Addendum No. 3
3/8/2019

Captive Elk Facility
Washington State University
Pullman, WA

Project No. 9899-2018
Washington State University
Facilities Services, Capital
Addendum No. 3  
3/8/2019

Captive Elk Facility  
Washington State University  
Pullman, WA

Bid Date: Wednesday, March 13, 2019

1. This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 14, 2019, and any prior addenda, as noted below.

2. Please acknowledge receipt of this addendum on the Form of Proposal.

This Addendum consists of 31 total pages and the following attachments:

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Changes to prior Addenda:
None

Changes to Bidding Requirements:

3-1. SECTION 00 11 13 – Advertisement for Bids

Item 1. Change from a days based Contract Time to a date of Substantial Completion Contract Time.

Replace “…Contract time shall be 98 days from Notice to Proceed to Substantial Completion. Proposals MUST BE based on Contract Time.”

Make read:
“…Substantial Completion shall be achieved by July 15, 2019. Proposals MUST BE based on this Contract Time.”

3-2. SECTION 00 42 13 – Form of Proposal

Item 1. Replace section in its entirety and replace with new to accommodate the update to Alternate No. 6. Bidders must use this most current bid form when bidding.
Changes to Specifications:

3-3. SECTION 00 50 00 – Agreement between Owner and Contractor

Item 1. Change from a days based Contract Time to a date of Substantial Completion Contract Time.

Replace: “4.3 Substantial Completion and Final Completion. Contractor shall achieve Substantial Completion of the Work Ninety-Eight (98) Days following Notice to Proceed, subject to adjustments as provided in the Contract Documents, and shall achieve Final Completion not later than Thirty (30) Days thereafter.”

Make Read:
“4.3 Substantial Completion and Final Completion. Contractor shall achieve Substantial Completion by July 15, 2019, subject to adjustments as provided in the Contract Documents, and shall achieve Final Completion not later than Thirty (30) Days thereafter.”

Item 2. Revise alternate 6 for clarity:

Replace: “Revise sanitary sewer connection as called out on sheet C102.”

Make Read:
“Add sanitary sewer connection as described on sheet C102 (Notes # 20, 21, 24, 25, 26 and 27) and all related work included on mechanical drawings not included in Alternate #1. Note that any reference to inclusion in Base Bid to be disregarded.”

3-4. SECTION 01 50 00 – Construction Facilities & Temporary Controls

Item 1. Clarification: 1.01, A. Availability and Use of Utility Services: Nearby owner electrical services and water are available to contractor.

Item 2. 1.05 Sanitary Facilities: Identify availability of sanitary facilities, not defined in original bid documents.

Delete: C and D.

Make read:
“A. Contractor shall provide temporary restroom facilities. Facilities shall not directly or indirectly drain or discharge onto Owner property or any waters of the State. Place where directed at the time Work begins; maintain in sanitary condition. Remove upon completion of the Work and disinfect the premises.

B. Use of permanent and/or existing Owner’s facilities is not allowed.”
3-5. SECTION 01 45 00 – Quality Control
   Item 1. Clarification: Contractor may utilize on-site personnel for QCM as a shared role.
   Item 2. Clarification: WSU shall be responsible for all 3rd party inspections.

3-6. SECTION 07 41 13 – Metal Roof Panels
   Item 1. 2.01.B – Contractor shall include roof snow guards as recommended by roofing panel manufacturer. Snow guards shall be attached to roof structure, anchored permanently and flashed to prevent water leakage.

3-7. SECTION 08 52 00 – Vinyl Windows
   Item 1. 2.01.A – Revise to read ‘Provide Vinyl Clad Windows from one of the following manufacturers:’

Changes to Drawings:

3-8. DRAWING A101
   Item 1. Staging Areas: Staging/‘lay-down’ areas are available to the north and/or east of the proposed Isolation Building. Replace previously issued drawing with attached Drawing stamped 2/25/2019.

3-9. DRAWING A102
   Item 1. Existing concrete slab(s) to be demolished, are typically 5” thick. Reinforcing is unknown. Revised Sheet A102 with better definition of concrete area attached.
   Item 2. No substantial plumbing demolition is anticipated.

3-1. DRAWING A103
   Item 1. ‘Shelled’ spaces #101 and #101A shall be defined to include only concrete floor slab, exposed 2x framing and exposed wood roof trusses. Rough in of any mechanical, plumbing and electrical into the space may be included per mechanical and electrical drawings.
   Item 2. Partition (Wall) Types are noted on Floor Plan. Partition Types are shown on D5 – Partition/Wall Types, Sheet A109. Walls in Feed Shed (Sheet A108) are as indicated (exterior siding over wood girts and pole structure) – uninsulated.
   Item 3. Partition Type 4 – Metal siding shall be on the Isolation Pen side of the partition.
   Item 4. STORAGE #102 - North and west walls to be uninsulated and have no interior finish.
3-2. DRAWING A104
   Item 1. Roof Framing Plan – Roof slope to be 3:12, in lieu of 6:12 noted.

