

DIVISION 1 – GENERAL REQUIREMENTS

Section 01010 - Summary of Work

PART 1 – GENERAL

1.01 DEFINITIONS

- A. **Owner:** The Contracting Agency also identified as the City of Yakima.
- B. **Engineer** – City of Yakima employee, who is licensed in the State of Washington as a Professional Engineer, who administers the contract or his authorized representatives. Also identified as Project Manager.
- C. **Environmental Agent (EA):** Environmental consultant contracted with the City of Yakima for oversight and implementation of environmental policy and procedures at the construction site. The EA is responsible for coordinating environmental requirements, and monitoring contractor performance relative to environmental specifications. EA activities may also include field screening and documentation of excavation, transport, and disposal of contaminated materials.

1.02 PROJECT BACKGROUND

This section provides a brief summary of the work and selected project background for informational purposes and for the convenience of the Contractor. In the event that information provided in this section conflicts in any way with the requirements of any other section of the Contract Documents, those other sections shall prevail.

- A. The City of Yakima (City, or Owner) is implementing a cleanup action including the removal of contaminated soil at the Richardson Airways Site (site) located at the Yakima Air Terminal, 2400 Washington Avenue, in Yakima County, Washington. The Air Terminal is currently owned and operated jointly by the City and County.
- B. Previous remedial investigations established that pesticides and herbicides associated with historical crop spraying operations have been detected in the soil at the site. The concentrations of pesticides and herbicides in the soil are above cleanup levels calculated in accordance with the Model Toxics Control Act (MTCA). The primary constituents of concern include: Aldrin, Dieldrin, DDT, DDD, DDE, Dinoseb, Endosulfan I, Endrin, Endrin Aldehyde, Endrin Ketone, and Toxaphene.
- C. In 2008, Ecology entered into a Consent Decree with the City and County to pursue soil cleanup at the site (Exhibit A). The cleanup action includes the removal and offsite disposal of an estimated 2,200 cubic yards (cy) (neat line estimate) of soil from the site.
- D. Generally, the work under this Contract includes, but is not limited to: site preparation; excavation, handling, transport, and offsite disposal of pesticide and herbicide contaminated soil; excavation backfilling; and site restoration. Personnel engaged in hazardous materials work shall be Hazmat, OSHA, and WISHA certified. The extent of the soil removal action under this Contract is shown on the Contract Plans.
- E. Soil: The subsurface soils below the existing asphalt pavement or surficial vegetated zone are generally expected to be brown silt or sandy silt. Silty gravel was encountered at approximately 7 feet below ground surface in the southern portion of the site.

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- F. Groundwater: The depth to local groundwater fluctuates depending on the time of year. Higher water levels occur in the spring and summer, corresponding with an influx of water due to local and regional irrigation practices. Groundwater is anticipated at approximately 7 to 10 feet below ground surface in the planned excavation areas.
- G. Existing site features near the work area are shown on the Contract Plans. No detailed site survey was performed, all features are taken from an aerial photo. Elevation datum is assumed from GRS80 data.

1.03 SCOPE

- A. The following provides a general summary of the primary elements of the project, as organized by the pay items of work under this Contract. The specific details and construction requirements for the work under this Contract are specified in the Technical Specifications, Contract Plans, and other parts of these Contract Documents.
- B. This project will consist of providing all materials, equipment, and labor to complete the specified cleanup action activities at the site. The work includes, but is not limited to, the following elements:
 - 1. Mobilization and work area preparation
 - 2. Installation of temporary security fencing
 - 3. Dust control, erosion and sediment control, health and safety, decontamination, and residuals management
 - 4. Excavation, haul, and disposal of impacted soil to the Terrace Heights Landfill
 - 5. Removal, haul, and disposal of asphalt pavement
 - 6. Placement and compaction of clean imported soil within the excavation area
 - 7. Site Surveying and field engineering
 - 8. Site restoration and demobilization.

1.04 LOCATION AND ACCESS

- A. The site is located near the Richardson Airways site at the Yakima Air Terminal (Air Terminal), 2400 West Washington Avenue, in Yakima County, Washington. The site is near the southern edge of the City of Yakima, approximately 2 miles west of Interstate 82. Richardson Airways is located inside the southeast portion of the Air Terminal near the North-South Taxiway. Primary access is from Airport Lane and Ahtanum Road to the south. Access to the site will be via a security gate. Temporary access through this gate will be provided by the Yakima Airport.
- B. Airport Security. Contractor shall have on site at all times during construction an individual with airport security clearance as approved by the Yakima Airport. The Contractor shall coordinate directly with the Yakima Airport regarding site security requirements.

1.05 PERMITS

- A. Contractor shall obtain all permits and approvals not designated by the Contract Documents as being the Owner's responsibility including but not limited to the

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submission of the Site Specific Fugitive Dust Control Plan to the Yakima Regional Clean Air Agency (YRCAA) as shown in Exhibit B.

- B. Contractor shall conduct all work in accordance with all permits and approvals, and shall have copies of such permits and approvals on the job site at all times during the work.

1.06 CONTRACTOR WORK HOURS

- A. Unless otherwise approved by the Owner, Contractor's work hours shall be limited to the period from 7:00 a.m. to 5:00 p.m. on Monday through Friday of each work week. Contractor shall be responsible for coordinating work hours with the disposal facility.

1.07 WORK TO BE PERFORMED BY OTHERS

- A. The Owner or its representatives will perform certain work and oversight activities at the site during this contract, including but not limited to the following.
 - 1. The Owner will provide Contractor with City of Yakima grading permit.
 - 2. The City of Yakima has obtained approval for the disposal of the impacted soil at the Terrace Heights Landfill. Use of any other landfill will be subject to approval of the Engineer.
 - 3. Marking the extent of the soil remediation areas and the pavement removal areas.
 - 4. Providing direction to the Contractor regarding the lateral extent and depth of soil excavation to be conducted under this Contract.
 - 5. Conducting soil sampling and analysis activities to confirm that impacted soil has been adequately removed from the excavation area.
 - 6. The Owner and its representatives will administer the Contract; monitor, observe, approve, and accept the work; coordinate with Ecology and other regulatory agencies; provide required direction for the work when Contractor requests clarification of the intent of the Contract Documents; and generally ensure that the execution and completion of the work meets design, construction, and other requirements of the Contract Documents.

1.08 ENGINEERING AND INSPECTION

- A. Contractor shall perform all specified land surveying, field engineering, and preparation of as-built construction record drawings. The Engineer or his designated representatives will perform certain engineering and inspection work associated with the soil cleanup action.

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1.09 PROTECTION OF SITE FEATURES AND ADJACENT PROPERTY USES

- A. Contractor shall coordinate his work schedule and all activities, which might affect Airport operations, with the Owner or his designated representatives. Contractor shall take such precautions and develop a construction approach for the project that limits adverse impacts to the Airport tenants, the existing facilities and utilities, and the existing access streets and parking areas.
- B. Contractor shall implement the work in a manner that preserves a safe work environment for all tenants and their employees, maximizes coordination and communication with their management, and minimizes disruptions to their businesses and operations. In fulfilling this requirement, Contractor shall ensure that pavements outside the designated work areas are free of construction debris that may cause damage to equipment and vehicle or injury to employees, and that soil or mud is promptly cleaned up.

1.10 CONTRACTOR COORDINATION

- A. Contractor is responsible for coordination with any sub-contractors, suppliers, utilities, or inspectors.

