

Analysis of Brownfield Cleanup Alternatives

Condon Grade School
220 S East Street, Condon, Oregon

Final

Prepared for:

Port of Arlington Environmental Sentry Corp.

November 9, 2023

Project No. M2602.01.002

Prepared by:

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Condon Grade School

220 S East Street, Condon, Oregon

*The material and data in this report were prepared
under the supervision and direction of the undersigned.*

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Abbreviations

| | |
|----------|--|
| ABCA | Analysis of Brownfield Cleanup Alternatives |
| ACM | asbestos-containing materials |
| AOC | area of containment |
| ARAR | applicable or relevant and appropriate requirements |
| CFR | Code of Federal Regulations |
| City | City of Condon |
| Client | Port of Arlington Environmental Sentry Corp. |
| CWA | Clean Water Act |
| DEQ | Oregon Department of Environmental Quality |
| EPA | U.S. Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| HBM | hazardous building materials |
| LBP | lead-based paint |
| MFA | Maul Foster & Alongi, Inc. |
| OAR | Oregon Administrative Rules |
| ORS | Oregon Revised Statute |
| OSHA | Occupational Safety and Health Administration |
| PCB | polychlorinated biphenyl |
| Property | former Condon Grade School property located at 220 S East Street in Condon, Oregon |
| RCRA | Resource, Conservation, and Recovery Act |
| TSD | treatment, storage, and disposal |

1 Introduction

On behalf of the Port of Arlington Environmental Sentry Corp. (the Client), Maul Foster & Alongi, Inc. (MFA), has prepared this Analysis of Brownfield Cleanup Alternatives (ABCA) for the former Condon Grade School property located at 220 S East Street in Condon, Oregon (the Property) (see Figure 1-1). The Property is currently owned by the Client. This ABCA identifies and evaluates potential cleanup alternatives based on findings from previous site investigations, technical feasibility and cost, and regulatory requirements. This ABCA complies with the requirements of the U.S. Environmental Protection Agency (EPA) Brownfields Cleanup Grants Program.

1.1 Purpose and Objectives

Future plans for the Property may include renovating the building classrooms into apartment units or demolishing the current buildings and constructing new apartment units. The purpose of this ABCA is to identify and evaluate potential cleanup alternatives to address the known environmental impacts on the Property. Objectives of this ABCA are as follows:

- Summarize information from previous environmental investigations and existing environmental data.
- Identify feasible cleanup technologies to address hazardous building material (HBM).
- Assemble cleanup technologies into a range of potential cleanup alternatives.
- Provide a streamlined evaluation of the cleanup alternatives against regulatory criteria.
- Identify a recommended cleanup alternative based on current understanding of Property conditions and redevelopment goals.

2 Background

The Property background and physical setting information summarized below has been obtained from site visits, an environmental file review, and previous Property investigations.

2.1 Property Location, History, and Description

The Property is comprised of approximately 3.16 acres in Gilliam County on tax lot nos. 04S21E10DB-01400 and 04S21E10DB-01500. The Property is in a neighborhood east of downtown Condon, Oregon, in section 10, township 4 south, range 21 east of the Willamette

Meridian (see Figure 1-1). According to Gilliam County, the Property is currently zoned P (Public Facility).¹

A two-story school building is located on the western portion of the Property, and a fenced-in playground and grassy field are located on the eastern portion. The school building is approximately 45,300 square feet in size, which includes a covered and heated recreation area located on the east side of the building, referred to as the “play shed.” The school building was constructed on the Property in the early 1920s. The play shed addition was constructed in approximately 1955; the two wings of classroom additions (constructed on the north and south ends of the school building) were constructed in 1958; a locker room extension was added to the play shed in 1964; and the library was added in 1966 (see Figure 2-1).

The Property was used as a school for over one hundred years and has been vacant since 2022 when the Condon School District constructed and relocated students to a new elementary school. The Condon School District deeded the Property to the City of Condon (the City) in 2020. In 2023, the Property was deeded from the City to the Client.

The buildings at the Property contain known asbestos-containing materials (ACM) and lead-based paint (LBP).

2.2 Previous Environmental Investigations

MFA completed previous investigations on the Property, including two Phase I environmental site assessments (ESAs) (see Appendix A) and an HBM survey (see Appendix B).