3-3. DRAWING A108
   Item 1. Fold down doors may field constructed with exterior covering to match exterior siding. Contractor to provide appropriate framing/backing, hinges and locking mechanisms for long-term, workable operation. Weatherstripping is not required.

3-4. DRAWING M201
   Item 1. Shut-off for hydrants and waterers are at backflow preventers.
   Item 2. Underfloor piping shall be as specified per WSU Standards.

3-5. DRAWING E200
   Item 1. For Alternate #2, Rms. #101/101A receptacles are to be Hubbell GFR5262SGBK.

3-6. DRAWING E300
   Item 1. Conduit in Rms. #101/101A to be EMT.
   Item 2. All sweeps from underground to above ground conduit and all conduit outside Rms. #101/101A are to be PVC coated RMC.
   Item 3. All underground conduit to be PVC Schedule 40.
   Item 4. Receptacles outside Rms. #101/101A to be Hubbell HBL1221BK with weatherproof in use covers.
   Item 5. Switches outside Rms. #101/101A to be Hubbell HBL1221BK with HBL1795 cover.
   Item 6. Provide Columbia CS4-232-EU (or equal) strip fluorescent with wall switch over panel ‘L’ in Room #101.
   Item 7. Detail 1 shall apply to the Isolation Building and the Feed Shed (Alt. #1).

3-7. DRAWING E500
   Item 1. One Line Diagram – Replace the spreadsheet for the 300KVA transformer in the lower left corner with attached Calculation Worksheet date 3/8/2019.

END OF ADDENDUM No. 3
1. Introductions:
   a. WSU Facilities Services Project Manager: Joanie Thomas (thomasjl@wsu.edu, 509-335-9027)
   b. WSU Facilities Services Construction Manager: Jason Harper (jaharper@wsu.edu) 509-335-8299)
   c. WSU Occupant/Customer: College of Vet Med / Dr. Margaret Wild
   d. Attendance at the pre-bid meeting and at the job-site visit is mandatory for Contractors/Prime Bidders.
   e. The Owner’s meeting minutes will be routed to project plan holders as an addendum.
   f. Send all questions regarding this project to the Facilities Services Project Manager and Facilities Services Construction Manager:
      i. All questions must be received no later than March 7, 2019.
      ii. All requests for substitutions must be received by March 7, 2019.
   g. Addenda will be forwarded to all plan holders. Addenda will be issued no later than March 8, 2019.
   h. This is an active campus. There are students, faculty and visitors who either will not be aware of construction or will be distracted. Contractors must routinely work around the pedestrian population on campus as well as control noise and other construction related activities to minimize the effect on the campus. WSU is committed to a completely accessible campus. This means that when construction activities interfere with accessible pathways, that the General Contractor is responsible for putting in place temporary facilities (ramps, pathways, etc.) to assure that all pathways are available. Harassment in the workplace is not tolerated at WSU. All trades are required to conduct themselves such that harassment, real or perceived, does not occur. Offending individuals will be permanently removed from the project.

2. Project Description:

   Demolish existing building #165 Veterinary Feed Lot Shelter. Construct a new 1-level, 5200 SF Captive Elk Facility building. Contract Time shall be 98 days from Notice to Proceed to Substantial Completion. Proposals MUST BE based on this Contract Time.

   **Base Bid:** All work associated with the completion of the isolation/scale/lab building, scale room/lab and restroom to be ‘shelled’. Mechanical to provide only underfloor plumbing as described on sheet M201 and M301. Include only electrical demolition (E100), the new feeder from the existing outdoor transformer to and including the new indoor transformer (E400) and a 1-inch stubout from the Isolation Building to a point 5 feet from the edge of the slab at the south end of the alleyway toward the proposed Feed Shed.
PRE-BID MEETING

Alternate No. 1: Add all portions of feed shed described on sheet A108, Civil, Mechanical & Electrical drawings.
Alternate No. 2: In lieu of of shelving room 101/101A per base bid, add all interior finish work in 101-101A, including GWB on exterior walls, ceiling, and interior walls; paint and casework; floor base and related finishes. Mechanical to include all work on mechanical drawings not in alternates 1 and 6. Include all power and lighting in or on the Isolation Building, Feed Shed and Scaleroom/Lab as described in the electrical drawings, not include in alternates 1 and 6.
Alternate No. 6: Revise sanitary sewer connection as called out on sheet C102, include electrical circuits for sewage pumps and their controller.
Alternates No. 3, 4, 5, 7 were removed from the bid via Addendum 2, and will be future improvement.

a. Location: 435 SE Dairy Road, Pullman, WA. 99164
c. Existing Hazards: Construction activities, delivery vehicles, students, facility maintenance, visitors, etc.
d. Schedule Constraints: Submittal and scheduling activities to begin as soon as notice to proceed is issued.
e. Parking. Parking on campus is enforced 24 hours a day, every day. It is the bidder's responsibility to obtain parking permits to attend pre-bid meetings, site visits, and bid openings. Go to www.parking.wsu.edu for more information about visitor parking permits. Labor force parking and permits: Minimal parking will be available onsite. Workers will need to park in existing lots on campus.