1.11 TRAFFIC CONTROL

- A. Contractor shall be responsible for providing adequate flaggers, signs, and other traffic control devices for the protection of the Contractor's work, airport tenants, and the public at all times regardless of whether or not the flaggers, signs, and other traffic control devices are ordered by the Engineer or whether or not the Contractor is working in the area of concern during that time. Flagging, signs, and all other traffic control devices furnished or provided shall conform to established standards. Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.
- B. Contractor shall be responsible for maintaining all barricades, etc., at all times during the period they are in use. Contractor and his surety shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.
- C. Contractor shall be responsible for providing notification and obtaining all necessary approvals of traffic control plans for road closures and modifications as required by the City of Yakima.

1.12 PAYMENT FOR EXTRA WORK

- A. No payment for extra work will be allowed unless the extra work has been authorized in writing by the Engineer, and compensation therefore agreed to and recorded before the extra work is started.

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PART 2 - PRODUCTS

Not applicable to this section.

PART 3 - EXECUTION

Not applicable to this section.

PART 4 - MEASUREMENT AND PAYMENT

A. See Section 01270 – Measurement and Payment.

END OF SECTION

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Section 01201 – Meetings

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section specifies requirements for meetings between the Owner and Contractor. Site meetings shall be attended by Contractor and its subcontractors as requested by the Owner.

PART 2 – PRODUCTS

Not applicable to this section.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION MEETING

- A. NOTIFICATION
Following award of the Contract, the Owner will notify the selected Contractor of the time and date of a pre-construction meeting.
- B. LOCATION
The pre-construction meeting will be scheduled by the Owner at a location to be determined at the time of scheduling.
- C. ATTENDANCE
The following are requested to attend, as appropriate:
 - 1. CITY REPRESENTATIVES:
 - a. Project Manager (City Engineer)
 - b. Contract Administrator
 - c. City Inspectors
 - d. Environmental Agent
 - 2. CONTRACTOR'S REPRESENTATIVES:
 - a. Project Manager (Superintendent)
 - b. Contract Administrator
 - c. Major Subcontractors
 - d. Site Safety Officer
 - 3. SUGGESTED AGENDA:
 - a. Introductions, roles, and responsibilities
 - b. Designation of responsible personnel
 - c. Contractor quality control program
 - d. Project schedule
 - e. Work sequencing
 - f. Pre-contract submittals

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Section 01201 – Meetings

1. Certificate of Insurance
2. Performance Bond
3. Labor and Materials Payment Bond
- g. Construction submittals
- h. Project coordination
- i. Communications and emergency contacts – Contractor shall have on-call at all times for this project an emergency contact. Contractor shall provide the Engineer a list of emergency contacts, senior staff, and phone numbers. Contractor shall also provide an organization chart indicating Contractor representatives and authorizations for site control.
- j. Procedures and processing of field decisions, Requests for Information (RFI), Requests for Proposal (RFP), submittals, Change Orders (CO), schedules, reports, and applications for payment.
- k. Weekly progress meetings
- l. Procedures for maintaining record documents
- m. Special site conditions and constraints
- n. Construction facilities and controls
- o. Inspection, surveying, and testing
- p. Security procedures
- q. Temporary utilities and utility shutdowns
- r. Coordination with other ongoing work at the site and in the vicinity of the site
- s. Contractor's land access routes and laydown area
- t. Site safety issues.

3.02 PROGRESS MEETINGS

- A. The Engineer or his designated representative will schedule and administer regular progress meetings throughout progress of the work.
- B. The Engineer or his designated representative will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, and record minutes and distribute copies to the Contractor, meeting participants, and others affected by decisions made.
- C. Attendance is required for the Contractor's job superintendent, major subcontractors, and suppliers, as appropriate to the agenda topics for each meeting.
- D. Standard Agenda
 1. Review minutes of previous meeting.
 2. Review of work progress and submittal status.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede planned progress.
 5. Maintenance of progress schedule.
 6. Corrective measures to regain projected schedules.
 7. Planned progress during succeeding work period.
 8. Coordination of projected progress.
 9. Discussion of site safety conditions, practices, any necessary modifications, and conformance with Contractor's health and safety plan.

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Section 01201 – Meetings

- E. Designated Authority: Persons designated by the Contractor to attend and participate in the weekly project meetings shall have all required authority to commit the Contractor to agreements made during the meetings.

3.03 SPECIAL MEETINGS

- A. The Owner may call special meetings at the project site or other locations to coordinate the work, answer questions, and/or resolve problems. Included will be the Prefinal and Final Inspections.

3.04 HEALTH AND SAFETY MEETINGS

- A. Conduct daily health and safety meetings for Contractor personnel as required by Contractor's approved health and safety plan.
- B. The Owner's onsite representatives may attend Contractor's health and safety meetings, as needed, to be aware of work conditions or health and safety concerns that could affect the normal business activities of the Owner's employees or Yakima Airport tenants, or the coordination or prosecution of work under other contracts.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 01270 – Measurement and Payment.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

Section 01330 – SUBMITTALS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section describes requirements for Contractor's submittals.

1.02 SUBMITTAL REQUIREMENTS

- A. Furnish for review all submittals required by the Contract Documents. All submittals shall be signed by an authorized representative of Contractor. Contractor's signature on submittals shall constitute a representation to the Owner that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or that it assumes full responsibility for doing so, and that it has reviewed or coordinated each submittal with the requirements of the Contract Documents.
- B. Each submittal shall be issued in 4 copies and addressed to the City and hand delivered to the following address:
City Engineer
129 North 2nd Street
Yakima, WA 98901
- C. Each submittal, or group of submittals, shall be accompanied by a transmittal letter that describes the items submitted. The transmittal letter shall be clearly labeled with the title of the project and shall list the submittals transmitted. Each submittal shall be individually numbered in a manner approved by the Owner. The initial version of the submittal shall be identified as "Revision 0," and subsequent submittals shall be numbered consecutively starting with "Revision 1."

1.03 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
 - 1. No Exceptions Taken. Accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. Does not constitute approval or deletion of specified or required items not shown in the partial submittal.
 - 2. Make Corrections Noted (No Resubmittals Required). Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 - 3. Amend and Resubmit. Rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
 - 4. Rejected-Resubmit. Submitted material does not conform to the Contract Documents in a major respect (e.g., wrong material, size, capacity, model, etc.).

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Section 01330 – SUBMITTALS

- B. Within 5 working days of the receipt of submittals, shop drawings, or manufacturer's data, the Owner or Environmental Agent will return one copy of each drawing or data sheet marked to indicate the result of the review.
- C. Copies marked "No Exceptions Taken" or "Make Corrections Noted" authorize Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- D. A favorable review shall not relieve Contractor of its responsibility to conform to the Contract Documents, correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Owner of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Owner or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Owner has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that Contractor's submittals shall be complete and acceptable by at least the second submission of each submittal. The Owner reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

1.04 SUPPLIER DATA

- A. Include name, address, contact person, and telephone number of each supplier on each shop drawing and material data submitted.

1.05 SHOP DRAWINGS AND DETAILS

- A. Submit all required shop drawings and details to the Owner for review before the items are manufactured or used in the work. The Owner's review of shop drawings shall be completed and designated with either "no exceptions taken" or "make corrections noted" prior to fabrication, construction, or delivery. Do not allow shop drawing copies to be used or distributed for field use without the Owner's notation of the appropriate final markings/action taken.
- B. Shop drawing submittal and coordination are the responsibility of Contractor; this responsibility shall not be delegated to subcontractors or suppliers. Designation of work "by others," if shown in shop drawings, shall mean that work will be performed by Contractor rather than by the subcontractor or supplier who has prepared the shop drawings.

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Section 01330 – SUBMITTALS

PART 2 – PRODUCTS

2.01 SUBMITTALS

Individual submittals are required in accordance with the pertinent sections of these specifications. The following list is incomplete, and it is the Contractor's responsibility to ensure that Contractor has met all Contract requirements.

- A. Section 01350 – Health and Safety Plan
 - 1. Health and Safety Plan and associated submittals
- B. Section 01560 – Environmental Controls

The following measures may be included as part of Contractor's Work Plan.