The 2021 Phase I ESA identified the potential presence of ACM and LBP throughout the interiors and exteriors of the former school building as an additional finding and recommended sampling and laboratory testing of suspect materials to verify the presence of ACM and LBP.

The 2022 HBM survey included non-destructive sampling of suspected ACM and screening for the presence and/or absence of LBP using a portable X-ray fluorescence device and confirmation paint chip samples. In addition, a visual inspection of suspected polychlorinated biphenyls (PCBs)-containing fixtures and mercury-containing fixtures was conducted. The HBM survey identified ACM in 130 of the 407 samples collected throughout all wings of the school in flooring materials, including mastic, HVAC units, piping, and exterior stucco texture; LBP coatings throughout doorways in the cafeteria and lead-containing paint throughout the building; light fixtures and thermostats throughout the structure that may contain PCBs or mercury based on visual observations; and a rubberized polyurethane flooring in the play shed that may contain mercury (see Figures 2-2 and 2-3). MFA recommended the HBM report be provided to contractors for future work on the Property and that any identified HBM should be abated by a licensed abatement contractor prior to disturbance activities. In addition, MFA recommended removing light fixtures and thermostats prior to building remodel or demolition, and suggested the rubberized polyurethane flooring in the play shed should be treated as mercury-containing and be removed in a controlled manner during building remodeling or demolition.

¹ Gilliam County. 2023. “Web AppBuilder for ArcGIS.” Accessed February 22, 2023.
<https://harneycounty.maps.arcgis.com/apps/webappviewer/index.html?id=c0fccc37daa4493caa0d30465e8f054d>.

The 2023 Phase I ESA findings were largely consistent with the 2021 Phase I ESA except that, based on the 2022 HBM survey, the 2023 Phase I ESA included the presence of HBM in building materials throughout the interior and exterior as an additional finding.

A data gaps HBM survey completed by MFA in October 2023 confirmed that the polyurethane flooring in the play shed did not contain mercury. The data gaps HBM report is forthcoming.

2.2.1 Contaminants

Potential contaminant sources associated with historical operations were identified during the Phase I ESAs (see Appendix A) and HBM Survey (see Appendix B). HBM (e.g., asbestos, lead, mercury, PCBs) must be addressed to allow for productive reuse of the Property and to prevent future exposure of HBM.

2.3 Geology and Hydrogeology

In general, the Property and surrounding area is level, with a gentle slope to the south-southwest, and is approximately 2,865 feet above mean sea level. The nearest surface water body is an unnamed stream, located approximately 975 feet south-southeast of the Property, that drains south toward Thirtymile Creek (located approximately 4.8 miles south of the Property). Based on topography and surface water features, the groundwater flow direction is estimated to be south-southwest. Records from the Oregon Water Resources Department online well log database were reviewed and did not identify any well listings for the Property. The depth to groundwater in the surrounding area is approximately 33 to 50 feet below ground surface. Shallow subsurface geology consists of gravel to a depth of 7 feet below ground surface underlain by basalt bedrock.

3 Applicable Regulations and Cleanup Standards

The remediation of the Property will be subject to a variety of federal (if applicable), state, and local laws and regulations. Oregon Revised Statute (ORS) 465.315(3) exempts the “on-site” portion of hazardous substance removal or a remedial action from state and local permits, licenses, or other authorization and procedural requirements. “On-site” is defined as the areal extent of contamination and all areas in close proximity to the contamination necessary for implementation of a removal or remedial action. Federal permits must still be obtained.

3.1 Summary of Generally Applicable or Relevant and Appropriate Federal Laws and Regulations

Remediation at the Property will be subject to a variety of federal laws and regulations that govern site cleanup. The applicable or relevant and appropriate requirements (ARARs) are discussed below.

3.1.1 Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (15 USC 2601-2692) mandated EPA to protect the public from “unreasonable risk of injury to health or the environment” by regulating the manufacture and sale of chemicals. Under the authority of Toxic Substances Control Act, EPA regulates aspects of the use and management of asbestos (Title II, 40 Code of Federal Regulations [CFR] 763), LBP (Title IV, 40 CFR 745), PCBs (Title I, 40 CFR 761), and elemental mercury (Title I, 40 CFR 721 and 40 CFR 273).