3. Estimated Base Bid, not including taxes, is approximately: $200,000.00 - $400,000.00

4. Expected Notice to Proceed date: March 25, 2019.

5. Estimated Contract duration after Notice to Proceed: Contract time shall be 98 Days from Notice to Proceed to Substantial Completion.

6. Bidders should review the complete version of the bid instructions in the Contract Documents and in any forthcoming addenda. Especially note the following:
a. Bids shall be made upon the form of proposal in the Contract Documents.
b. All information requested on the bid form shall be filled out completely and entirely to include:
   i. Base Bid amount – Required
   ii. Alternate amount(s) as required – Required
   iii. Unit Price amount(s) as required – N/A
   iv. Acknowledgement of each addendum received – Required
c. The bid should include a bid security bond.
d. Bid forms shall be enclosed in an opaque envelope if mailed or delivered, shall have a cover sheet if faxed see specification section 00 21 13.
PRE-BID MEETING

e. The bidder is responsible for getting the bid to the office designated in the documents by the time noted in the documents. To be considered responsive, bids shall be received and time stamped at McCluskey; Facilities Services Capital, main desk prior to the bid date and time in the Contract Documents. (NOTE: the USPS and private delivery/shipping companies do not make regular deliveries directly to the building and office designated.)

f. Bids will be received prior to 2:00 p.m.; Wednesday March 13, 2019 at Facilities Services, McCluskey Services Building, 2425 East Grimes Way, Pullman, WA 99164-1150. Proposals will then be publicly read aloud in the Admin Conference Room, McCluskey Services Building.

g. Bidder Responsibility Mandatory Criteria: It is the intent of the Owner to award a contract to the low responsible bidder. Prior to awarding a contract, the apparent responsive low bidder must submit documentation demonstrating compliance as per Section 00 21 13, Part 1.16 – Low Responsible Bidder. Be prepared to submit the required documentation with 48 hours of receipt of request.

7. Summary of Construction Administration Requirements:
   a. For complete project administrative requirements refer to Division 1 and the General Conditions of the Contract Documents and addenda.
   b. Prior to starting work; the contractor will be required to submit a Schedule of values and a construction progress schedule in a critical path method format for review and approval.
   c. Regular progress meetings will be conducted during the course of the project.
   d. Material information and/or shop drawings shall be submitted to the Owner for approval. The construction progress schedule shall include time for the submittal review and distribution process.
   e. O&M Manuals and As-built drawings shall be submitted prior to substantial completion and the final application for payment and shall be identified as activities on the construction progress schedule.

8. A job-site visit will be conducted during the course of this pre-bid meeting.

9. Discussion/Remarks/Concerns:

End of Meeting
## Pre-Bid Meeting

<table>
<thead>
<tr>
<th>Name / Business Name</th>
<th>Email</th>
<th>Phone No.</th>
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<tbody>
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<td>Webb French Quality Contractors, LLC</td>
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</table>
Refer to Instructions to Bidders for bid submittal procedures.

Bidder's Firm Name: ______________________________ Date: __________

To: Facilities Services, Capital
   McCluskey Services Building, P.O. Box 641150
   Washington State University
   Pullman, Washington 99164-1150

Pursuant to and in compliance with the Advertisement for Bids and the Instructions to Bidders, the Bidder, having carefully examined the Contract Documents entitled "New Captive Elk Facility" and having visited the Project site and examined the conditions affecting the Work, hereby proposes and agrees to provide all labor, materials, equipment, services, and incidentals necessary to complete the Work for the following stipulated sums:

A. BASE BID

______________________________________________________________

______________________________________________ DOLLARS ($______________).

B. UNIT PRICES – NOT USED

C. ALTERNATES

The Bidder proposes to modify the Base Bid by deleting from, adding to or otherwise modifying the Work as further described by the Contract Documents for the following stipulated sums:

Alternate No. & Description

Alternate No. 1 – Add all portions of feed shed described on sheet A108, Civil, Mechanical & Electrical drawings.

______________________________________________________________

______________________________________________ DOLLARS ($______________).

Alternate No. 2 – 2. Alternate No. 2 - In lieu of shelling room 101/101A per base bid, add all interior finish work in 101/101A, including GWB on exterior walls, ceiling, and interior walls; paint and casework; floor bases and related finishes.

Mechanical – Include all work included on mechanical drawings not included in alternates 1 and 6.

