylene sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions.

**2.4** CHEMICAL PAINT REMOVAL SYSTEMS

A. Chemical paint removal systems shall be selected on the basis of the type of paint/coating to be removed, the substrate type, and chemical compatibility with new coating systems to be applied. Chemical removal systems shall effectively remove paint without adversely affecting the treated surface's suitability for repainting or adversely affecting the bonding, appearance or durability of the coatings to be applied.

B. Chemical paint removal systems containing methylene chloride are prohibited.

C. Submit manufacturer's product data sheets for each chemical remover for review and evaluation by the District's Observation Service and District's Representative. All chemical paint remover products are subject to approval by the District's Observation Service and District's Representative.

**2.5** SPRAY ADHESIVE

A. Provide spray adhesive in aerosol cans which is specifically formulated to stick to sheet polyethylene.

**2.6** DISPOSAL CONTAINERS

A. Provide six (6) mil thick polyethylene sheeting, six (6) mil leak tight polyethylene bags and other impervious containers as required by applicable regulations. All waste shall be labeled as hazardous or potentially hazardous waste unless proven otherwise by appropriate sampling and laboratory analysis.

B. All hazardous waste shipping containers shall meet applicable DOT requirements.

**2.7** WARNING SIGNS AND LABELS

A. Caution Signs: To be minimum of 20 x 14 inches and includes phrase "Caution Lead Hazard, Keep Out Unless Authorized" in minimum two-inch-high letters. These shall be posted at each approach to each lead or removal Work Area or area where lead related construction hot work is conducted.

B. CAL/OSHA Lead Warning Posters: "Warning Lead Work Area, Poison, No Smoking or Eating" shall be posted at the entrance to each Work Area.

C. Labels: Hazardous waste shall be labeled according to Federal, State and Local regulations including, but not limited to, the California Code of Regulations, Title 22, Chapter 30 and the U.S. Department of Transportation 49 CFR Parts 172, 173, 178 and 179.

**2.8** PERSONAL PROTECTIVE EQUIPMENT

A. Personal protective equipment shall comply with the requirements of Title 8 CCR 1532.1 Lead.

B. Minimum protective clothing and equipment for lead-related construction work shall consist of fire retardant, disposable, full body coveralls, disposable boots, gloves, or equivalent in accordance with ANSI Z41. Sleeves at wrists and cuffs at ankles shall be secure.

C. Eye protection and hard hats shall always be available and worn and shall conform to ANSI 87.1 and ANSI 89.1

D. The Design Builder shall provide Authorized Visitors with suitable disposable protective clothing, headgear, respirators, and footwear whenever authorized visitors are required to enter the Work Area. Up to an average of ten sets per day of suitable personal protective equipment shall be made available for authorized visitors.

E. All disposable clothing worn during each work shift shall be removed prior to exiting the Work Area and shall be properly segregated and placed in container for proper waste characterization. The Design Builder shall bear full responsibility for additional costs associated with waste profiling and disposal if wastes are not properly segregated.

**2.9** RESPIRATORS

A. Provide workers with personally issued respiratory equipment approved by NIOSH and suitable for the lead exposure level in the Work Area. Where respirators with disposable filters are employed, provide sufficient filter for replacement as required by the worker or applicable regulation. Each respirator shall be washed at least daily prior to storage. The following general conditions shall apply to respirator use:
   1. All respirators used must be certified by NIOSH and a respirator program shall be established and implemented.
   2. Respirators shall be used whenever airborne lead concentrations will exceed, or are likely to exceed, 50 µg/m3, and for any of the Trigger Tasks which have not been demonstrated to be below the PEL by initial monitoring, and for all operations involving the removal of LCP or welding on surfaces with paint or lead contamination regardless of airborne lead concentrations.
   3. Prior to initial monitoring, the level of protection shall follow CAL/OSHA requirements for the specific Trigger Task. Otherwise, the respirators worn shall be selected based on measured or reasonably expected airborne concentrations of lead as follow:
      a. Half face negative pressure air purifying respirator: up to 500 µg/m3
      b. Powered air purifying respirators: up to 50,000 µg/m3
      c. Type C supplied air respirator full face piece pressure demand mode: up to 100,000 µg/m3
   4. Disposable respirators are not acceptable at any time. It is always permissible to upgrade to a more protective type of respirator.
   5. During all segments of LCP removal and cleanup activities and hot work on LCP coated surfaces, respirator usage shall always be required of all persons within the designated Work Areas regardless of airborne lead concentrations.