3.1.2 Resource Conservation and Recovery Act

The hazardous waste management regulations developed by EPA are codified in Resource Conservation and Recovery Act (RCRA) Title 40 CFR parts 260 through 282 and include provisions for the management and disposal of wastes containing lead and other heavy metals.

3.1.3 Clean Air Act

The Clean Air Act requires EPA to develop and enforce regulations to protect the public from exposure to airborne contaminants referred to as National Emissions Standards for Hazardous Air Pollutants. The Standard for Demolition and Renovation (40 CFR 61.145) specifies work practices to be followed during demolitions and renovations of all regulated facilities including structures, installations, and buildings. The regulations require the owner of the building to notify applicable state and local agencies and/or EPA Regional offices before all demolitions or before renovations of buildings that contain a certain threshold amount of asbestos. The EPA has delegated the Oregon Department of Environmental Quality (DEQ) as their representative agency in Oregon.

3.1.4 National Ambient Air Quality Standards Attainment Area

The EPA has established National Ambient Air Quality Standards for a variety of potentially airborne substances known as criteria pollutants. National Ambient Air Quality Standards are ARARs for any conditions at a site that may result in emissions to the air of any listed criteria pollutant. Criteria pollutants include carbon monoxide, nitrogen dioxide, ozone, lead, particulates smaller than 10 micrometers, and sulfur dioxide.

Cleanup alternatives may involve HBM abatement. The air emissions generated by handling HBM at the Property are subject to applicable air quality standards to control or prevent the emission of air contaminants. Based on the known contaminants present at the Property, the applicable criteria pollutants at the Property include particulate matter (dust) and lead.

3.1.5 Clean Water Act

The federal Water Pollution Control Act Amendments of 1972, commonly referred to as the Clean Water Act (CWA), requires the development of regulations to protect the quality of the nation's waters.

The objective of the CWA (33 U.S. Code 1251-1376 and 40 CFR 129 and 131) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Sections 303 and 304 of the CWA require EPA to issue ambient surface water quality criteria for the protection of aquatic life and human health. The federal water quality criteria, as specified in 40 CFR 131, are nonenforceable guidelines to be used by states to set water quality standards for surface water.

Federal water quality criteria, based on chronic and acute effects to aquatic life, have been developed for 120 priority toxic pollutants and 45 nonpriority pollutants for marine waters and freshwaters.

During construction, water will be directed through erosion- and sediment-control features to meet any water quality standards. The State of Oregon has been delegated the authority to implement the CWA and has rules and regulations corresponding to all of those stated in the CWA. Therefore, any discharges to the City's stormwater conveyance system and/or surface water will be managed under the state program. In addition, ambient surface water quality criteria are considered screening criteria.

3.1.6 Comprehensive Environmental Response, Compensation, and Liability Act

Asbestos, PCBs, mercury, and lead are listed as Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601) hazardous substances in Designation of Hazardous Substances and Reportable Quantities (40 CFR 302.4).

3.1.7 Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X)

The Lead Hazard Standard codified in 40 CFR Part 745 Subpart D identifies LBP hazards that apply to target housing and child-occupied facilities. The Residential Lead-Based Paint Hazard Reduction Act was enacted as Title X of the Housing and Community Development Act and requires certification of LBP abatement and evaluation firms and individuals, requirements for training providers, and work practice standards. LBP activities include abatement, inspection, and risk assessment.

3.1.8 U.S. Department of Transportation

The U.S. Department of Transportation has published regulations including requirements regarding communications and emergency response, shipping, and packaging (40 CFR 171 through 180), that govern the transportation of hazardous materials to or from the Property such as asbestos, lead, mercury, and PCBs (49 CFR 172.101).

The provisions of 40 CFR § 263 establish minimum standards that apply to persons transporting hazardous waste by air or water.

3.1.9 Natural Resource Damages

The Natural Resource Damage provisions of the Comprehensive Environmental Response, Compensation, and Liability Act, the Oil Pollution Act of 1990, and the CWA allow natural resource trustees to assess damages for losses arising from injury to public natural resources caused by the release of oil or hazardous substances. 43 CFR 11.62 provides the definitions of what constitutes an injury to a natural resource, particularly the definitions of injury to surface water resources, groundwater resources, air resources, geologic resources, and biological resources. The definition of injury either must be met or likely will be met for natural resource damages to be included for a given facility or property.