Include all power and lighting in or on the Isolation Building, Feed Shed and Scaleroom/Lab as described in the electrical drawings, not included in alternates 1 and 6.

______________________________________________________________

______________________________________________ DOLLARS ($______________).
Alternate No. 3 – NOT USED. All boundary and perimeter fencing shown on A101, A109 and C100 are future improvements.

Alternate No. 4 – NOT USED. All grading as described on revised sheet C101 (attached), A109 and C100 are future improvements.

Alternate No. 5 – NOT USED. All wood fencing described as North & South sorting areas A101, A109 and C100 are future improvements.

Alternate No. 6 - Add sanitary sewer connection as described on sheet C102 (Notes # 20, 21, 24, 25, 26 and 27) and all related work included on mechanical drawings not included in Alternate #1. Note that any reference to inclusion in Base Bid to be disregarded, include electrical circuits for sewage pumps and their controller.

____________________________________________DOLLARS ($ ____________).

Alternate No. 7 – NOT USED. Fencing indicated (chain link and perimeter fencing) is future improvement.

For Alternates, which do not affect the Base Bid, indicate a zero (0) in the space provided for the Alternate.

D. REINSTATEMENT OF BID ALTERNATES

The Bidder agrees that Owner has the right to reinstate any Alternate not incorporated in the original Contract, for the sum originally proposed, provided Owner notifies the Bidder within 60 Days of Notice to Proceed.

E. SALES TAX

The Bidder agrees that the amounts indicated in the proposal do not include Washington State and local sales taxes except as required by the Instructions to Bidders.

F. CONTRACT PROVISIONS

Should the Bidder be notified of the acceptance of this proposal within 60 Days from the date set for the opening thereof or at any time thereafter before this proposal is withdrawn, the bidder agrees to execute a Contract for the Work and to furnish the required bonds.

1. TIME OF COMPLETION
   The bidder agrees, if awarded a Contract for the Work, to complete the Work within the Contract Time specified.

2. LIQUIDATED DAMAGES
   The bidder agrees that time is of the essence of the Contract and acknowledges that the amount of damages specified is a measure of the damages which the Owner will sustain should the Bidder fail to complete the Work within the Contract
G. BID GUARANTEE

The Bidder agrees that the bid guarantee accompanying the Part A Form of Proposal is left in escrow with Owner, that the amount of the guarantee is the measure of the damages that Owner will sustain by failure of the bidder to execute a Contract for the Work and furnish required bonds, and that if the bidder fails to deliver said documents within 10 Days after receipt of notice of award to the bidder, the bid guarantee shall become the property of Owner.

H. MINORITY AND WOMEN'S BUSINESS ENTERPRISE (MWBE) PARTICIPATION

Owner is committed to the enhancement of opportunities for minority and women owned and controlled firms in public contracting. While neither required, nor a part of bidder responsiveness, the use or solicitation of minority and women business enterprises is expressly encouraged.

I. CONTRACTOR AND SUBCONTRACTOR PARTICIPATION

If Base Bid exceeds one million dollars ($1,000,000), the Bidder agrees, if awarded the Contract, that all firms named on Part B of the Form of Proposal will be directly subcontracted for performance of their respective work category.

J. ADDENDA

The bidder hereby acknowledges receipt of Addendum by number(s):

____   _____   _____   _____   _____   _____   _____   _____   _____   _____

K. PREVAILING WAGE CERTIFICATION

The bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, or through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, any provision of chapter 49.46, 49.48, or 49.52 RCW, as defined in RCW 49.48.82.

L. DECLARATION

The bidder represents and warrants that he/she possess the authority to sign for and bind bidder.

The Bidder declares under penalty of perjury under the laws of the State of Washington, that all of the foregoing information as recited is true and correct to the best of his/her knowledge.

Bidder’s Firm Name: ____________________________

Signed By: ____________________________ Official Title: ____________________________
Print Name: ________________________________________________________________

Address: __________________________________________________________________

City: ___________________________ State: _______________ Zip Code: _______

Telephone: ______________________ Fax: ________________________________

State of Washington Contractor’s License Number: __________________________

Federal Tax Identification Number: _________________________________________

Email Address: __________________________________________________________

The firm represented by the above signature is a:

Sole Proprietorship ___________
Partnership ___________
Corporation ___________ State of Incorporation _________________________
Other ___________

END OF SECTION 00 42 13
Report of Geotechnical Investigation
Proposed WSU
Medical Waste Incinerator
Pullman, Washington

for

Bovay Northwest
March 7, 1997
Job No. 12634-023-701
March 7, 1997

Bovay Northwest
808 East Sprague Avenue
Spokane, Washington 99202

Attn: Ms. Karen Beattie

Report of Geotechnical Investigation
Proposed WSU Medical Waste Incinerator
Pullman, Washington

Dear Ms. Beattie:

This report presents the results of a geotechnical investigation performed at the proposed Washington State University (WSU) Medial Waste Incinerator site. The site is located on Dairy Road, southeast of the main campus in Pullman, Washington. The site location, relative to existing surface features, is shown on Figure 1. The purpose of the investigation is to evaluate subsurface conditions at the proposed site, and provide our findings, conclusions, and recommendations for foundation support of the planned incinerator.

