MASEK CONSULTING SERVICES, INC.
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Jenkins Hall at Humboldt State University Abatement Specification(preliminary, no seismic retrofit or detailed renovation plans provided)

1.0 General Provisions

1.1 It is not the intent of these specifications to add burdensome requirements, *but the requirements of these specifications, not any lesser requirements of any particular regulation(s)*, shall apply to the work.

1.2 Contractor shall be responsible for compliance with **ALL** applicable laws and regulations, including, but not limited to:

A) The US EPA Asbestos NESHAP (40 CFR Part 61 Subpart M);

B) Federal Occupational Health and Safety Administration laws and regulations, such as those in 29CFR1926.1101 and 29CFR1926.62;

C) Titles 8 and 17 of the California Code of Regulations; and,

1.3 Contractor workers shall perform their work wearing proper personnel protective equipment, and Contractor shall have at the job site their exposure assessment data showing that the respiratory protection they are using is adequate for each of the tasks being performed. If they do not have proper exposure assessment data, they must follow the procedures in the applicable federal OSHA and California regulations to develop that data, and must start the work with their employees wearing full-face PAPR respirators. If they then provide data showing that half-face negative pressure respirators are sufficient, they may then down-grade to those respirators. Of course, each employee must have proper training and a current fit test for each type and brand of respirator they use, and a current medical examination showing their fitness to work wearing a negative pressure respirator.

1.4 The Asbestos & Lead Survey Report prepared by Masek Consulting Services, Inc. dated April 26, 2016 is included herein by reference.

1.5 Contractor shall carefully inspect the work site and the documents provided and determine to their satisfaction the quantities and locations of materials to be removed and the conditions which will impact the work prior to submitting their bid. The rough estimates of quantities of materials and items within the survey reports and/or these specifications are included for convenience only. Contractor shall remove and dispose, as required by these specifications and by applicable laws and regulations, these specifications governing, all of the various types of materials indicated in these specifications in whatever quantity is actually present.

1.6 For clarity, the phrase “in compliance with all applicable laws and regulations” is not repeated through out these specifications, and Contractor shall not treat the absence of that phrase as an indication that non-compliant removal or disposal are permissible.

1.7 Contractor shall immediately notify Humboldt State University or their consultant of any issues which might delay or slow the work, and shall have procedures and plans in place to keep the work going in the event of events such as, but not limited to, equipment breakdowns or supervisor illness.

1.8 Contractor shall provide asbestos abatement supervisors who have at least five years prior abatement experience, and shall provide copies or originals of their latest refresher training certificate, as well as an outline / summary of their experience listing specific projects.

1.9 Contractor shall provide lead abatement supervisors who have at least five years prior abatement experience, and shall provide copies or originals of their latest refresher training certificate, as well as an outline / summary of their experience listing specific projects.

1.10 Contractor shall cooperate with Humboldt State University or their consultant in not allowing any Contractor personnel without copies of:

- Training (initial or refresher);
- Medical exam (showing that the requirements of the regulations for a proper and complete examination were met, not just a respiratory function test); and,
- Fit test documents for the type of respirator to be worn less than one year old to perform abatement work.

No excuses will be accepted (e.g. “we will FAX it to your office,” “he has it in his car and will give it to you later,” “someone is bringing it from our office”).

Contractor may only allow personnel without un-expired copies or originals of all such documents at the work site to perform tasks outside of critical barriers which do not require training, such as organizing supplies and picking up and delivering equipment.

1.11 Contractor shall provide all abatement personnel and consultant personnel with good

quality coveralls in a range of sizes to accommodate their workers and Humboldt State University or their consultant personnel , and shall only allow abatement personnel not utilizing double coveralls to wear nylon swim suits under the coveralls. Contractor shall provide all personnel requiring additional protection with additional protective clothing / equipment (e.g. nylon leg covers or boots) to wear over their coveralls

1.12 Contractor shall construct view screens so that their personnel in coveralls and wearing respirators are not visible to people walking past the project site. Construction site fencing may also be used (additionally, not as a replacement for the view screens) to block walking paths which would offer a view of the building. The view screens may be constructed of adequately supported opaque or black polyethylene sheeting.

1.13 Contractor shall not sample or analyze, or cause to be sampled and analyzed, any bulk samples of materials for asbestos, or perform or cause to be performed any testing of paint or ceramic tile for lead. In the unlikely event that a significant quantity of a previously hidden and previously un-tested material is encountered, Humboldt State University's consultant will sample it.

1.14 Contractor shall not haul any wastes before Humboldt State University or their consultant reviews and approves each and every waste transportation manifest, and shall provide copies of every such manifest for the Owner to be placed into their report.

1.15 Contractor shall require that all of their employees who enter the job site sign a form at the end of each work shift indicating that they either had no accidents or injuries, or detailing any accidents or injuries, and that copies of those forms shall be provided to Humboldt State University or their consultant at the end of each work shift (carbon copy or carbonless copy forms are recommended). Employees who fail to complete such a form will not be permitted to reenter the job site prior to completing the form for the prior shift.