Once natural resource damages have been established by federal, state, or Native American Tribe trustees, the responsible party must take action to restore the damaged resource. These actions can take the form of cash payment to a trustee, or the responsible party can undertake its own restoration projects, or both.

In accordance with DEQ regulations, the cleanup alternative will establish means and methods to ensure that the remedial action minimizes short-term risks during implementation. Consequently, natural resource damages caused by remedial action implementation will be avoided.

3.1.10 Treatment, Storage, and Disposal Facility Standards

The Solid Waste Disposal Act (42 USC 6921 Subtitle C) incorporated under RCRA (40 CFR § 264) provides design standards for treatment, storage, and disposal (TSD) facilities. The TSD requirements for hazardous wastes are normally associated with facilities applying for, or having received, an RCRA permit.

The applicability of the TSD facility requirements to an on-site remedial action is contingent on whether the remedy includes on-site disposal. According to EPA guidance, “disposal” is synonymous only with a new “placement” of hazardous waste. Placement occurs whenever hazardous wastes are moved from one area of containment (AOC) to another, or are removed, treated, and later returned to the same AOC (National Contingency Plan Preamble at 8759; EPA Office of Solid Waste and Emergency Response Directive 9347.3-05FS [Superfund land-disposal restriction Guide 5]).² No placement occurs in connection with in-situ treatment or containment of contamination. The boundaries of an AOC are formed by the areal extent of contiguous contamination, regardless of variations in contaminant type or concentration (National Contingency Plan Preamble at 8758).

3.1.11 Land-Disposal Restrictions

Land-disposal restrictions for RCRA wastes characterized as toxic (40 CFR § 268) require that the waste be treated to specified concentrations before placement in a land-based unit. Land-disposal restrictions would apply to wastes removed from the Property that exceed treatment standards for waste codes or that fail a toxic characteristic leaching procedure analysis.

3.1.12 Occupational Safety and Health Administration

Federal Occupational Safety and Health Administration (OSHA) regulations pertaining to hazardous waste sites are addressed under 29 CFR 1910.120, the Hazardous Waste Operations and Emergency Response Standard. This standard applies to cleanup and corrective actions as well as to operations involving hazardous wastes that are conducted at a permitted TSD facility, unless the employer can demonstrate that the operations do not involve employee exposure or the reasonable possibility of employee exposure to safety or health hazards. The General Standards for Asbestos (29 CFR 1910.1001) and Lead (29 CFR 1910.1025) apply to occupational exposures. The Construction Standards for Asbestos (29 CFR 1926.1101) and Lead (29 CFR 1926.62), apply to construction work including work practices during demolition and renovation, worker training, disposal of asbestos and lead waste, and specification of permissible exposure limits.

² EPA. 1989. *Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions. Superfund LDR Guide #5*. Directive 9347.3-05FS. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. July.

3.2 Summary of Generally Applicable or Relevant and Appropriate Oregon State Laws and Regulations

The following state laws and regulations and local requirements were determined to be ARARs. Regulations are codified in the Oregon Administrative Rules (OARs).

3.2.1 Department of Environmental Quality

In Oregon, DEQ enforces the EPA National Emissions Standards for Hazardous Air Pollutants standard that regulates abatement, handling, and disposal of ACMs. Specific requirements apply to generators of asbestos waste, persons transporting asbestos waste, and operators of disposal facilities accepting the waste.

- ORS 468A.700 through 760: Asbestos Abatement Projects addresses requirements for asbestos abatement projects, contractor licensing and training, worker certification and training, and accreditation.
- OAR 340-248-0005 through 340-248-0280: Asbestos Requirements applies to asbestos milling, manufacturing, fabricating, abatement, disposal, or any situation where a potential for exposure to asbestos fibers exists. The regulations address asbestos licensing and certification requirements as well as asbestos emission standards and procedural requirements.
- OAR 340-110-001 through 340-110-080: Oregon regulations on management of waste containing PCBs.
- OAR 340-202-0050 and -0060: Oregon regulations establish provisions for general regulation of air pollution sources, ambient air quality standards, and acceptable levels for particulate matter, and stipulate requirements for new sources of toxic air pollutant emissions. These regulations may be applicable to cleanup actions at the Property; for example, to control emissions resulting from HBM abatement.