 - 1. Erosion Control Measures
 - 2. Spill Prevention Measures
 - 3. Fugitive Dust Control Measures (including a site specific fugitive dust control plan for submittal to the Yakima Regional Clean Air Agency).
- C. Section 02200 – Earthwork
 - 1. Site-Specific Work Plan
 - 2. Backfill Material Sources and Documentation
 - 3. Waste Disposal Documentation
 - 4. Site Surveys

PART 3 – EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. Prepare all submittals required by the Contract Documents. When a submittal contains multiple pages of printed material or printed material and a sample, the submittal contents shall be stapled, clipped, or bound so that all items within the submittal are easily retained as a single package. If samples are bulky, irregular in shape, or of inordinate weight (as with soil samples), the submittal shall be delivered as two packages, with the sample accompanied by a tag identifying the sample by submittal number, submittal title, specification reference, and contents.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 01270 – Measurement and Payment.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

Section 01350 – Health and Safety Provisions

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This Contract requires excavating, handling, loading, and transport of contaminated materials on portions of the site. Based on past site activities and field investigations, soil in the excavation area identified on the Contract Plans contains elevated concentrations of pesticides and herbicides. Work involving contact with the impacted soils will require employees to have 40-Hour Hazardous Waste Operation and Emergency Response (HAZWOPER) training. The Contractor shall also comply with, at a minimum, the provisions of 29 CFR 1926, the provisions of the Owner's site health and safety plan included as Exhibit C, and Contractor's site-specific health and safety plan prepared for the work under this Contract. Additionally, Contractor shall exercise due caution when excavating and handling impacted soil and construction water to minimize the potential health hazard to persons on the site, adjacent properties, and the general public.
- B. Contractor shall at all times conduct its activities with appropriate precautions to avoid the risk of bodily harm to persons or the risk of damage to any property or the environment. Contractor shall continuously inspect all work, materials, and equipment and shall be solely responsible for discovery, determination, and correction of any conditions that may involve such risks.
- C. Supply all equipment, materials, and personnel necessary to meet the requirements of this section and all applicable codes and regulations for safe handling and disposal of site wastes.
- D. The Owner and its representatives will be responsible for health and safety protection of their own personnel and will, at a minimum, perform other work not in this Contract in accordance with the health and safety plan presented in Exhibit C. Contractor shall allow use of its decontamination facilities by the Owner and its representatives, federal or state agencies, and authorized visitors.

1.02 REGULATORY REQUIREMENTS AND APPLICABLE PUBLICATIONS

- A. Regulatory requirements applicable to the Work include, but are not limited to, the following:
 - 1. 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
 - 2. 29 CFR 1926, Safety and Health Regulations for Construction
 - 3. 49.17 RCW, Washington Industrial Safety and Health Act
 - 4. WAC 296-800, *General Safety and Health Standards*
 - 5. WAC 296-155, *Safety Standards for Construction*
 - 6. WAC 296-62, Part P, *Hazardous Waste Operations and Emergency Response*
 - 7. American Conference of Governmental Industrial Hygienists (ACGIH), *Threshold Limit Values and Biological Exposure Indices for 1991-1992*, or most recent version
 - 8. NIOSH/OSHA/USCG/EPA, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, DHHS Publication No. 85-115, October 1985

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Section 01350 – Health and Safety Provisions

1.03 SUBMITTALS

- A. Prepare and submit to the Owner, within 5 working days of the issuance of the Notice to Proceed, a site-specific health and safety plan meeting applicable regulatory requirements. Obtain the Owner's concurrence with the plan before proceeding with onsite work. The health and safety plan shall address all requirements for general health and safety and shall meet the minimum requirements of Article 2.01 of this section.
- B. Submit the name and qualifications of Contractor's health and safety officer for the work. This person shall not be replaced without prior written approval by the Owner.
- C. Submit proof of 40-hour and current 8-hour annual refresher OSHA 1910.120 training for general site workers, and of 40-hour and current 8-hour annual refresher OSHA 1910.120 training for site supervisors, who are authorized by Contractor to engage in work associated with hazardous materials and potentially hazardous materials. For onsite supervisory personnel, in addition to the previously described training certifications, submit current certification of OSHA 1910.120 onsite management or supervisor training and American Red Cross first aid and cardiopulmonary resuscitation (CPR) training. Site worker training shall comply with WAC 296-62, Part P. Upon request by the Owner, submit documentation of respiratory fit testing for personnel who are authorized by Contractor to engage in work associated with hazardous materials and potentially hazardous materials.

1.04 QUALIFICATIONS

- A. Contractor's employees who engage in hazardous materials work shall at a minimum meet the training requirements as specified in the regulatory requirements listed in this section.

1.05 SCOPE OF HAZARDOUS MATERIALS WORK

- A. Hazardous materials work is limited to activities involving personnel or equipment in contact with contaminated soil and water associated therewith, including excavation, handling, and disposal of these materials. Contractor shall be responsible for monitoring hazardous materials and conditions and determining when work involves hazardous materials and when conditions are present that require conformance with specified regulatory requirements. Contractor shall be responsible for the planning and scheduling of hazardous material work with all other work under the Contract and shall conduct all hazardous material work in accordance with Contractor's site-specific health and safety plan.

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Section 01350 – Health and Safety Provisions

1.06 PERSONAL DECONTAMINATION FACILITY

- A. Provide a personal decontamination facility that meets the requirements specified in the site-specific health and safety plan and Section 01560.
- B. On completion of the work, and with the Owner's approval, decontaminate and demobilize decontamination facilities.

1.07 EQUIPMENT DECONTAMINATION

- A. Conform to the provisions of Section 01560.

PART 2 – PRODUCTS

2.01 HEALTH AND SAFETY PLAN

- A. Prepare and maintain for the duration of this Contract a site-specific health and safety plan to promote the health and protection of all onsite personnel and the environment.
- B. Assess the potential risks to onsite personnel and the environment and develop a site-specific health and safety plan to safely execute the work under this Contract. Submit the health and safety plan to the Owner for review and general concurrence. The Owner's review and concurrence with Contractor's health and safety plan will not in any way relieve Contractor of its responsibility for health and safety, nor shall the Owner's concurrence be construed as limiting in any manner Contractor's obligation to undertake actions that may be necessary or required to establish and maintain safe working conditions at the site, including conditions not related to hazardous materials, nor shall the Owner's concurrence be construed as establishing Owner or Environmental Agents in a position of responsibility for implementation or administration of Contractor's health and safety plan.
- C. Contractor and its subcontractors shall comply with the site-specific health and safety plan for the duration of this Contract. Coordinate with the Owner and with all of the Contractor's subcontractors on health and safety matters. Furnish all necessary first-aid, safety, personal protective and decontamination equipment and facilities, and enforce the use of such equipment and facilities by Contractor's employees and its subcontractors.
- D. The Owner's health and safety plan is contained in Exhibit C and is provided for reference purposes only; Contractor's health and safety plan shall, at a minimum, be as protective as the relevant sections of that plan. Contractor is responsible for independently evaluating the physical and chemical hazards associated with the project site and the work under this Contract and developing a plan that adequately addresses these hazards in compliance with applicable local, state, and federal regulations. As a minimum, Contractor's health and safety plan shall include:

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1. A description of the site activities to be performed.
 2. A listing of hazardous substances known to be or suspected of being present at the site.
 3. A description of the site chemical hazards (e.g., toxicity, flammability, stability, reactivity, etc.), including the nature of each chemical; its physical properties; OSHA, WISHA, or ACGIH standards, where established; and physical hazards (e.g., noise, heavy equipment, heat stress, etc.).
 4. A map of the site showing the proposed work activity locations, evacuation routes, and assembly areas.
 5. General health and safety directives regarding onsite conduct, including levels of protection and contingency plans.
 6. Site-specific health and safety directives for potentially hazardous activities. These directives shall specify the equipment and safety procedures to be used by personnel engaged in the work activities.
 7. Establishment of the work area definitions associated with potential contact with hazardous materials. Planned changes in boundaries during the work shall be identified.
 8. Requirements for personal protective equipment, including respiratory, eye, and skin protection. The plan shall include a listing of the health and safety equipment that will be available onsite and required for site activities during the work under this Contract.
 9. Personal decontamination facilities and procedures.
 10. Equipment decontamination facilities and procedures.
 11. Emergency procedures in case of hazardous material spillage or exposure to personnel, personal injury, fire, explosion, etc. This section of the plan shall include emergency telephone numbers and specific procedures for immediate removal to a hospital or doctor's care of any person who may be injured on the job site.
 12. Field monitoring equipment and procedures. This section of the plan shall specify when and how monitoring will be performed, what data reporting procedures will be used, and how the data will be used on site to determine appropriate personal protective equipment.
 13. Names and responsibilities of personnel assigned to implement, administer, and supervise the health and safety plan.
 14. Names, firms, and staff positions of personnel authorized to work at the site, including personnel handling any chemical sampling equipment and personnel performing any offsite material disposal.
 15. An employee signature page on which each of Contractor's employees whose activities involve contact with contaminated soil and waters associated therewith, and each employee of each subcontractor whose activities involve contact with contaminated soil and waters associated therewith, will acknowledge receipt of the plan, an understanding of the plan, and an agreement to comply with plan provisions.
 16. Recordkeeping requirements and all necessary reporting to cover the implementation of the plan.
- E. As conditions change or if new operations are to be performed, Contractor's health and safety plan shall be modified or amended as appropriate.

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Section 01350 – Health and Safety Provisions

PART 3 – EXECUTION

3.01 HEALTH AND SAFETY

- A. Site activities involving hazardous materials shall be conducted in accordance with Contractor's site-specific health and safety plan.
- B. Designate a qualified representative as health and safety officer whose responsibility will be health and safety oversight and who is thoroughly trained in rescue procedures, HAZWOPER, and the use of safety equipment and gas detectors. The designated health and safety officer shall be on site at all times when contact with hazardous materials is anticipated.
- C. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- D. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.
- E. Contractor shall be responsible for providing safety training and shall require its subcontractors and all of Contractor's authorized visitors to have this training, if appropriate for the work to be conducted by these personnel. Documentation of this training shall be available at the site. Provide appropriate personal protective equipment for Contractor's employees, as specified in the health and safety plan, and require subcontractors to provide this equipment for subcontractor's employees.
- F. Provide for decontamination of Contractor's and subcontractor's personnel and equipment that contacts hazardous or potentially hazardous materials.
- G. Provide for the proper disposal of disposable safety gear and equipment used by Contractor's and subcontractor's employees. Such disposal shall conform to all applicable federal, state, and local waste disposal regulations. Waste material from Contractor's onsite decontamination facilities shall be properly containerized, labeled, and disposed by the Contractor.
- H. Maintain accurate accident and injury reports and furnish the Owner a copy of the reports within 24 hours of the reported incident. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence to the Engineer, giving full details of the claim.

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- I. Provide proper illumination of construction activities, as necessary, to allow all workers and oversight personnel to safely execute their responsibilities and tasks.
- J. Promptly comply with any specific instructions or directions given to Contractor by the Owner or the Environmental Agents unless overriding health and safety concerns dictate another course of action. The Owner's review of the Contractor's performance does not include approval of the adequacy of the Contractor's safety supervisor, the site specific health and safety plan, safety program, or any safety measures conducted for or taken in, on, or near the construction site.
- K. Health and safety plans, emergency procedures, and first aid procedures shall be conspicuously posted at the site and Contractor shall hold regularly scheduled meetings, as necessary, to instruct its personnel and its subcontractors on health and safety practices and use of personal protective equipment.

3.02 MATERIAL HANDLING AND DISPOSAL

- A. Handle and dispose of contaminated soil, water, and other materials during prosecution of the work consistent with these Specifications and directives issued by the Owner, and in conformance with all applicable federal, state, and local waste disposal regulations.
- B. Contaminated materials shall be contained within designated areas and shall not, at any time, be placed directly on or otherwise allowed to contaminate the surface of designated uncontaminated areas, except as approved in writing by the Owner or the Environmental Agent.
- C. Transport contaminated soil, water, and other materials from the point of removal to the point of temporary storage or loading in such a manner that contaminated material is not placed on and does not spill or fall on designated uncontaminated areas. Contractor shall install and maintain chemically resistant liner and containment berm materials and clearly stake and mark temporary storage locations for contaminated materials at all times.
- D. Assist the Owner or the Environmental Agent whenever they elect to acquire confirmational samples. Assist the Environmental Agent to the maximum extent practicable and facilitate the complete removal of contaminated materials within the limits specified by the Environmental Agent subject to contractual provisions related to changes in the scope of work.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 01270 – Measurement and Payment.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

Section 01500 – Temporary Facilities and Controls

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section specifies requirements for certain temporary facilities to be provided and maintained by Contractor. No temporary facilities or utilities will be provided by the Owner.
- B. Temporary facilities include water, sanitary, and electrical utilities, parking areas, material and equipment storage areas, and other temporary site improvements determined by Contractor as necessary for execution of the work.
- C. Available areas for temporary facilities within and around the site are limited. Final arrangements and layouts for temporary facilities shall be proposed by Contractor and approved by the Owner.

PART 2 – PRODUCTS

2.01 TEMPORARY CONSTRUCTION FACILITIES

- A. Provide and maintain temporary berms and lining/cover materials as required to prevent movement of waste materials, spills, etc. resulting from the work under this Contract.
- B. Maintain construction, staging, and storage areas in a neat, orderly condition.
- C. Provide barricades, temporary fencing, handrails, warning lights, and other devices required by law or regulation, or as necessary to protect people on or near the site.

2.02 MATERIAL STORAGE

- A. Construct temporary material and equipment storage areas, as required, to secure and protect same against damage, loss, theft, and vandalism.
- B. Provide shelters, as required, for material storage to protect goods and supplies against the elements, theft, vandalism, or other damage.

2.03 ELECTRICAL

- A. Provide temporary electric supply as needed for completion of the work.

2.04 DRINKING WATER

- A. Provide drinking water for all personnel connected with the work. Water shall be transported in sanitary containers to provide clean and fresh water.

DIVISION 1 – GENERAL REQUIREMENTS

Section 01500 – Temporary Facilities and Controls

- B. Provide drinking water for consumption in the exclusion zone(s). Contractor shall devise a method for water consumption that does not pose a health and safety risk for site workers.

2.05 TEMPORARY TOILETS

- A. Provide adequate chemical toilet facilities for all individuals connected with the work, in numbers as required by federal and state safety and occupational standards.
- B. Provide regular service of each chemical toilet facility to maintain sanitary conditions. Remove units at the completion of the site work.

2.06 WATER FOR CONSTRUCTION PURPOSES, DECONTAMINATION, DUST CONTROL, AND FIRE PROTECTION

- A. Provide clean, potable water and necessary storage, as required, for the work, including storage requirements for fugitive dust emissions control. Water may be transported to the site by tanker truck or by connections to a nearby fire hydrant or other water source, whichever is more feasible and cost-effective, as approved by the Owner. The Contractor shall pay for any and all temporary water connection and meter fees charged by the City of Yakima. Arrangements for temporary water connections can be made by contacting the City of Yakima Water Department:

City of Yakima Water Department (509) 575-6154

- B. Make connections and provide piping, hoses, nozzles, and other accessories required to supply water to the site and support zones for accomplishing the work and providing necessary fire protection, and provide and maintain the necessary equipment to meet the requirements of the Contract Documents.