We understand that the medical waste incinerator facility will consist of a cast in place concrete structure with a steel beam and deck roof system. The anticipated foundation loads are approximately 7,000 plf for a continuous wall footing load and a maximum spread footing load of 40,000 pounds.

SCOPE OF SERVICES

As outlined in your scope of services dated December 18, 1996, the scope of our services is as follows:

1. Site exploration by means of excavating test pits and drilled borings using hollow stem auger drilling. The approximate location of the test pits and borings is shown on the Site Plan, Figure 2.

2. Limited laboratory testing of selected soil samples to evaluate the moisture content, grain size, and collapse potential of the site soils. Laboratory test data is presented on the Test Pit Logs in Appendix A, with Raw Laboratory data presented in Appendix B. Test data is also discussed in this report.
3. Development of recommendations for foundation support of the incinerator including an evaluation of the coefficient of subgrade reaction, lateral earth pressure, settlement, bearing pressures, and the need of subgrade preparation.

4. Preparation of this report summarizing the investigation and presenting our conclusions and recommendations.

PROPOSED CONSTRUCTION

The WSU medical waste incinerator building construction is planned to be cast in place concrete walls with a steel beam and deck roof system. The maximum wall height is anticipated to be approximately forty feet. The building will have a slab on grade and continuous wall footings with spread footings at the concentrated column loads. The maximum anticipated continuous wall footing load is approximately 7,000 plf. The maximum spread footing load is approximately 40,000 pounds.

SITE CONDITIONS

The following site conditions, both surface and subsurface, are derived from observations during the field investigations which occurred on January 7, and February 6, 1997.

Surface

Currently the site is occupied by a fenced animal holding area for the WSU Veterinary Department. The site is generally level, and covered with vegetation. The ground was frozen and snow covered during our investigation. Bordering the site, are wire fencing with wood posts.

Subsurface

Our knowledge of site subsurface conditions is based on excavating five test pits (TP-1 through TP-5) to approximately eight feet below ground surface (bgs) and drilling two borings (B-1 & B-2) to a depth of about twenty five feet beneath current site grades at the approximate facility location. The boring and test pit locations were selected by our representative and located approximately within the proposed incinerator location as shown on Figure 2. A graphical representation of the test pit and boring logs are presented in Appendix A. The soils were classified in accordance with the Unified Soil Classification System.

The subsurface soils encountered in the test pit program consisted of an upper eight to twelve inches of organic top soil (OL/OH), underlain by a light brownish, medium stiff silt (ML) which appears to be loessial in nature (i.e. wind-deposited). This silt has a trace of fine sand and was dry to moist
at the time of exploration activities. This silt was encountered to the termination of the test pits at approximately eight feet bgs. During the excavation of the five test pits, construction debris was encountered from throughout the soil column. The debris encountered consisted of bricks, wire, and broken concrete slabs. The presence of this debris indicated that this material is not undisturbed native soil and will be considered imported fill.

As a result of the test pits terminating in fill material, two soil borings were drilled to determine the possible depth and nature of placement of the fill. Boring B-1 and B-2 were drilled to approximately twenty five feet bgs with a hollow stem auger drill rig. Soils encountered in the both borings consisted of a light brown, medium stiff silt (ML) from ground surface to approximately fifteen feet bgs. Laboratory tests have indicated that this soil is not collapsible (see Plate A-10). At approximately fifteen feet bgs, the soil color changed from a light brown to grayish green. The soil type and density, however, did not change. This grayish green horizon was approximately five feet thick which extended from approximately fifteen to twenty feet bgs. The soil encountered from twenty feet to the termination of the borings at twenty five feet bgs, consisted of a brownish, medium stiff to stiff silt (ML).

Groundwater was not encountered during the course of our field investigation. The depth of groundwater, however, may fluctuate in response to seasonal effects, regional rainfall, and other factors not observed during our site investigation.

DISCUSSION AND RECOMMENDATIONS

General

The buildings may be supported on shallow spread footings founded in the existing fill soil provided that footing subgrades are properly inspected and prepared. An allowable bearing pressure of 2000 pounds per square foot (psf) may be used for design. This value may be increased by one third for transient loads from wind or seismic sources. Exterior footings should have a minimum width of 1.5 feet and a minimum embedment of 3 feet for protection against frost action.

We estimate that the total settlement of a fully loaded footing 4 feet in width will be less than 1/4 inch, and that differential settlement across the length of the building will be less than 1/4 inch. These settlements are expected to be elastic in nature and will occur essentially simultaneous with the application of load. No long term settlements are anticipated.