B. The Design Builder is responsible for determination of airborne lead concentration levels for the Design Builder's personnel and for providing and enforcing use of appropriate personnel respirator protection based upon airborne lead concentrations and this specification.

C. Respirators shall not be removed inside the Work Area. Workers shall proceed to the designated washing area and clean the external surface of the respirator body before removing the respirator.

**2.10** TOOLS AND EQUIPMENT

A. Provide suitable tools for the removal of LCP and LCCM contamination including required HEPA exhaust systems, HEPA exhausted portable welding fume control systems, HEPA vacuums, ground fault circuit interrupters (GFCIs), ladders, scaffold, garden sprayers and portable eyewash systems. All tools and equipment brought onsite shall be clean and free of lead and other hazardous material contaminants. HEPA vacuums shall be labeled with a lead warning label and dedicated to LCP work to prevent commingling of lead wastes with asbestos or other wastes. HEPA filtered exhaust systems shall be DOP tested on site to verify 99.97% effectiveness as an installed system and shall have accurate magnahelic gages to indicate filter performance while in use. Provide sufficient back up equipment for use in the event of equipment failure. Ensure all equipment has been fitted with any necessary feasible noise attenuators to meet occupational and environmental noise standards for building occupants.

B. Provide enough support equipment, including but not limited to, lumber, nails, hardware, and waste water storage to construct and operate the required hand washing / decontamination system.

**3.1** GENERAL

A. Public Warning and Safety Information to be Posted

1. Post signs at all approaches to the lead Work Area entrance to read "Caution Lead Hazard - Keep Out Unless Authorized." In addition, post the CAL/OSHA Lead Hazard Warning Poster at the immediate Work Area entrance.
2. A list of phone numbers for the local hospital and for emergency squad, the local fire department, a representative of the Design Builder who may be reached 24 hours a day, the District's Observation Service, and District Representative and any other professional Consultants directly involved in the project.

**3.2** GENERAL PREPARATION FOR INTERIOR LEAD REMOVAL AND LEAD-RELATED CONSTRUCTION

A. Move all non-fixed objects out of the Work Areas. Such items shall be moved at least five (5) feet from Work Areas.

B. Pre-clean entire floor area and all horizontal surfaces inside and within five (5) feet of the Work Area using HEPA vacuums and wet methods.

C. Cover all non-moveable objects within five (5) feet of the Work Area with six (6) mil polyethylene sheeting and seal with duct tape.

D. Cover all floors within the Work Area with two layers of six (6) mil polyethylene sheeting and seal with duct tape. Shut down, lock out, isolate the HVAC systems that supply, exhaust or pass through the lead control area. All heater vents and registers shall be sealed with two (2) layers of six (6) mil plastic sheeting and duct tape or equivalent.

E. Provide, at minimum, 10-foot candle illumination lighting to the Work Area.

F. Install lead caution signage at each approach to the lead related construction Work Area and lead warning signage just outside each Work Area entry/exit point.

G. When Work Area preparation is complete, notify the District's Observation Service and request an inspection. No work is to proceed in any Work Area until the general Work Area preparation materials, methods, and procedures have been inspected and approved by the District's Observation Service.

**3.3** GENERAL PREPARATION OF EXTERIOR LEAD REMOVAL OR LEAD-RELATED CONSTRUCTION

A. Cordon off the Work Area extending at a minimum of 10 feet horizontally beyond the area of lead related construction with barrier tape and warning signs as specified herein.