1.16 Contractor shall use a three stage decontamination unit with a working ***hot and cold*** water shower, drain pump and filter assembly, adequate soap, and adequate towels, for all asbestos and lead abatement work not performed using glove bags. No removal work shall start until the decontamination unit is complete and fully functional.

1.17 Good communications and the ability to read and comprehend labels, material safety data sheets, and laws/regulations is vital to safe and timely completion of abatement projects. Contractor shall furnish at all times when preparation and abatement work is underway a supervisor on the job site who speaks, reads, and writes the English language fluently, and shall promptly replace any contractor which Humboldt State University or their consultant finds to be insufficiently fluent in written and spoken English.

1.18 In addition to the postings at the job site required by the laws and regulations, Contractor shall also post copies of their contractor's license and insurance certificate.

1.19 Contractor shall utilize GFCI-protected outlets for connection of any and all of their lights and other single phase electrical equipment and to provide adequate provisions for

connection of air monitoring pumps and other consulting equipment.

1.20 Contractor shall perform the personal air monitoring of the contractor's employees. Contractor shall submit all personal air monitoring to the analytical laboratory chosen by Contractor for “same day received” analysis by the PCM method, and shall post at the job site the results of each laboratory analysis, not more than two work days following the day the samples were collected.

1.21 Humboldt State University or their consultant will visually inspect each work area prior to the start of any actual asbestos and/or lead removal and Contractor shall not start work until given clearance to proceed.

1.22 Humboldt State University may retain a consultant to inspect (visually and/or with air / wipe sample clearance testing) each work area after the completion of the asbestos and/or lead removal and Contractor shall not be finished with the work in any area until given clearance by that consultant. Clearance shall be issued verbally by the consultant, followed with a written clearance sent by E-mail or text message.

1.23 Contractor personnel shall promptly obey the project-related directives of Humboldt State University or their consultant. For anything other than gross violations of applicable laws and regulations, written first warnings will be issued (on paper, or transmitted by E-mail or other means). There shall be no second warnings. Contractor shall remove and promptly replace all personnel who do not promptly obey the project-related directives of Humboldt State University or their consultant

1.24 Humboldt State University or their consultant shall have the right to refuse to allow Contractor to use or continue to use any equipment which Humboldt State University or their consultant feels is malfunctioning or in poor and/or unsafe condition. However, Contractor shall not rely upon Humboldt State University or their consultant to identify such equipment, and shall retain all responsibility for any illness or injury to their workers due to equipment and/or tools which is malfunctioning, unsafe, or in poor condition.

1.25 Contractor shall only use amended water, not plain water from garden hoses, to wet materials.

1.26 The Contractor’s on-site supervisor shall spend the majority of each work day at (and preferably inside) of the critical barriers supervising and working with the other members of the abatement crew.

1.27 Abatement workers and supervisors shall *decontaminate and come fully outside of the decontamination unit(s) to drink*. Adequate drinks (water, sports drink, Etc.) shall be provided by Contractor.

1.28 All containments shall have negative air pressure maintained until all removal work is completed and Humboldt State University or their consultant has issued a verbal clearance to turn them off and tear down the containment. When that is not possible, the containment(s) shall be sealed at the end of each shift, using a zipper or tape to seal the decontamination unit entrance and any other containment (e.g. waste removal)

entrance(s) or exit(s).

1.29 A manometer with an audible alarm shall be connected and functioning properly at all containments. If negative air pressure should far below the required level, all removal work shall stop and the full efforts of the crew shall be directed towards correcting the situation and keeping any debris in the containment wet.

1.30 Contractor shall have a sufficient number of workers to complete the work safely and in a timely manner, and shall provide additional workers if instructed to do so by Humboldt State University or their consultant

1.31 Contractor shall not allow abatement workers and supervisors to take cell phones and walkie-talkies into containments.

1.32 Should Humboldt State University or their consultant determine that temperatures inside the containment(s) are too high, contractor shall provide all of the workers and supervisors working inside of the containment(s) with powered air purifying respirators (PAPRs), and frequent breaks to decontaminate in the shower and come out to drink. This does not transfer ANY responsibility or liability to Humboldt State University or their consultant. Contractor shall retain ALL responsibility for their employees.

1.33 Dry sweeping inside of containments shall not be tolerated. Humboldt State University or their consultant may issue a first warning to the employees involved, including the supervisor, and there shall be no second warnings. The second occurrence with the same person(s) will be cause for ejection from the job site.