We estimate that a coefficient of subgrade reaction (K) value of 160 pci and a CBR value of 7 would be appropriate for the soils at this site. A soil to concrete friction coefficient of 0.3 may be used for
design purposes. Lateral earth pressures may be estimated using an equivalent fluid unit weight of 34 pcf for the active case, 52 pcf for the at-rest case, and 175 pcf for the passive case.

**Site Preparation**

Organic silt topsoil should be removed from under building and pavements. The subgrade for buildings and pavement should be prepared by proofrolling using vibratory equipment such that the upper 2 feet is compacted to 95 percent of the maximum dry density (as determined by the ASTM D-1557 test method). Any zones of soft or wet soils or deleterious materials in the footing or slab subgrade should be over-excavated and replaced with essentially granular fill soil compacted to 95 percent of the maximum dry density.

**Construction Monitoring and Testing**

We recommend that Dames & Moore be retained to provide construction monitoring and testing services during foundation area preparation. The purpose of our field monitoring services is to confirm that site conditions are as anticipated, to provide field recommendations as required based on conditions encountered, and to document the activities of the contractor to assess compliance with the project recommendations provided by Dames & Moore.

**CLOSURE**

The analyses, conclusions, and recommendations presented in this report are based on site conditions as they existed at the time of our field exploration, and further assume that the conditions encountered in our exploratory boring are representative of subsurface conditions within the project area. If conditions different from those described in this report are encountered or appear to be present beneath excavations, Dames & Moore should be advised at once so that additional recommendations may be provided where necessary.

This report was prepared for the exclusive use of the Bovay Northwest and Washington State University. It should be made available to prospective contractors for information on factual data only and not as a warranty of subsurface conditions.

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J: DATA RPT WSU_INCI.RPT
This report was prepared for the exclusive use of the Bovay Northwest and Washington State University. It should be made available to prospective contractors for information on factual data only and not as a warranty of subsurface conditions.

We appreciate the opportunity of providing these services. If you have any questions or require further information, please call.

Very truly yours,

DAMES & MOORE

Kenneth M. Hoffmann, P.G.
Project Geologist

W. Martin McCabe, P.E.
Senior Geotechnical Engineer

Attachments:

- Figure 1 - Site Location Plan
- Figure 2 - Site Plan
- Appendix A - Log of Test Pits and Borings
- Appendix B - Laboratory Test Results

SITE VICINITY MAP
WSU/Bovay Northwest
February 1997
Medical Waste Incinerator
12634-023-701
Pullman, Washington

Dames & Moore

FIGURE 1
**LOG OF TEST PIT NO. TP-1**

**PROJECT:** WSU Medical Waste Incinerator  
**PROJECT NO.:** 12634-023-701  
**PROJECT LOCATION:** Pullman, Washington  
**DATE STARTED:** January 7, 1997  
**DATE COMPLETED:** January 7, 1997  
**EXCAVATING CONTRACTOR:** Motley & Motley

**SAMPLING METHOD:** Grab

<table>
<thead>
<tr>
<th>PERCENT</th>
<th>DENSITY</th>
<th>MOISTURE CONTENT</th>
<th>BLOW COUNT</th>
<th>SAMPLE</th>
<th>ELEVATION (ft.)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
<th>SAMPLE TYPE KEY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Relatively undisturbed sample</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disturbed sample</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sample attempt with no recovery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bag or grab sample</td>
</tr>
</tbody>
</table>

**DESCRIPTION:**

- OL 0: Organic topsoil
- ML 5: Light brown silt with trace fine sand. (damp) (loess)

**Remarks:**

Test pit completed at a depth of 8 feet below the ground surface.  
No ground water was encountered during excavation.

**WATER LEVEL:**  
**DATE:**  
**TIME:**  
**GROUND SURFACE ELEVATION:**  
**DATUM:**  
**WEATHER:**  
**FIELD ENGINEER:** Ken Huffmann  
**PREPARED BY:** Todd Parkington

**NOTES:**

**LOG OF TEST PIT TP-1**

DAMES & MOORE

Plate A-1
**LOG OF TEST PIT NO. TP-2**

**PROJECT:** WSU Medical Waste Incinerator

**PROJECT NO:** 12634-023-701

**PROJECT LOCATION:** Pullman, Washington

**DATE STARTED:** January 7, 1997

**DATE COMPLETED:** January 7, 1997

**EXCAVATING CONTRACTOR:** Motley & Motley

**SAMPLE TYPE KEY:**
- Relatively undisturbed sample
- Disturbed sample
- Sample attempt with no recovery
- Bag or grab sample

**DESCRIPTION**

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<thead>
<tr>
<th>ELEVATION (ft)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>OL</td>
<td>Topsoil</td>
</tr>
<tr>
<td></td>
<td>ML</td>
<td>Light brown silt with trace sand, (damp) loess fill</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concrete debris 2 feet long by 1 inch thick.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wire debris and bricks.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
Test pit completed at a depth of 8 feet below the ground surface.
No ground water was encountered during excavation.