B. Protect windows, doors, and openings within the regulated area adjacent interior areas of the building with a minimum of one layer of 6-mil poly.

C. Where LCP or LCCM components are likely to generate airborne dust or paint chips, devise a suitable containment to contain such dust and prevent dispersal.

D. Provide a designated entry/exit point to exterior Work Areas suitable for workers to properly decontaminate and exit from the Work Area as specified herein. Install lead caution and warning signage as specified above.

E. Notify the District's Observation Service when the Work Area is ready for inspection at the startup of each lead related construction process not previously evaluated and approved by the District's Observation Service. Lead related construction work shall not initially proceed until the Observation Service has checked and approved Work Area preparations.

**3.4** WORKER PROTECTION AND DECONTAMINATION PROCEDURES

A. The Design Builder shall use only workers medically qualified and trained for lead-related construction, LCP removal, hot work on LCCM surfaces, and respirator usage.

1. Medically qualified shall mean that the worker has had an occupational medical exam for lead exposure and respirator usage within 12 months of abatement start up.
2. The contents of the exam must be in conformance with Title 8 CCR 1532.1.
3. Each abatement worker shall have successfully completed formal documented training in lead hazards and lead abatement methods meeting Title 17 California Department of Public Health (CDPH) requirements. Non-abatement workers performing lead-related construction work shall have documented lead training in accordance with Title 8 CCR 1532.1.
4. The Design Builder's Competent Person for lead-related construction involving paint removal shall have received at least 40 hours of formal training by a Recognized Training Education Institution in lead hazards and lead abatement.
5. The Design Builder shall ensure that no worker is allowed onsite to perform lead removal or lead-related construction work until the District's Observation Service has received and approved all of the worker's medical, training and fit testing certifications.
6. Each worker and Authorized Visitor shall, upon entering the job site, enter the designated clean change room area and put on full body reusable or disposable coveralls, booties or shoe covers, respirator with HEPA filters, and gloves before entering the Work Area.

7. Each worker and Authorized Visitor shall HEPA vacuum contamination from protective clothing and then remove shoe covers before leaving one Work Area for another Work Area inside the same building unless the Work Areas have been interconnected with a secured plastic sheet runway at least three feet wide.
8. When exiting a Work Area, proceed to vacuum off all reusable work clothing and dispose of outer disposable protective clothing as suspect lead waste. Proceed to a designated wash area, remove and clean the respirator and store in a clean container.
9. At the end of the work day, all workers are to do the following in addition to those procedures described above: Place disposable outer garments and shoe covers in separate labeled waste containers dedicated to PPE for proper waste characterization; remove inner disposable clothing and place in waste containers; clean protective gear including respirator, shower or wash hands and face at minimum, and put on clean street clothes in the clean room area.
10. All tools and equipment shall be decontaminated by HEPA vacuuming and wet wiping prior to being taken out of the Work Area. Tools and equipment with inaccessible internals shall be externally wet wiped, bagged and sealed prior to being removed from the Work Area.
11. Workers shall not eat, drink, smoke, or chew gum or tobacco at the work site within 20 feet of any Work Area as specified by the District or the District's Observation Service.

**3.5** REMOVAL OF LEAD CONTAINING PAINT BY CHEMICAL REMOVAL

A. Removal of LCP using Chemical Removal system shall be approved for use by the District's Representative and District's Observation Service.

B. The Design Builder shall provide additional security measures as necessary to ensure occupants cannot gain access to chemicals and chemically treated surfaces.

C. Safety data sheets for each chemical substance and product used shall be onsite at all times and available for review by the workers, the District's Representative, and District's Observation Service.

D. The Competent Person shall review the contents of the safety data sheets and the safe removal procedures with the workers prior to chemical removal.

E. Workers shall wear chemical goggles, face shields, impervious gloves, aprons, and booties over the standard protective clothing prior to starting chemical removal.