3.2.2 Oregon Occupational Safety and Health Administration

Oregon-OSHA has adopted the Federal OSHA standards by reference in OAR 437-002-0010 and 437-002-0360 and is responsible for land-based administration and enforcement.

3.2.3 Oregon Health Authority

The Oregon Health Authority has been authorized by EPA to regulate LBP activities in Oregon. Oregon Health Authority implements the following Oregon statutes and regulations under the Lead-Based Paint Program.

- ORS 431.917-926 Lead-Based Paint Activities
- OAR 333-068 Accreditation of Training Programs for Professionals Engaged in LBP Activities
- OAR 333-069 Certification of Individuals and Firms Engaged in LBP Activities
- OAR 333-070 Pre-Renovation Education and Renovation, Repair, and Painting Activities Involving LBP

3.2.4 National Pollutant Discharge Elimination System 1200-C Permit

The National Pollutant Discharge Elimination System 1200-C permit is administered by the DEQ to regulate construction activities that disturb one or more acres of land through clearing, grading, excavating, or stockpiling of fill material and where the possibility exists that stormwater could run off the Property into surface waters or conveyance systems leading to surface waters of the state during construction. To obtain a permit, applicants must prepare an erosion- and sediment-control plan and incorporate best management practices into their land-disturbing construction work. A complete application packet includes an application form, Land Use Compatibility Statement, and the erosion- and sediment-control plan.

3.2.5 Noise Regulations

Maximum environmental noise levels have been determined and are contained in OAR 340-035-0035. Approved procedures for measurement of environmental noise are contained in OAR 340-035-0035.

3.3 Local Requirements

A building permit from the City for the demolition of existing structures/foundations may be required.

4 Remedial Action Alternatives

The purpose of this ABCA is to identify the most appropriate remedial action alternative that reduces or eliminates potentially complete pathways for exposure to HBM on the Property. This ABCA was completed in general accordance with EPA guidelines for conducting an ABCA and Oregon regulations for conducting a feasibility study (OAR 340-122-0085). This document is a draft and will be presented for public comment.

4.1 Remedial Action Alternatives Considered

Typically, under DEQ removal authority (OAR 340-122-0090), remedial alternatives are evaluated using the following criteria:

- Effectiveness
- Long-term reliability
- Implementability
- Implementation risk
- Reasonableness of cost

The above factors are discussed below, along with a discussion of climate change and sustainability related to resilience per EPA guidance.³

4.1.1 Alternative 1: No Action

The “no action” alternative is only included for baseline purposes, and it is not considered a long-term solution to environmental issues present at the Property. This alternative would not include any activities to remove, treat, monitor, or manage HBM. If HBM is left in place, human exposure is likely. This alternative is not further evaluated because it is not protective of human health and the environment.

4.1.2 Alternative 2: Removal of All Existing ACM and Miscellaneous Hazardous Substances, and Encapsulation of LBP

Alternative 2 uses engineering controls and institutional controls to prevent exposure of future Property occupants to HBM. Alternative 2 includes the following elements:

Removal of All Existing ACM and Miscellaneous Hazardous Substances—This alternative includes removal of all ACM, PCB- and mercury-containing fixtures prior to building renovation. Under this alternative, flooring (tile, vinyl, linoleum, and mastic), thermal systems insulation, leveling compound, and exterior stucco will be abated. All PCB and mercury-containing light bulbs and fixtures will be abated. The cost estimate for this alternative assumes all HBM can be disposed of at the Columbia Ridge Landfill in Arlington, Oregon free of charge.

The interior paint appears to be in stable condition and is not posing a significant risk to public interest and safety. LBP will be encapsulated. Consequently, this alternative does not include LBP abatement and therefore, following abatement of ACM and miscellaneous hazardous substances, annual condition inspections and documentation of all areas known to contain LBP (i.e., cafeteria) will be required for the lifetime of the building. The cost estimate for this alternative was based on inspections and documentation for thirty years.