2.07 SECURITY

- A. The construction site shall be closed to the public at all times. Contractor shall have on site at all times during construction an individual with airport security clearance as approved by the Yakima Airport. Contractor shall coordinate directly with the Yakima Airport regarding site security requirements. Arrangements for security clearance can be made with Yakima Airport:

Kris Yalovich (509) 575-6149

- B. Contractor shall access the site via a security gate. Temporary access through this gate will be provided by the Yakima Airport. The Contractor shall be responsible for controlling access through this gate while the gate is opened.

DIVISION 1 – GENERAL REQUIREMENTS

Section 01500 – Temporary Facilities and Controls

2.08 TEMPORARY SECURITY FENCING

- A. General: Furnish and install a temporary fence around the construction area as shown on Drawings.
- B. Construction: The temporary fence shall consist of woven wire mesh not less than 6 feet in height, complete with metal posts and all required bracing, and with vehicle access and a locked gate for airport tenant access as shown on the Drawings and as required by the Engineer.
- C. Project Completion: Upon completion of project work, Contractor shall remove all temporary fencing.

PART 3 – EXECUTION

3.01 GENERAL

- A. Install and maintain all necessary temporary facilities for the duration of the project, consistent with applicable codes and regulations and the requirements of these Specifications.
- B. All temporary facilities are to be removed at the completion of site work.

3.02 REMOVAL

- A. Temporary facilities subject to contamination in the exclusion and contamination reduction zones shall be decontaminated in accordance with Section 01560 before being removed from the site.
- B. Upon removal of temporary facilities from the site, restore areas occupied by those facilities to a condition similar to those that existed prior to the Contract or as acceptable to the Owner.
- C. Remove all rubbish, debris, and other accumulations that may result from work under this Contract. Dispose of nonhazardous and nondangerous wastes, rubbish, debris, and construction waste materials at approved offsite locations weekly.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 01270 – Measurement and Payment.

END OF SECTION

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

PART 1 – GENERAL

1.01 GENERAL

- A. Perform the work in a manner to minimize the polluting of air, water, or land, and control noise and the disposal of solid waste materials, as well as any other pollutants. The work includes compliance with the Department of Ecology approved Consent Decree (See Exhibit A), and local, state, and federal laws, regulations, and ordinances with respect to environmental compliance. The bidder shall review this information and become familiar with existing site conditions before submitting a bid to the Owner for this project.
- B. Reference Documents: The results of site investigations are included as Reference Documents and these documents are:
 - 1. The Supplemental Investigation Data Report (Landau Associates 2009)
 - 2. The Site Cleanup Action Workplan and Addendum (Landau Associates 2009).

1.02 PRECONSTRUCTION SITE REVIEW

Prior to start of any onsite construction activities, Contractor and the Environmental Agent shall make a joint condition site review, after which Contractor shall prepare a brief report or site map indicating on a layout plan the condition of work areas, assigned storage areas, access routes, and other pertinent site features. Contractor shall be responsible for moving existing stockpiles onsite as needed for site access and work areas.

1.03 PROTECTION OF LAND AREAS

Except for work and storage areas and access routes specifically assigned for the use of Contractor, land areas outside the limits of permanent work performed under this Contract shall be preserved in their present condition. Contractor shall confine its construction activities to onsite areas defined on the Contract Plans or specifically assigned by the Owner for its use.

1.04 DISPOSAL OF CONTRACTOR WASTE

As part of Contractor's construction plan, submit a description of Contractor's scheme for disposing of waste materials resulting from the work under this Contract. Waste material does not include any of the materials designated for removal by the plans or specifications, unless those materials are further contaminated through the actions of the contractor (see below). If any waste material is spilled or dumped in unauthorized areas, completely remove the material to the Owner's satisfaction and restore the area to the condition of the adjacent undisturbed areas. Where directed, ground contaminated by such activities shall be excavated, disposed of as approved by the Owner, and replaced with suitable fill material, all at the expense of Contractor.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

1.05 CORRECTIVE ACTION

Upon receipt of a notice in writing of any noncompliance with provisions in this Section, take immediate corrective action. If Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to a stop work order shall be made the subject of a claim for extension of time or for excess costs of damages by Contractor unless it was later determined that the Contractor was in compliance.

1.06 POST-CONSTRUCTION CLEANUP OR OBLITERATION

Unless otherwise instructed in writing by the Owner, obliterate all signs of temporary construction facilities such as work areas, temporary stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Except for areas restored as shown on the Drawings, the disturbed areas shall be graded, filled as necessary to restore original grades, and paved or seeded as designated by the Owner.

1.07 SUBMITTALS

The following measures shall be included as part of Contractor's Work Plan developed per the requirements of Section 02200.

- A. Erosion Control Measures
- B. Spill Prevention Measures
- C. Fugitive Dust Control Measures (including a site specific fugitive dust control plan for submittal to the Yakima Regional Clean Air Agency; see Exhibit B).

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Selection of the types, capacities, and materials of products and equipment needed to execute the work and to provide the required environmental protection is the responsibility of Contractor. Materials, tools, and equipment shall be suitable for the intended purpose and shall conform to the requirements of the Specifications and applicable codes and standards for safety.
- B. Decontaminate equipment and materials prior to transporting the equipment or materials to the site, as appropriate, and decontaminate and/or clean equipment and materials prior to removing them from the site in conformance with this Section.
- C. Select suitable environmental protection products and equipment to facilitate the work, including, but not limited to, absorbent pads and booms, silt fencing, hay bales, ecology

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

blocks, pressure washers, pumps and hoses, filter media, tanks, shield systems, small tools, plastic (polyethylene) sheeting, and all other required facilities and equipment.

PART 3 – EXECUTION

3.01 CONDUCT OF THE WORK

- A. Conduct the work in a manner that protects the environment as specified in this section and elsewhere in the Contract Documents. Failure to protect the environment may result in the Owner issuing a stop work order, the duration of which shall extend until conditions that threaten the environment are corrected to the satisfaction of the Owner. Costs incurred as a result of such a stop work order shall be at the sole expense of Contractor.
- B. Contractor shall control access to work areas at all times. Potentially impacted materials and stockpiles shall be placed in areas isolated from general site areas and shall be clearly identified and delineated. Access to areas with potentially impacted materials shall be restricted to only those personnel with appropriate health and safety training in accordance with applicable codes and regulations.
- C. Contractor shall keep the work site, staging areas, and Contractor's facilities clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance in conformance with the present condition of the site.

3.02 AIR POLLUTION AND DUST CONTROL

- A. The project requires that all trucks carrying loads of contaminated soil leaving the site have their loads securely covered. Maintain all excavations, fill areas, stockpiles, material and equipment storage areas, waste areas, borrow areas, and all other work areas free from excess dust to such reasonable degree as to avoid causing a hazard or nuisance to others. A truck cleaning station shall be constructed as shown on the Contract Plans. Existing stockpiles shall be relocated as needed to allow for construction of this facility.
- B. Contractor shall abide by all applicable regulations enforced by the Yakima Regional Clean Air Agency (YRCAA). This includes preparing a site specific fugitive dust control plan and submitting the plan, as indicated in Exhibit B, to the YRCAA for review within 5 days of notice to proceed..
- C. Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of any legally constituted authority. Contractor shall maintain construction vehicles and equipment in good repair. Exhaust emissions that are determined to be excessive by the Engineer shall be repaired or replaced.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

D. Street Cleaning

1. Contractor shall be responsible for preventing dirt and dust from escaping from trucks departing the project site, by covering loads, brushing truck tires before leaving the site, or other reasonable methods.
2. When working dump trucks and/or other equipment on paved streets and roadways, Contractor shall be required to clean said streets in accordance with City of Yakima requirements.
3. In the event that the above requirements are violated and no action is taken by Contractor after notification of infraction by the Engineer, the Owner reserves the right to have the streets in question cleaned by others and the expense of the operation charged to the Contractor.