F. Stage or install a temporary emergency eyewash capable of providing a 15-minute flush within the immediate Work Area if corrosive organic or corrosive inorganic paint removal (stripping) products are used.

G. Chemical stripping agents (and neutralizers) shall be applied in accordance with the recommendations of the manufacturer. Remove all paint down to the bare substrate. Ensure that the chemicals used, and the associated removal methods leave a clean and smooth surface capable of accepting a suitable primer/sealer coating after final cleaning. No paint or chemical residue shall be visible on the bare metal surfaces to be welded. All chemical residues shall be removed from surface applied.

H. Containerize all paint and chemical waste in impervious containers labeled as hazardous waste.

I. Package all contaminated rags and protective equipment, and disposable cleaning items and plastic sheets in labeled impervious containers and transfer waste containers to secure waste storage units. The Design Builder shall assume all such waste to be hazardous unless proven otherwise by objective waste characterization data.

J. Clean and decontaminate the Work Area in accordance with the procedures outlined herein.

K. Decontaminate all tools and equipment before removing them from the Work Area. Seal or bag-up such equipment for transfer to the next Work Area or operation.

**3.6** REMOVAL OF LCP BY MECHANICAL REMOVAL

A. Paint removal by mechanical means is not expected for this project.

B. All mechanical removal equipment and systems shall be approved by the District's Representative and District's Observation Service. Such equipment includes but is not limited to abrasive blast (all methods), needle guns, abrasive wheels, and rotopeen equipment.

C. All power tools shall be designed and equipped with effective HEPA filter exhaust systems.

D. The Design Builder shall submit a separate work plan for containment of lead dust and debris emissions released by vacuum assisted power tools.

E. Work Area preparation and LCP removal shall be in accordance with the approved work plan.

**3.7** CLEANING AND DECONTAMANATION OF REMOVAL WORK AREAS

A. Daily Clean up: Perform the following clean up procedures daily.
   1. Clean Work Areas until they are free of loose dust and debris to the satisfaction of the District's Observation Service and/or District Representative using HEPA and/or wet wiping after pick up of large debris.
   2. Wet debris with a fine mist of water and collect material. All material to be properly segregated, bagged in 6-mil plastic bags, sealed, and moved to a designated, secure, waste storage area for waste characterization.
   3. At the end of each work day the Design Builder's Competent Person shall inspect work performed that day to ensure the work has been completed and no dust or residue remains on the areas removed and/or in the Work Area. The District's Representative shall be included in that inspection process when and if they request inclusion.

B. Final Clean up and Decontamination of Abatement Work Areas: At completion of abatement perform cleaning as follows:
   1. Remove all visible dust and debris as specified above.
   2. Clean all Work Areas where abatement was performed by vacuuming all surfaces with a HEPA vacuum followed by wet wiping with a high phosphate (trisodium phosphate) wash or equivalent. The Design Builder shall spray surfaces with a 5-10 percent trisodium phosphate (or approved equivalent) cleaning solution applied with a garden sprayer and wipe or mop surfaces with frequently changed clean towels, rags or mops.
   3. Disassemble and remove containment barriers at each Work Area location after cleaning as specified above. Place polyethylene sheeting and tape into waste bags and remove to the temporary waste storage area.

4. Remove six (6) mil polyethylene sheeting on immovable objects and floors (where present) after misting with a high phosphate wash and wet wiping. Place polyethylene sheeting and waste rags in segregated six (6) mil plastic bags, seal and store in a designated, secure, waste storage area for waste characterization.
5. The cleaning procedure used shall prevent spread of contamination and effectively clean surfaces while producing minimal waste.
6. All tools and equipment shall be sealed in six (6) mil plastic bags after being decontaminated using a high phosphate wash and wet wiping prior exiting the Work Area.
7. Liquid cleaning wastes shall be filtered prior to containerizing for temporary storage pending hazardous waste characterization. Filter systems shall be able to remove particulate two microns and larger in diameter. Permits, if required, are the responsibility of the Design Builder.
8. At least eight hours prior to completion of the first Work Area and again upon completion of final clean up and decontamination, notify the District's Observation Service to obtain a final clearance inspection and testing.