1.34 If Humboldt State University or their consultant observes a continuing problem with lack of adequate wetting of materials, Humboldt State University or their consultant shall instruct the supervisor to assign one or more workers to doing nothing except keeping materials wet. If that occurs, Contractor shall still be responsible for meeting all deadlines. Humboldt State University or their consultant shall determine the adequacy of wetting. Generally, materials which have been removed and materials which are being removed must be kept damp until they are placed in the disposal container(s). Contractor is reminded that respirators are secondary protection in case engineering controls such as adequate wetting are not sufficient, not primary protection. Contractor's supervisor shall remind their workers on a daily basis of that fact as they sign-in.

2.0 Materials Which Contain Asbestos

2.1 Contractor shall remove and dispose of all of the asbestos containing materials which need to be disturbed to perform the planned renovation work.

2.2 Contractor shall cooperate with Humboldt State University or their consultant in the performance of clearance air monitoring in all full containments in which friable materials were removed, and other air monitoring as Humboldt State University or their consultant deems practical and necessary. This includes providing adequate power for air sampling equipment and adequate light.

2.3 Contractor shall use bags or other disposal containers appropriate for the waste and debris placed into them. If normal asbestos waste bags are used, double bags must be utilized. Double wrapping in poly of long or odd shaped items shall be acceptable. Dumpster liners / bags, double-lined cubic yard boxes, and double-lined drums may be used.

2.4 Unless Contractor is removing non-friable materials intact (e.g. heating and removing vinyl floor tile intact), they shall perform the work in a negative pressure containment(s), using HEPA-filtered negative air machines, shall maintain a negative pressure of -0.020 inches of water column or better, and shall have a manometer with audible alarm connected and functioning properly. This requirement exceeds the requirements for Class II and III work in 29CFR1926.1101, but represents normal good work practices in the abatement industry, as most non-friable materials are not removed intact, so there is a significant potential for asbestos fiber releases.

3.0 Lead (Paint, Ceramic Tile, Phone & Electrical Cables, Pipe Seals, Flashing, Etc.)

3.1 Contractor shall clear the ground of all leaves and other loose materials for a distance eight feet all around the building, then shall lay and adequately secure polyethylene sheeting on the ground prior to beginning the lead work. If conditions are windy, screens or polyethylene enclosures shall be erected. The other perimeters may be established with appropriate warning tape, or better material(s). The polyethylene sheeting shall be cleaned with a HEPA vacuum following the lead work.

3.2 Contractor shall remove all of the areas of lead-based paint or materials coated with lead based paint which need to be disturbed or removed to perform the planned renovation work.

3.3 Contractor shall collect, package, transport, and remove offsite to an approved landfill all loose lead paint chips on the buildings and visible paint chips/flakes from the soil using HEPA vacuums and hand tools.

3.4 Contractor shall remove all lead-covered phone and electrical cables which are to be removed or which are in equipment / areas which will be demolished during the project and dispose of them so that they will be recycled, not disposed in a landfill.

3.5 Contractor shall remove all lead seals on cast iron piping which is to be removed or which are in areas which will be demolished during the project and dispose it by recycling or by disposal in a hazardous waste landfill. The cast iron piping with lead seals may be mixed with the other steel waste which will be recycled.

3.6 Contractor shall remove all lead flashing and roof jacks which are to be removed and recycle them if practical.

3.7 Contractor will be generating lead waste. Contractor shall collect accurate waste characterization samples *while Humboldt State or their consultant watches*, with proportions of the sampled materials roughly the same, by weight, as in the waste (e.g. if the waste, by weight, is 40% lead coated wood window components, 10% glass, 25%

carpet, and 25% roofing, the characterization sample must be, by weight 40% lead coated wood window components, 10% glass, 25% carpet, and 25% roofing). The waste will be disposed as lead waste or construction debris, depending on the outcome of the laboratory analysis of the characterization samples.

4.0 Batteries

4.1 Contractor shall remove and dispose all batteries.

5.0 Fluorescent and HID Lamps/Bulbs and Ballasts

5.1 Contractor shall carefully remove, pack and ship/transport to a recycling company all fluorescent lamp tubes and mercury-vapor lamps.

5.2 Contractor shall assume that all lamp ballasts / HID ballasts contain PCBs, except those found to be marked / date coded as not containing PCBs (after 1979), and that ballasts shall be removed and packed for recycling and disposed by transportation to an approved company (***not land fill disposal***).

6.0 Refrigerants

6.1 Contractor shall remove and dispose all refrigerants from all equipment containing refrigerants, such as chillers, air conditioners, water coolers, and refrigerators/freezers which need to be removed for the planned renovation. All refrigerants which could be recycled shall be recycled. Of course, the technician(s) performing the refrigerant recovery must be trained and certified under Section 608 of the Clean Air Act, 40CFR Part 82, so Contractor shall see that they have copies of their certification documents on site for review and approval by Humboldt State University or their consultant before they perform the work.

7.0 Mercury

7.1 Contractor shall collect, package, and dispose (by recycling) all mercury containing switches and mercury thermometers which need to be removed for the planned renovation.

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