3.03 NOISE CONTROL

- A. Contractor shall comply with all local controls and noise level rules, regulations, and ordinances which apply to any work performed pursuant to the Contract.
- B. Each internal combustion engine, used for any purpose on the job or related to the job, shall be enclosed and be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler and enclosure.

3.04 DRAINAGE AND EROSION CONTROL

- A. Stockpile locations shall be approved by the Engineer. Control measures include the following:
 1. All stockpiles shall be established on plastic sheeting or other impermeable surface to completely contain the material and to prevent wind erosion and runoff during precipitation. Plastic sheeting for stockpile covers shall be a minimum thickness of 6 mils. Plastic sheeting for the stockpile liner (between the stockpile and ground surface) shall have a minimum 12-mil thickness or equivalent protection acceptable to the Engineer to prevent puncturing or tearing in areas with vehicle and equipment traffic.
 2. Any free liquids issuing from stockpiles shall be controlled with berms and application of adsorbent materials as necessary. Poned water that has been in contact with contaminated material or that results from stockpile drainage shall be collected and stored in Engineer approved onsite containers prior to sampling and proper disposal of these liquids at no additional cost to the Owner.
 3. The stockpiles shall be continuously protected and isolated from contact and disturbance by water, wind, animal, or humans.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

- B. Surface water control, management, and disposal within all work areas shall be the responsibility of Contractor. Surface water disposal shall comply with all applicable federal, state, county, and local laws, statutes, ordinances, and regulations. Surface drainage from work areas shall be contained and surfaces shall be graded as appropriate to control erosion. Temporary control measures shall be provided and maintained until permanent drainage measures are completed. Temporary erosion control measures shall be installed to control the movement of erodible soil by surface water drainage. At the completion of work, all disturbed areas will be reseeded as shown on the Contract Plans. Drainage and erosion control measures shall be carried out in accordance with this section and the Contract Plans.
- C. Temporary Pumping and Erosion Control:
 - 1. Contractor shall implement erosion control measures as shown on the Contract Plans. In addition, Contractor shall conform to the regulations and requirements of legally authorized surface water management agencies.
 - 2. Contractor shall be responsible for keeping excavations and other areas free from water as required to permit continuous progress of, or to prevent damage to, its own work or the work of others. Contractor's operations shall be conducted in such a manner as to prevent sediment from reaching existing sewers, storm drains, creeks, or streams. Temporary erosion control and settling ponds or temporary tanks shall be provided in the work area as required to trap runoff until the turbidity has settled and the water can be diverted into the storm drains or drainage courses. Stored or impounded water shall not be discharged to any drainage or sanitary sewer system.
 - 3. Contractor shall cover exposed excavated areas and stockpiles when runoff from rain is or would be likely to cause turbid waters to enter local waterways or drainage systems. Contractor shall suspend work in the rain if such work cannot be performed without causing turbid runoff.

3.05 SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

The Contractor shall prepare a project specific spill prevention, control, and countermeasures (SPCC) plan to be used for the duration of the project. The plan shall be submitted to the Engineer prior to the commencement of any onsite construction activities. The Contractor shall maintain a copy of the plan at the work site, including any necessary updates as the work progresses. If hazardous materials are encountered during construction, Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. Hazardous material, as referred to within this Specification, is defined in RCW 70.105.010 under "Hazardous Substances". Occupational safety and health requirements that may pertain to SPCC planning are contained in but not limited to WAC 296-824 and WAC 296-843.

The SPCC plan shall address the following project-specific information:

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

- A. SPCC Plan Elements
 - 1. Site Information

Identify general site information useful in construction planning, recognizing potential sources of spills, and identifying personnel responsible for managing and implementing the plan.
 - 2. Project Site Description

Identify staging, storage, maintenance, and refueling areas and their relationship to drainage pathways, waterways, and other sensitive areas. Specifically address:
 - a. Contractor's equipment maintenance, refueling, and cleaning activities.
 - b. Contractor's onsite storage areas for hazardous materials.
 - 3. Spill Prevention and Containment

For each of the locations identified in 2, above, specifically address:
 - a. Spill prevention and containment measures to be used at each location
 - b. The method of collecting and treating, or disposing of, runoff from each location
 - c. The method of diverting project runoff from each location. - 4. Spill Response

Outline spill response procedures including assessment of the hazard, securing spill response and personal protective equipment, containing and eliminating the spill source, and mitigation, removal, and disposal of the material.
 - 5. Standby, Onsite Material and Equipment

The plan shall identify the equipment and materials Contractor will maintain on site to carry out the preventive and responsive measures for the items listed.
 - 6. Reporting

The plan shall list all federal, state, and local agency telephone numbers the Contractor must notify in the event of a spill.
 - 7. Program Management

Identify site security measures, inspection procedures, and personnel training procedures as they relate to spill prevention, containment, response, management, and cleanup.
 - 8. Preexisting Contamination

If preexisting contamination in the project area is described elsewhere in the Plans or Specifications, the SPCC plan shall indicate measures the Contractor will take to conduct work without allowing release or further spreading of the materials.
- B. SPCC Plan Attachments
 - 1. Site plan showing the locations identified in (A. 2. and A. 3.) noted previously.
 - 2. Spill and Incident Report Forms, if any, that the Contractor will be using.

Implementation Requirements

The Contractor shall implement prevention and containment measures identified in the SPCC plan prior to performing any of the following:

- 1. Placing materials or equipment in staging or storage areas
- 2. Equipment refueling
- 3. Equipment washing
- 4. Stockpiling contaminated materials.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01560 – Environmental Controls

3.06 DECONTAMINATION

- A. Before traveling between excavations and offsite disposal sites, decontaminate the exterior of all trucks where impacted soil is visible. Contractor shall manage and dispose of all wash water generated during decontamination.
- B. All equipment, tools, vehicles, and other equipment used in suspected contaminated areas shall be decontaminated to prevent contamination of unaffected areas.
- C. All contaminated equipment, tools, or materials that cannot be decontaminated shall be stored and disposed by Contractor in accordance with all federal, state, and local regulations.
- D. Personnel and equipment decontamination shall occur whenever people or equipment leave the work site. Decontamination waste shall be stored, labeled, and disposed of according to all applicable requirements at the cost of Contractor. All analytical costs associated with waste characterization are the responsibility of Contractor.

3.07 WASTE DOCUMENTATION AND CERTIFIED WEIGHT RECEIPTS (see also Section 02200)

- A. Contractor shall notify the Engineer and the offsite disposal facility at least 72 hours prior to offsite transportation of waste.
- B. Waste Documentation and Certified Weight Receipts:
 - 1. Obtain and submit copies of all bills of lading, certified truck scale tickets, and other waste disposal documentation to the Engineer within 2 working days of offsite disposal.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 1270 – Measurement and Payment.

END OF SECTION

DIVISION 2 - SITE WORK
Section 02200 – Earthwork

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section specifies earthwork requirements for the project, including demolition, excavation, material handling, grading, backfilling and compaction of soil, and other work incidental to the earthwork shown on the Drawings or required to accomplish the work under this Contract. Earthwork covered under this section includes, but is not limited to, the following elements:
1. Clearing within limits of the Project.
 2. Demolition and removal of existing asphalt pavement, and a catch basin/sump and associated piping as needed in the designated soil remediation areas.
 3. Excavating, stockpiling, loading, transport, and disposal of impacted soil to Terrace Height Landfill or other offsite disposal facility approved by the Engineer.
 4. Excavating, size reduction, stockpiling, loading, and transport of asphalt and debris to Terrace Height Landfill or other offsite disposal facility approved by the Engineer.
 5. Coordination of environmental testing with Owner and Environmental Agent.
 6. Placing, compacting, and final grading imported clean soil as excavation backfill.
 7. Conducting site surveying prior to and after excavation backfill.
 8. Site cleanup and restoration.