4.1.3 Alternative 3: Abate HBM

Alternative 3 includes the same removal of existing ACM and miscellaneous hazardous substances as Alternative 2. In addition, Alternative 3 will include sandblasting all interior surfaces with LBP (i.e., cafeteria). The cost estimate for this alternative assumes all HBM can be disposed of at the Columbia Ridge Landfill in Arlington, Oregon free of charge.

4.2 Evaluation of Cleanup Alternatives

4.2.1 Effectiveness

Both Alternative 2 and Alternative 3 are judged to be effective, as they would eliminate the exposure of HBM to human receptors.

³ EPA. 2014. *Checklist: How to Address Changing Climate Concerns in an Analysis of Brownfield Cleanup Alternatives (ABCA)*. EPA 560-Q-14-001. U.S. Environmental Protection Agency. April.

4.2.2 Long-Term Reliability

Alternative 2 requires the maintenance of engineering controls (LBP encapsulation) to prevent exposure of human receptors to HBM.

Alternative 3 implements full HBM abatement to prevent exposure of human receptors to HBM. Alternative 3 is judged to be more reliable in the long term.

4.2.3 Implementability

Proposed Alternatives 2 and 3 are considered moderately easy to implement, as they use common construction practices and locally available materials. However, Alternative 3 requires abating all LBP and capturing the dust and would require additional engineering controls. Alternative 2 is judged to be slightly more implementable as it would not require removal of LBP.

4.2.4 Implementation Risk

Alternative 3 requires additional material set-up and procedures to ensure all lead dust is appropriately captured. Although work would be performed by trained, certified contractors consistent with a site-specific health and safety plan that includes supervision and air monitoring, there is a slightly higher implementation risk for Alternative 3. The nearby community would be primarily impacted by haul routes. The required permits would reduce risk to the environment during construction through engineering controls.

4.2.5 Climate Change Concerns

The Property is not located near any creeks or surface water features prone to flooding. Its relatively urban setting makes it less vulnerable to the increase in average temperature and wildfire activities expected due to the impacts of climate change. Potential impacts from climate change are not a significant factor in alternative selection.

4.2.6 Cost

The probable cost of Alternative 2 is \$1,112,000 (see Table 4-1) and the probable cost of Alternative 3 is approximately \$861,000 (see Table 4-2). It is assumed that proposed Alternatives 2 and 3 would be completed simultaneously with the redevelopment of the Property. The cost for Alternative 2 includes HBM abatement, LBP encapsulation, and monitoring for thirty years. The cost for Alternative 3 includes HBM abatement and LBP removal. Neither alternative includes costs for the proposed building renovations or replacement of abated building materials. The estimates include a 30 percent contingency and are considered to have a confidence of -30 to +50 percent.

4.2.7 Sustainability

Proposed Alternative 2 has a slightly higher level of sustainability, in relation to trucking and emissions associated with hauling. Truck idling will be minimized whenever feasible. Alternative 2 has slightly lower trucking requirements as compared to Alternative 3, as LBP would not be removed.

4.3 Public Participation

The ABCA process mandates that public comments and concerns be addressed during the selection of a cleanup alternative. This ABCA report will be included in the EPA grant application to be presented for public comment. Additional public comment period(s) will likely occur before the cleanup action.

5 Preferred Cleanup Alternative

Alternative 1 cannot be recommended since it does not address site risks. Based on the above alternative evaluation, the preferred cleanup alternative for HBM abatement is Alternative 3 due to its lower expected cost, similar effectiveness, and higher long-term reliability. Both alternatives are comparable in most regards and the additional cost associated with long-term LBP monitoring and reporting associated with Alternative 2 is not warranted given the lower cost of Alternative 3. For these reasons, Alternative 3 is the preferred cleanup alternative.

Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Figures



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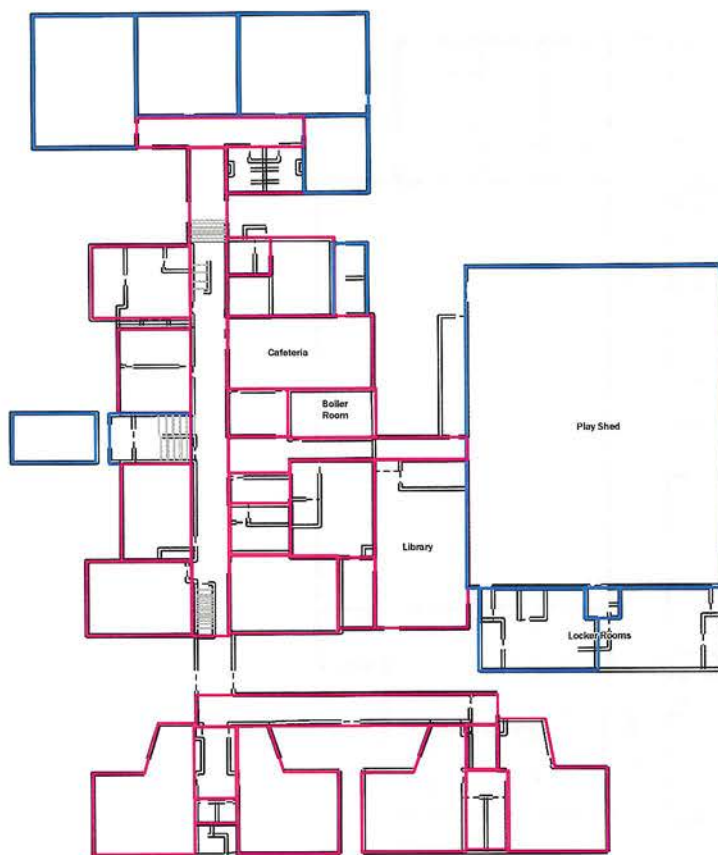






Figure 2-2
First Floor
Building Overview
Condon Grade School
220 S East Street
Condon, OR 97823

Legend

-  Presence of Asbestos
 No Presence of Asbestos
 Door
 Wall
 Stair








Data Sources
Aerial photograph obtained from the Oregon Geospatial Enterprise Office. Tax lot data obtained from Gilliam County



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Condon Grade School
220 S East Street
Condon, OR 97823

 Presence of Asbestos
 No Presence of Asbestos
 Door
 Wall
 Stair



Data Sources
Aerial photograph obtained from the Oregon Geospatial Enterprise Office. Tax lot data obtained from Gilliam County




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Tables



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ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST

| Table 4-1: Alternative 2 Conceptual Cost Estimate | | | | | |
|--|--|---------|--|--------------|-------------------|
| Project: Condon Grade School ABCA | | | <div> MAUL FOSTER ALONGI</div> <div>3140 NE Broadway Portland, OR 97232 971.544.2139 (p) www.maulfooster.com</div> | | |
| Client: Port of Arlington Environmental Sentry Corp. | | | | | |
| Project No./Task: M2602.01.002 | | Initial | | | |
| Prepared By: M. Pollock | | MVP | | | |
| Checked By: J. Elliott, PE | | JCE | | | |
| Date: 10/19/2023 | | | | | |
| Revision No.: 0 | | | | | |
| Cost Estimate Summary—Feasibility Level | | | | | |
| Component | | Units | Unit Cost | No. of Units | Cost |
| Removal of All Existing ACM and Miscellaneous Hazardous Substances, Encapsulation of LBP | | | | | |
| Mobilization | | LS | \$ | 59,800 | 1 \$ 59,800 |
| Abatement | | | | | |
| Flooring (vinyl, tile, linoleum) and mastic | | SF | \$ | 7.50 | 19,160 \$ 143,700 |
| Linoleum flooring | | SF | \$ | 7.50 | 4,930 \$ 36,975 |
| Self-leveling compound | | SF | \$ | 4.30 | 870 \$ 3,741 |
| Thermal system insulation | | SF | \$ | 4.30 | 360 \$ 1,548 |
| Stucco | | SF | \$ | 4.30 | 9,000 \$ 38,700 |
| Pipe-wrap on HVAC ducts | | LF | \$ | 47 | 7,500 \$ 352,500 |
| Mercury light tubes (per 4 foot bulb) | | EA | \$ | 10 | 40 \$ 400 |
| Mercury-containing fixtures | | EA | \$ | 215 | 8 \$ 1,720 |
| LBP Encapsulation | | SF | \$ | 5.00 | 200 \$ 1,000 |
| Waste removal and disposal | | LS | \$ | 17,700 | 1 \$ 17,700 |
| ABATEMENT SUBTOTAL (rounded to the nearest \$100) | | | | | \$ 657,800 |
| Contingency | | | | 30% | \$ 197,340 |
| REMEDIAL ACTION TOTAL (rounded to the nearest \$100) | | | | | \$ 855,100 |
| Monitoring and Maintenance | | | | | |
| LBP monitoring (30 years) | | LS | \$ | 101,700 | 1 \$ 101,700 |
| LBP monitoring report (30 years) | | LS | \$ | 95,700 | 1 \$ 95,700 |
| MONITORING SUBTOTAL | | | | | \$ 197,400 |
| Contingency | | | | 30% | \$ 59,220 |
| MONITORING TOTAL | | | | | \$ 256,620 |
| TOTAL (rounded to the nearest \$1,000) | | | | | \$ 1,112,000 |
| Notes | | | | | |
| ABCA = analysis of brownfield cleanup alternatives. | | | | | |
| ACM = asbestos-containing material. | | | | | |
| EA = each. | | | | | |
| HVAC = heating, ventilation, and air conditioning. | | | | | |
| LBP = lead-based paint. | | | | | |
| LF = linear foot. | | | | | |
| LS = lump sum. | | | | | |
| SF = square feet. | | | | | |