**3.8** FINAL CLEARANCE INSPECTION AND TESTING OF REMOVAL WORK AREAS

A. Interior Clearance Inspection and Testing.
   1. After the final cleanup of each Work Area by the Design Builder, the District's Observation Service will conduct a visual inspection to ensure that all visible dust and debris has been removed.
   2. If the results of the final visual inspection are satisfactory, the District's Observation Service may proceed to collect clearance dust wipe samples in building areas that were impacted by lead-related construction that will be reoccupied. The District may opt to clear lead-related construction work areas by visual means.
   3. If the Work Area is not visibly clean, as determined by the District's Observation Service, the Design Builder shall re clean and decontaminate the Work Area.
   4. The visibly clean Work Area shall not contain surface lead contamination at or in excess of 800 micrograms of lead per square foot of surface sampled ($\mu g/ft^2$) for rough exterior surfaces or 10 $\mu g/ft^2$ for interior floors. Dust wipe samples will be taken using the HUD sampling protocol by the District's Observation Service subsequent to the lead paint removal or lead related construction activities to assess adequacy of the Design Builder's cleaning and decontamination procedures.
   5. Dust wipe samples will be collected using commercial wipes moistened with a non-alcohol wetting agent. Areas of approximately one square foot will be selected from horizontal surfaces below or adjacent to where LCCM's components or paint has been removed.
   6. At a minimum, one dust wipe sample will be collected per representative work area and sent under proper chain of custody protocol to an AIHA or ELLAP accredited laboratory or equivalent.
   7. All dust wipe samples will be analyzed for lead using either AAS or ICP AES for lead and results will be provided to the Design Builder within two days of receipt of sample results.
   8. The Design Builder's cleaning and decontamination shall be deemed adequate when all collected and analyzed dust wipe sample results from the Work Area are below the following levels of lead:
      a. Smooth interior floors: 10 micrograms per square foot ($\mu g/ft^2$)
      b. Exterior surfaces 800 $\mu g/ft^2$.

9. If any of the dust wipe samples exceed the clearance criteria, the entire Work Area must be cleaned and re-tested until the clearance criteria are met.
10. If a Work Area fails the clearance criteria specified above, the Design Builder shall re clean the entire Work Area.
11. Building areas scheduled for demolition do not require final dust wipe testing.

**3.9** LEAD-RELATED CONSTRUCTION WORK

A. Where the Design Builder's work requires demolition of lead containing materials, disturbance of materials coated with LCP, or removal/installation of architectural, electrical, plumbing, or mechanical components from/to existing LCP coated systems, the Design Builder shall take the following precautions:
   1. Cordon off the work area with caution tape and lead warning signs.
   2. Protect workers in conformance with Title 8 CCR1532.1.
   3. Place a plastic drop cloth below the area where LCP paint chips or dust is likely to be released.
   4. Clean up all resulting LCP chip dust and debris by wet wiping or HEPA vacuuming before moving the drop cloth to the next area. Dispose of paint chip and contaminated cleaning materials as specified herein.