1.02 REFERENCE STANDARDS

- A. The following standards and test methods are included as a part of this Section insofar as specified and modified herein. In case of conflict between the requirements of this Section and the listed standards and test methods, the requirements of this Section shall prevail.

Reference	Title or Description
ASTM D 422	Test Method for Particle-Size Analysis of Soil
ASTM D 1557	Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
ASTM D 2216	Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
ASTM D 2487	Test Method for Classification of Soils for Engineering Purposes
ASTM D 2922	Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods
ASTM D 3017	Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods

1.03 REFERENCES

- A. All references to WSDOT shall refer to *2008 Standard Specifications for Road, Bridge, and Municipal Construction* of the Washington State Department of Transportation.
- B. 29 CFR 1910 - Occupational Safety and Health Regulations.

DIVISION 2 - SITE WORK

Section 02200 – Earthwork

- C. WAC 296-155, Part N, Excavations, Trenches, and Shoring.
- D. 29 CFR 1926 - Safety and Health Regulations for Construction.

1.04 QUALIFICATIONS

- A. Personnel engaged in hazardous materials work shall be Hazmat, OSHA, and WISHA certified. Conduct earthwork associated with known or potentially contaminated materials in accordance with Contractor's site-specific Health and Safety Plan prepared in accordance with Section 01350.
- B. Transportation work shall be performed by properly licensed, insured, and registered waste haulers that are acceptable to the Owner. All loads shall be securely covered before leaving the site.

1.05 CONTRACTOR RESPONSIBILITY

- A. Furnish all labor, equipment, supplies, and materials necessary to perform the earthwork activities associated with the work under this Contract.

1.06 QUALITY ASSURANCE

- A. Contractor shall be responsible for the quality control monitoring and testing activities, except as related to environmental sampling, during construction. The City of Yakima will provide independent testing and inspection service to the satisfaction of the Engineer. Tests conducted for the sole benefit of the Contractor shall be at the Contractor's expense.

1.07 SUBMITTALS

- A. Submit in accordance with Section 01300.
- B. Prepare and submit for Owner's approval a Construction Plan that includes details of Contractor's methods and equipment to accomplish the work under this section.
- C. Prepare and submit to the Owner a list of proposed material suppliers, referencing the materials or supplies to be provided and used in the work.
- D. Submit location of proposed fill material prior to importing any backfill material to the site:
 - 1. Contractor shall coordinate with the Owner and Environmental Agent and facilitate collection of samples of the clean imported soil material proposed for use as excavation backfill at least 2 weeks in advance of any backfill being delivered to the site. Contractor shall assure the sample(s) are representative of materials to be imported to the site. The Environmental Agent will arrange for testing of the material for total metals using EPA Method 6010, total petroleum hydrocarbons using Method NWT PH-HCID, chlorinated pesticides using EPA Method 8081, and

DIVISION 2 - SITE WORK

Section 02200 – Earthwork

- chlorinated herbicides using EPA Method 815 at a rate of two samples for the first 1,000 yd³ of backfill and one sample for every additional 2,000 yd³.
2. The contractor shall provide certification that the imported fill materials were obtained from a commercial quarry or pit permitted by the State of Washington or other suitable to the Engineer.
- E. Whenever the source or stockpile from which the imported fill materials are obtained is changed, certificates of compliance and the required laboratory test results from these new sources will also be required at no additional cost to the Owner.
- F. Contractor shall establish a credit account with Terrace Heights Landfill at least 10 days prior to commencement of hauling (and fulfill comparable requirements at other Engineer-approved disposal facility). Out-of-county (Yakima) contractors will be required to provide \$1,000 bond to dispose at Terrace Heights Landfill (Exhibit D)..
- G. Contractor shall provide legible copies of weight receipts or other documentation certifying the total weight of material transported to and disposed of at approved offsite disposal facility.

PART 2 – PRODUCTS

2.01 GENERAL REQUIREMENTS FOR IMPORTED BACKFILL

- A. Imported fill used for backfilling the excavations shall be an imported, clean, granular fill material free of roots, organic material, contaminants, recycled concrete or asphalt, and all other deleterious and objectionable material. The material shall have such characteristics of size and shape that it will compact readily, and shall conform to WSDOT Section 9-03.14(1) for gravel borrow, except the maximum particle size in any dimension shall be 6 inches.
- B. The Owner maintains the right to reject any materials that have been determined to be substandard for any reason. In the event of rejection, it shall be the responsibility of Contractor to remove all rejected material from the site at its sole expense.
- C. Contractor shall visually inspect each load of imported material upon delivery. Material shall be inspected for presence of foreign, recycled, or reprocessed material. The Owner or his designated representative may at any time perform an independent inspection. Material may be rejected due to identification of any such material or as a result of substandard test results. Materials may be segregated for testing by the Contractor, the Engineer, the Owner, or their designated representatives based on appearance or odor.
- D. The Owner reserves the right to perform additional testing as necessary. Tests performed by the Owner will be at no cost to Contractor.

2.02 EQUIPMENT

Bid Documents
Contract ?

ECOLOGY REVIEW DRAFT

02200-3

DIVISION 2 - SITE WORK

Section 02200 – Earthwork

- A. Provide all necessary equipment to accomplish the work in this Section, including the excavation, transport, placement, moisture conditioning, backfilling, grading, and compaction of soil. Compaction equipment shall be properly sized and suitable to the type and location of material being compacted and shall be used in the manner needed to achieve the degree of compaction required.

PART 3 – EXECUTION

3.01 GENERAL

- A. Conduct all required earthwork activities in accordance with the requirements of the Contract Documents and as otherwise directed by the Owner to complete the work under this Contract. Coordinate the work with representatives of the Owner to limit adverse effects of the work on Yakima Air Terminal activities. Designated truck traffic routes within the Airport are indicated on the Contract Plans.
- B. Contractor operations will require work in a potentially hazardous environment. Ensure adequate protection for all personnel including personal air monitoring as necessary, comply with all health and safety requirements of Contractor's site-specific health and safety plan, and perform construction equipment decontamination as specified. For the purpose of estimating costs, modified Level D protection may be assumed for intrusive work associated with excavation and handling of pesticide contaminated soil and debris and other activities with a potential for exposure to contaminated materials.
- C. Implement site access and traffic control, utility protection, fugitive dust emissions control, drainage and erosion control, spill prevention and pollution control, and all other controls needed to protect environmental quality during the work.

3.02 EXCAVATION SAFETY

- A. Safety is the sole responsibility of Contractor. Compliance with OSHA, 29 CFR Part 1926, Subpart P and WAC 296-155, Part N is mandatory.
- B. Where a sloped excavation infringes on or potentially endangers or compromises an existing site facility or feature, provide temporary shoring, sheeting, and bracing as required to complete the earthwork. At Contractor's expense and to the Owner's satisfaction, repair and make good any damage to any facility or feature caused by Contractor's work under this Contract.

DIVISION 2 - SITE WORK

Section 02200 – Earthwork

3.03 UTILITY LOCATOR SURVEY

- A. Prior to any excavation work on the project, the Contractor must call 1-800-424-5555 to locate public utilities within the project limits.
- B. Contractor shall also provide the services of a utility locating company to perform a locator survey for all non-public utilities located within the project limits.
- C. Contractor shall maintain a Locator Survey Plan showing all utilities located and date of survey.