3140 NE Broadway
Portland, OR 97232
971.544.2139 (p)
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ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST

| Table 4-2: Alternative 3 Conceptual Cost Estimate | | | | |  MAUL FOSTER ALONGI 3140 NE Broadway Portland, OR 97232 971.544.2139 (p) www.maulfooster.com | | |
|--|--|----------------|-------|--------------|--|----------------|--|
| Project: Condon Grade School ABCA | | | | | | | |
| Client: Port of Arlington Environmental Sentry Corp. | | | | | | | |
| Project No./Task: | | M2602.01.002 | | Initial | | | |
| Prepared By: | | M. Pollock | | MVP | | | |
| Checked By: | | J. Elliott, PE | | JCE | | | |
| Date: | | 10/19/2023 | | | | | |
| Revision No.: | | 0 | | | | | |
| Cost Estimate Summary—Feasibility Level | | | | | | | |
| Component | | | Units | Unit Cost | No. of Units | Cost | |
| Abate HBM | | | | | | | |
| Mobilization | | | LS | \$ 60,200.00 | 1 | \$ 60,200 | |
| Abatement | | | | | | | |
| Flooring (vinyl, tile, linoleum) and mastic | | | SF | \$ 7.50 | 19,160 | \$ 143,700 | |
| Linoleum flooring | | | SF | \$ 7.50 | 4,930 | \$ 36,975 | |
| Self-leveling compound | | | SF | \$ 4.30 | 870 | \$ 3,741 | |
| Thermal system insulation | | | SF | \$ 4.30 | 360 | \$ 1,548 | |
| Stucco | | | SF | \$ 4.30 | 9,000 | \$ 38,700 | |
| Pipe-wrap on HVAC ducts | | | LF | \$ 47 | 7,500 | \$ 352,500 | |
| Mercury light tubes (per 4 foot bulb) | | | EA | \$ 10 | 40 | \$ 400 | |
| Mercury-containing fixtures | | | EA | \$ 215 | 8 | \$ 1,720 | |
| Waste removal and disposal | | | LS | \$ 17,700 | 1 | \$ 17,700 | |
| Sandblast lead paint | | | SF | \$ 24.00 | 200 | \$ 4,800 | |
| ABATEMENT SUBTOTAL (rounded to the nearest \$100) | | | | | \$ | 662,000 | |
| Contingency | | | | 30% | \$ | 198,600 | |
| TOTAL (rounded to the nearest \$1,000) | | | | | \$ | 861,000 | |
| Notes | | | | | | | |
| ABCA = analysis of brownfield cleanup alternatives. | | | | | | | |
| EA = each. | | | | | | | |
| HBM = hazardous building materials. | | | | | | | |
| HVAC = heating, ventilation, and air conditioning. | | | | | | | |
| LF = linear foot. | | | | | | | |
| LS = lump sum. | | | | | | | |
| SF = square feet. | | | | | | | |