**PREPARED BY:** Todd Parkington

---

**SAMPLING METHOD:** Grab
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<thead>
<tr>
<th>SAMPLE TYPE KEY:</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively undisturbed sample</td>
<td>Light brown silt with trace fine sand. (damp) (loess fill)</td>
<td>Several pieces of concrete debris 2 inches thick and 1 to 2 feet long.</td>
</tr>
<tr>
<td>Disturbed sample</td>
<td>Test pit completed at a depth of 8 feet below the ground surface. No ground water was encountered during excavation.</td>
<td></td>
</tr>
<tr>
<td>Sample attempt with no recovery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bag or grab sample</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Log of Test Pit No. TP-3**

**Project:** WSU Medical Waste Incinerator

**Project No.:** 12634-023-701

**Project Location:** Pullman, Washington

**Date Started:** January 7, 1997

**Date Completed:** January 7, 1997

**Excavating Contractor:** Motley & Motley

**Sample Type Key:**
- Relatively undisturbed sample
- Disturbed sample
- Sample attempt with no recovery
- Bag or grab sample

**Notes:**

**Prepared By:** Todd Parkington

**Field Engineer:** Ken Hoffmann

**Ground Surface Elevation:**

**Datum:**

**Weather:**

**Water Level:**

**Date:**

**Time:**

**Description:**

**Remarks:**
**LOG OF TEST PIT NO. TP-4**

**PROJECT:** WSU Medical Waste Incinerator  
**PROJECT NO:** 12634-023-701  
**PROJECT LOCATION:** Pullman, Washington

**DATE STARTED:** January 7, 1997  
**DATE COMPLETED:** January 7, 1997  
**EXCAVATING CONTRACTOR:** Motley & Motley

**WATER LEVEL:**  
**DATE:**  
**TIME:**

**GROUND SURFACE ELEVATION:**  
**DATUM:**  
**WEATHER:**  
**FIELD ENGINEER:** Ken Hoffmann  
**PREPARED BY:** Todd Parkington

**SAMPLING METHOD:** Grab

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<thead>
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<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Relatively undisturbed sample</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Disturbed sample</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Sample attempt with no recovery</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Bag or grab sample</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERFNT</th>
<th>DRY DENSITY (pcf)</th>
<th>MOISTURE CONTENT (%</th>
<th>BLOWS PER FOOT</th>
<th>SAMPLE ELEVATION (ft.)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Topsoil</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Light brown silt with trace fine sand. (damp) (loess fill)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wood and concrete debris.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Test pit completed at a depth of 7 feet below the ground surface. No ground water was encountered during excavation.</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

LOG OF TEST PIT TP-4  
DAMES & MOORE  
Plate A-4
LOG OF TEST PIT NO. TP-5

PROJECT: WSU Medical Waste Incinerator
PROJECT NO: 12634-023-701
PROJECT LOCATION: Pullman, Washington

DATE STARTED: January 7, 1997
DATE COMPLETED: January 7, 1997
EXCAVATING CONTRACTOR: Motley & Motley

WATER LEVEL: __________
DATE: __________
TIME: __________

GROUND SURFACE ELEVATION: __________
DATUM: __________
WEATHER: __________
HELD ENGINEER: Ken Hoffmann
PREPARED BY: Todd Parkington

SAMPLING METHOD: Grab

<table>
<thead>
<tr>
<th>PERCENT FINES</th>
<th>DENSITY (g/cc)</th>
<th>DRY MOISTURE CONTENT (%)</th>
<th>BLOWN PER FOOT</th>
<th>SAMPLE ELEVATION(ft)</th>
<th>DEPTH (ft)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Topsoil</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Light brown silt with trace fine sand. (damp) (loess fill)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Concrete debris and bricks.</td>
<td></td>
</tr>
</tbody>
</table>

Test pit completed at a depth of 8 feet below the ground surface.
No ground water was encountered during excavation.
LOG OF BORING NO. B-1

PROJECT: WSU Medical Waste Incinerator
PROJECT NO: 12634-023-701
LOCATION: Pullman, Washington

DATE STARTED: February 6, 1997
DATE COMPLETED: February 6, 1997
DRILLING CONTRACTOR: Environmental West
DRILLER: Hollow stem auger
SAMPLING METHOD: D&M, 140# hammer, 30" drop

GROUNDS SURFACE ELEVATION: DATUM: WEATHER
FIELD ENGINEER: Ken Hoffmann PREPARED BY: Todd Parkington