3.03 SURVEYING

- A. Contractor shall subcontract with an independent professional surveyor licensed in the State of Washington who will be responsible for conducting field surveying and related engineering and reporting associated with quality control surveying, measurement for payment surveys, and construction record surveying and documentation. The responsibilities of Contractor's independent surveyor shall include, but not be limited to, the following:
 - 1. Verification of existing benchmarks and control points established for the work.
 - 2. Establishment of supplemental benchmarks and control points as needed to conduct the work.
 - 3. Initial layout of the work.
 - 4. Soil excavation and backfill progress surveys and reporting.
 - 5. As-built surveys of all completed work.
 - 6. Calculation of construction quantities for Contractor's progress payment requests.
 - 7. Maintenance of the "Project Record" drawings.
 - 8. Preparation of as-built construction record drawings.
- B. Contractor may utilize project staff, other than the independent surveyor, for carrying out certain day-to-day surveying activities, provided that such activities are coordinated by, and verified by, Contractor's independent surveyor. Contractor's staff involved in surveying activities shall be qualified in such work, and shall be subject to approval by the Owner.
- C. Survey the location and elevation of soil at the base of excavations, the top of fills, and the top of the final surfacing materials at maximum 25 ft intervals.
- D. Survey the location and elevation of all performance and confirmation sampling locations performed by the Environmental Agent.
- E. Contractor's independent surveyor shall be responsible for calculation of all measured pay quantities. Quantity calculations shall be completed in accordance with Section 01270.

DIVISION 2 - SITE WORK

Section 02200 – Earthwork

3.04 SITE CLEARING

- A. Perform clearing within the limits of the Project as indicated on the Drawings. The work includes the clearing of vegetation, brush, and debris. Clearing shall be coordinated with the Environmental Agent to avoid impacts to site markings.

3.05 EXISTING PAVEMENT AND CATCHBASIN REMOVAL AND DISPOSAL

- A. Remove pavements as indicated on Drawings in a manner that minimizes disturbance to the underlying soil and surrounding pavement.
- B. During soil excavation work, carefully remove the catch basin/sump and the section of storm drain piping that crosses the excavation area.
- C. Load, transport, and recycle/dispose of existing asphalt pavement, catchbasin/sump, and piping at the Terrace Heights Landfill or other approved facility. Contractor shall confirm and adhere to asphalt disposal restrictions at the approved facility (e.g., asphalt less than 5 years of age may not be disposed at the Terrace Heights Landfill).
- D. Provide legible copies of certified weight receipts or other documentation of the weight of pavement transported to and recycled/disposed at the recycling/disposal facility.

3.06 IMPACTED SOIL EXCAVATION AND STOCKPILING

- A. Excavate impacted soil within the excavation areas as indicated on the Drawings and as modified by the Environmental Agent based on confirmation sampling results. Contractor shall provide aid and support to Environmental Agent, as necessary, to collect confirmation samples from base and sidewalls of excavation. Based on confirmation sampling results, the Environmental Agent will instruct the Contractor, as necessary, to make incremental increases in depth or horizontal extent of soil excavation. Contractor shall coordinate with Environmental Agent and sequence and schedule excavation and backfilling work in order to allow for laboratory analysis turnaround time as discussed in Article 3.10. The depth of impacted soil will vary within the excavation area, but is generally anticipated to be less than about 6 ft deep.
- B. Construct temporary material processing/stockpile areas at locations within the work area at locations approved by the Owner. Line, berm, and cover material processing/stockpile areas as necessary to protect the environment and prevent the spread of impacted soil and debris during material handling activities.
- C. Segregate impacted soil and debris; size reduce the debris as needed for proper transportation and disposal; and stockpile and protect these materials in separate stockpiles until loaded for offsite disposal.
- D. Drain the excavated soil and/or mix wet soil with drier soil if needed to control free liquids in the material loaded for offsite disposal.

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3.07 IMPACTED SOIL LOADING AND TRANSPORT TO DISPOSAL FACILITY

- A. Contractor shall provide minimum 48-hour notice to approved disposal facility prior to hauling.
- B. Load and transport impacted soil to the Terrace Heights Landfill, unless otherwise designated by the Owner. **ALL LOADS SHALL BE SECURELY COVERED PRIOR TO LEAVING THE SITE.** Contractor has complete responsibility for coordinating with the disposal facility concerning disposal schedules and anticipated wait times. The Owner is not responsible for any delays caused by the disposal facility.
- C. Provide legible copies of certified weight receipts or other documentation certifying the total weight of material transported to and disposed of at the approved facility.

3.08 DEBRIS LOADING AND TRANSPORT TO DISPOSAL FACILITY

- A. Load and transport asphalt concrete pavement debris, catch basin, piping, and associated material to the Terrace Heights Landfill or other approved recycling/disposal facility. Contractor has complete responsibility for coordinating with the disposal facility concerning disposal schedules and anticipated wait times. The Owner is not responsible for any delays caused by the disposal facility.
- B. Provide legible copies of certified weight receipts or other documentation certifying the total weight of material transported to and disposed at the approved facility.

3.09 MOISTURE CONDITIONING AND REWORKING OF BACKFILL MATERIAL

- A. Fill materials that contain excess moisture or otherwise can not be readily compacted shall be moisture conditioned and reworked until the specified compaction criteria can be achieved. Moisture conditioning and reworking of such material shall be conducted in a manner approved by the Environmental Agent. All such moisture conditioning and reworking of fill materials shall be the responsibility of Contractor at its sole expense.
- B. When necessary to achieve compaction, add water to raise the moisture content of dry materials to near its optimum moisture content as determined by ASTM D 1557.

3.10 BACKFILLING AND COMPACTION

- A. Obtain the approval of the Environmental Agent prior to placing any backfill materials in the excavations. As indicated in Article 3.06, the Environmental Agent will collect confirmation soil samples from various locations in the excavation and the samples will be analyzed at an offsite analytical laboratory on a rush turnaround basis during the work week. Contractor shall anticipate that analytical results may not be available for at least 72 hours, excluding weekends, and plan its earthwork activities accordingly.
- B. Excavation Backfill: Imported fill material used as excavation backfill shall be moisture conditioned to near its optimum moisture content, placed in layers not exceeding 8 inches

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loose depth, and compacted to at least 95 percent of its maximum dry density as determined by ASTM D 1557. Material exhibiting instability, including significant pumping or rutting, during placement and compaction shall be removed, reconditioned, and reworked as needed regardless of the density test results.

3.11 GRADING

- A. Conduct site grading and seeding consistent with Contract Plans and as otherwise directed by the Engineer.
- B. Finish graded surfaces shall be smooth and free from irregular surface changes.

3.11 FILL COMPACTION QUALITY CONTROL

- A. General: Contractor shall be responsible for the quality control monitoring and testing activities that are required by the Contract Documents.
- B. Moisture/Density Testing and Reporting: Perform moisture content and density testing of fill and backfill materials at a minimum frequency of one test per 200 yd³ of material placed, unless otherwise approved by the Environmental Agent. Record the following for each test:
 - 1. The location and approximate elevation.
 - 2. The material description and appropriate compaction control standard.
 - 3. The percent of the referenced compaction standard.
 - 4. The date, time, weather conditions, and any other pertinent data.

3.12 CLEANUP

- A. At the completion of the work, remove all waste materials, rubbish, and debris resulting from the Work, as well as all tools, appliances, construction equipment and machinery, and surplus materials. Temporary utility services provided or arranged for by Contractor shall be terminated in accordance with the procedures and policies of the utility purveyor. Leave the site clean and ready for use by the Yakima Air Terminal at Substantial Completion of the work. Unless otherwise approved by the Owner, restore to original condition all property not designated for alteration by the Contract Documents.

PART 4 – MEASUREMENT AND PAYMENT

- A. See Section 1270 – Measurement and Payment

END OF SECTION