B. Where the Design Builder's work involves the removal of LCP components such as removal of painted building components or onsite dismantlement of mechanical equipment, the Design Builder shall take the following precautions:
   1. Prepare Interior Work Areas as specified for removal.
   2. Remove components using wet methods and/or HEPA vacuuming to control dust generated by mechanical cutting and/or disassembly. If torch cutting is required, remove the existing paint on all surfaces back at least 12 inches or more in each direction from the hot work as specified herein.
   3. Clean up lead containing paint chips, dust, and debris as the removal proceeds and at the completion of work using HEPA vacuums and/or wet wiping. Clean all tools and equipment prior to removing them from the Work Area. Clean all polyethylene sheeting and horizontal surfaces prior to removing the sheeting.
   4. Special precautionary controls shall be used as necessary to prevent lead dust, debris or fume from being carried or blown out of the controlled area by wind or air currents. Torch cutting of components with inaccessible paint shall be done with HEPA filtered local exhaust ventilation to capture fumes unless monitoring data reviewed and accepted by the Design Builder's Observation Service and District's Representative indicates local exhaust is not necessary.
   5. Each removed LCCM component shall be carefully removed from the work areas. Clean up dust and debris as removal proceeds.

**3.10** LEAD CONTAMINATION OF BUILDING INTERIOR OR ENVIRONMENT

A. In the event that removed LCCM paint, dust, or debris is not properly contained within the Work Area and thereby escapes, bypasses or penetrates established barriers, the Design Builder shall stop work immediately, notify the District's Observation Service and District's Representative immediately, and commence clean up and decontamination procedures as described herein or directed by the District's Representative.

**3.11** WASTE STORAGE, SEGREGATION, AND CHARACTERIZATION

A. The Design Builder shall provide for secure onsite temporary storage of LCP or LCCM related waste. Waste storage location, equipment, containers and methods are subject to prior approval by the District's Representative.

B. All lead related waste streams and waste categories shall be considered hazardous until proven otherwise through testing by the Design Builder. The Design Builder shall be responsible for segregating waste into the below listed categories at minimum. If the Design Builder allows different waste stream to become co-mingled, the waste will be classified as hazardous if any single component waste stream is hazardous.

1. LCP removed by chemical stripping.
2. Painted demolition debris to be landfilled.
3. Paint (LCP) chips, dust and debris, HEPA vacuum waste.
4. Uncleaned plastic sheeting and tape.
5. Disposable Protective Clothing and Equipment (PPE).
6. Cleaning Rags.

C. Intact LCP components: Architectural and mechanical equipment debris with intact LBP shall be considered hazardous until proven otherwise through testing.

D. All lead containing waste streams must be verified for federal hazardous waste characteristics for lead prior to landfill disposal. Painted metal and mechanical equipment that is diverted for recycling is exempt from waste characterization testing.

E. Each lead related waste produced shall be placed in properly segregated, labeled and sealed, impervious containers.

F. Removed intact LCP components shall be properly segregated, wrapped in six mil polyethylene sheeting, labeled and securely sealed with duct tape or placed in a lined bin.

G. All waste containers, bags, and packaged waste shall be stored in a designated, secure, locked waste storage area and be labeled with the following information:

1. Waste Category: Lead
2. Date Accumulated: (Insert Date)
3. Name, address: (Insert Facility Name and Address)
4. Origin of waste: (Insert Waste Stream Name, i.e. Paint Chips, Vacuum Bags)

H. HEPA vacuum and wet wipe the exterior of all waste containers prior to removing them from the Work Area to the designated storage area.

I. Each category of waste, except components with intact paint, will be tested and characterized by the Design Builder using one or more of the following testing protocols:

1. CAL/EPA testing protocol: Criteria
   a. Total Threshold Limit Concentration (TTLC): 1,000 ppm lead
   b. Soluble Threshold Limit Concentration (STLC): 5 ppm lead
2. Federal EPA testing protocol:
   a. Toxicity Characteristic Leaching Procedure (TCLP): 5 ppm lead

J. Based on the testing protocols, any waste greater than or equal to five (5) ppm lead using STLC or TCLP tests or any waste greater than or equal to 1,000 ppm lead using the TTLC test shall be considered a hazardous waste.

K. When the TTLC test result is less than 50 ppm lead, no further testing is required for that waste category sampled unless the waste stream or waste generating process changes. A minimum of two samples must be collected to represent each category of waste generated. It will be the responsibility of the District's Observation Service to ensure representative samples are taken by the Design Builder from each category of segregated waste.