SAMPLE TYPE KEY:
- Relatively undisturbed sample
- Disturbed sample
- Sample attempt with no recovery
- Bag or grab sample

DESCRIPTION

<table>
<thead>
<tr>
<th>ELEVATION (Ft.)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 10.00</td>
<td></td>
<td></td>
<td>Light brown silt with some sand. (moist) (medium stiff) (fill)</td>
</tr>
<tr>
<td>10.00 - 15.00</td>
<td></td>
<td></td>
<td>Grades to stiff.</td>
</tr>
<tr>
<td>15.00 - 20.00</td>
<td></td>
<td></td>
<td>Light brown silt with some sand. (moist) (hard) (native soil)</td>
</tr>
<tr>
<td>20.00 - 25.00</td>
<td></td>
<td></td>
<td>Boring completed at a depth of 26.5 feet below the ground surface. No ground water was encountered during drilling.</td>
</tr>
</tbody>
</table>

NOTES:

DAMES & MOORE

LOG OF BORING B-1

Plate A-6
## LOG OF BORING NO. B-2

**PROJECT:** WSU Medical Waste Incinerator  
**DATE STARTED:** February 6, 1997  
**DATE COMPLETED:** February 6, 1997  
**DRILLING CONTRACTOR:** Environmental West  
**DRILLER:**  
**DRILLING METHOD:** Hollow stem auger  
**SAMPLING METHOD:** D&M, 140# hammer, 30" drop

<table>
<thead>
<tr>
<th>PERCENT FINES</th>
<th>DRY DENSITY (p-cf)</th>
<th>MOISTURE CONTENT (%)</th>
<th>BLOWS PER FOOT</th>
<th>SAMPLE TYPE</th>
<th>ELEVATION (ft.)</th>
<th>USCS</th>
<th>GRAPHIC SYMBOL</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td>Light brown silt with some sand. (moist) (stiff) (fill)</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>20.3</td>
<td>20</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>Gray silt with some sand. (moist) (stiff to very stiff) (native soil)</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td>Boring completed at a depth of 27 feet below the ground surface. No ground water was encountered during drilling.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NOTES:

![DAMES & MOORE Logo]

LOG OF BORING B-2  
**PREPARED BY:** Todd Parkington  
**FIELD ENGINEER:** Ken Hoffmann

**WATER LEVEL:**  
**GROUND SURFACE ELEVATION:**  
**DATUM:**  
**WEATHER:**
DENOTES APPROX. AREA OF EXISTING CONCRETE SLAB TO BE REMOVED. ACTUAL AREA AND THICKNESS TO BE FIELD VERIFIED. EXISTING SUBGRADE TO BE RESTORED TO APPROXIMATE GRADE LEVEL AND PREPARED FOR NEW CONCRETE FOUNDATION AND SLAB.

EXISTING CONCRETE FEED TROUGH TO BE REMOVED BY OWNER.

EXISTING METAL FENCING, GATES AND RELATED COMPONENTS TO BE REMOVED BY OWNER.

APPROXIMATE LINE OF EXISTING DUMPSTER TO BE REMOVED BY OWNER.

EXISTING POLE BARN TO BE REMOVED INC. CONCRETE SLAB AND ALL MATERIALS DISPOSED OF BY THE CONTRACTOR.

SEE MECHANICAL AND ELECTRICAL FOR ADDITIONAL DEMOLITION REQUIREMENTS.

EXISTING METAL FENCING, GATES AND RELATED COMPONENTS TO BE REMOVED BY OWNER.
The following calculations format meets the requirements of WAC 296-46B-900(3)(j):

**CUSTOMER** 300 KVA Transformer

**Peak demand on Jan-19:** 34.4865 kW

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power factor:</td>
<td>80 %</td>
</tr>
<tr>
<td>Apparent peak demand:</td>
<td>43.1 kVA</td>
</tr>
<tr>
<td>NEC Article 220-87 (2) adjustment factor:</td>
<td>125 %</td>
</tr>
<tr>
<td>Adjusted peak demand:</td>
<td>53.9 kVA</td>
</tr>
<tr>
<td>Seasonal adjustment factor:</td>
<td>1</td>
</tr>
<tr>
<td>Adjusted peak demand:</td>
<td>53.9 kVA</td>
</tr>
<tr>
<td>Occupancy adjustment factor:</td>
<td>1</td>
</tr>
<tr>
<td>Adjusted peak demand:</td>
<td>53.9 kVA</td>
</tr>
<tr>
<td>Other adjustment factor(s):</td>
<td>1</td>
</tr>
<tr>
<td>Adjusted peak demand:</td>
<td>53.9 kVA</td>
</tr>
<tr>
<td>New calculated load being added:</td>
<td>25.7 kVA</td>
</tr>
</tbody>
</table>

**ADJUSTED MAXIMUM ANNUAL DEMAND:** 79.6 kVA

96 AMP

08-Mar-19