L. The Design Builder shall package, store, handle, transport and dispose of each category of waste generated based on the testing results unless specific written direction is provided by the appropriate regulatory agency and reviewed and approved by the District's Observation Service. In all cases, the landfill shall be subject to approval by the District's Representative.

M. Upon verbal request of the District's Observation Service, the Design Builder shall provide samples of lead-related waste to the District's Observation Service. The Design Builder shall provide samples within full view and presence of the District's Observation Service and District's Representative upon request.

N. The cost of waste characterization or waste profiling required by the approved landfill will be the responsibility of the Design Builder.

O. In the event that District's Observation Service has determined that waste is not properly segregated, additional waste testing may be conducted of the mixed waste stream. The Design Builder shall be responsible for the costs associated with this additional testing.

P. The Design Builder shall bear full responsibility for additional costs associated with waste disposal and characterization if waste is not properly segregated as required herein.

**3.12** HAZARDOUS WASTE DISPOSAL

A. Site Storage and Handling:

1. The Design Builder shall pay strict attention to the requirements of 40 CFR 262 and 265 and Title 22, Chapter 30 for the onsite handling of lead waste/debris, with special attention given to the time of storage, amount of material stored at any one time, use of proper containers, and personnel training. All waste shall be stored in secure, locked, labeled, sealed impervious containers and not placed on the unprotected ground. All containers shall be shielded adequately to prevent dispersion of the debris by wind or rain and shall be labeled as hazardous waste. Any evidence of improper storage shall be cause for immediate shutdown of the project until a corrective action is taken.

B. Transportation and Disposal of Waste:

1. The Design Builder shall arrange to have the LCP waste and debris transported from the site in accordance with the requirements of 40 CFR 263 and 264 and disposed of properly in accordance with 40 CFR 268, GISO 8 CCR Articles 40 and 41, 49 CFR Parts 172, 173, 178, and 179 and Title 22, Chapter 30, Articles 5, 6, 6.5 and 8.
2. The Design Builder shall submit to the District and the District's Observation Service the Name, Class, and EPA I.D. Number of the waste disposal site(s) to be used for each waste category which has been determined by testing to exceed the hazardous waste thresholds provided herein.
3. The Design Builder shall prepare waste shipping manifests for review by the District's Representative. Upon waste or material pickup by the selected waste transporter, manifests shall be signed by the District's Representative and copies retained to verify that all steps of the handling and disposal process have been completed properly.

4. Copies of the landfill weight tickets shall be provided to the District's Representative to verify the amount of waste disposed of at that site. The Design Builder shall be responsible for all costs associated with transportation and disposal of all wastes generated at the result of this work.

C. No waste characterized as hazardous waste shall be stored onsite for more than 90 days prior to being properly transported for disposal.

D. All equipment, materials, and waste generated on this project must be removed offsite to their proper locations by the Design Builder within 14 calendar days from removal and lead related construction work completion.

E. Containers to be loaded for transportation from the storage area must be removed by workers who have entered from uncontaminated areas, dressed in clean coveralls.

**3.13** STOP WORK ORDERS

A. The District and/or the District's Observation Service has the authority to stop work if it is determined that conditions or procedures are not in compliance with the specifications and/or applicable regulations; to the extent of potential endangerment of building users, workers, building occupants, District employees, the public or environment. The work stoppage shall remain in effect until conditions have been corrected and corrective measures have been taken to the satisfaction of the District's Representative and the District's Observation Service. All standby time and testing costs required to correct the above-mentioned problems shall be borne solely at the Design Builder's expense. Examples of such conditions that might result in a work stoppage include but are not limited to:

1. Uncontrolled visible emissions which escape the established Work Area or breach physical protective barriers within the Work Area; and/or,
2. Ambient airborne levels of lead outside the construction area at more than 15 micrograms per cubic meters of air (µg/m3) of lead averaged over an eight-hour work period or 5.0 µg/m3 for any 24-hour period. Measurements of the ambient airborne lead levels shall be made outside the immediate Work Area and at the nearest occupied areas.
3. Unsecured Waste Storage Area and/or improper containment of lead abatement waste or LCP contamination.

**3.14** CLOSEOUT

A. Prior to approval of payment request, the Design Builder must provide the following information:

B. Copies of hazardous waste manifest, profile sheets and weight tickets for all hazardous waste and for all nonhazardous waste or waste recycle receipts.

C. All surface damages during the work must be restored to their original condition except those surfaces scheduled for demolition as part of the renovation project.

END OF SECTION

# ATTACHMENT A
# LEAD-RELATED WORK PLAN OUTLINE

In accordance with the contract documents, Cal-OSHA Lead in Construction Standard (Title 8 CCR 1532.1) and DPH (17 CCR Division 1, Chapter 8), the Design Builder is required to prepare a written, site-specific Lead Compliance Plan, and submit to the District for approval prior to start of work. This plan is required for the Design Builder to meet Cal-OSHA and CDPH 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. All contractors performing lead-related construction work shall prepare plans.

I. Location of Work:
The work to be completed under this work plan will be completed at:
(Building name)
(Location within building)

II. Description of Work:
Describe the anticipated work scope, including:
A. Paint removal (list paints or coatings, and locations)
B. Paint stabilization or encapsulation (list paints or coatings, and locations)
C. Removal and/or replacement of lead-coated components (list components and locations)
E. Dust/residue removal or decontamination (list materials and locations)
F. Demolition/dismantlement of lead-coated components
G. Any other activities that will or may result in worker exposures to lead

III. Schedule:

| Phase/Task | Anticipated Date(s) |
|---|---|
| Mobilization | _____ |
| Set-up of work area(s), containments | _____ |
| Lead-related construction | _____ |
| Final Cleaning | _____ |
| Visual Inspection | _____ |
| Final Clearance (visual and sampling) | _____ |
| Teardown | _____ |
| Demobilization | _____ |

The competent person, _____, will conduct worksite visual inspections on a daily basis, or more often as necessary.

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 | Decontamination 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 |

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

| | |
|---|---|
| Location, size, layout & detail of work | Wet methods |
| Negative pressure enclosure | Local exhaust ventilation for tools |
| Respiratory protection | HEPA vacuums |
| Vacuum assisted blasting | General room ventilation |
| Containment (i.e., poly barriers) | Interface of trades involved |
| Methods to assure safety of bldg. occupants | Pollution control |
| Removal method to reduce lead dust generation | |

VII. Technology to Be Used in Meeting the OSHA PEL

List all or any specialized equipment to be used to meet the PEL.

VIII. 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.

IX. 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 lead-contaminated solid waste and wastewater.

X. 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.

XI. Medical Surveillance Program

**Appendix "C"**

**Registered Subcontractors List**
**(Labor Code Section 1771.1)**

PROJECT: _____

Date Submitted (for Updates): _____

Design-Builder acknowledges and agrees that it must clearly set forth below the name and Department of Industrial Relations (DIR) registration number of each subcontractor **for all tiers** who will perform work or labor or render service to Design-Builder or its subcontractors in or about the construction of the Work **at least two (2) weeks before the subcontractor is scheduled to perform work**. This document is to be updated as all tiers of subcontractors are identified.

Design-Builder acknowledges and agrees that, if Design-Builder fails to list as to any subcontractor of any tier who performs any portion of Work, the Agreement is subject to cancellation and the Design-Builder will be subjected to penalty under applicable law.

If further space is required for the list of proposed subcontractors, attach additional copies of page 2 showing the required information, as indicated below.

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

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**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

**Subcontractor Name:** _____

DIR Registration #: _____

Portion of Work: _____

Date: _____

Name of Design-Builder: _____

Signature: _____

Print Name: _____

Title: _____

[END OF DOCUMENT]