

March 28, 2025

TO: PLANHOLDERS

SUBJECT: WEST SITCUM BLDG 950 SEWER & BATHROOM UPGRADES  
PROJECT NO. 201189.01  
CONTRACT NO. NWSA-PA-000000072

### **ADDENDUM NUMBER 02**

This addendum is issued to amend the following:

#### **SPECIFICATIONS**

##### **A. SECTION 00 07 07 – Seals Page**

1. Added Industrial Hygienist details.

##### **B. SECTION 00 01 10 - Table of Contents**

1. Add Section 02 82 14 – Asbestos Abatement,
2. Add Section 02 83 13 – Lead in construction control procedure
3. Appendix C – Hazardous Materials Assessment Report

##### **C. SECTION 00 11 13 - Advertisement for Bids**

1. Add abatement of regulated materials to scope of work. See attached revised specifications.

##### **D. SECTION 00 31 26 - Existing Hazardous Material Information**

1. Replace 1.02 A with Contractor is notified that certain portions of the Work area are known to contain lead or asbestos-containing materials (ACM), as detailed in the Hazardous Materials Assessment Report provided in Appendix C. See attached revised specifications.

##### **E. SECTION 00 41 00 - Bid Form**

1. Add bid item No.4, Abatement of Regulated Materials. See attached revised specifications.

##### **F. SECTION 00 73 46 - Port-Washington State Prevailing Wage Rates**

1. Change the applicable effective date for prevailing wages for this Project to 04/09/25. See attached revised specifications.

**G. SECTION 01 10 00 - PORT-Summary**

1. Add to 1.01-A-2: Work also includes abatement of regulated materials. See attached revised specifications.

**H. SECTION 01 14 00 - Work Restrictions**

1. Add to 1.03: The Port will provide temporary bathrooms for the tenant to use during construction. See attached revised specifications.

**I. SECTION 01 20 00 - Price and Payment Procedures**

1. Add to 1.07: Bid item #4 description, measurement and payment details. See attached revised specifications.

**J. SECTION - 02 82 14 - USER-ASBESTOS ABATEMENT**

1. This is a new Added section. See attached specifications.

**K. SECTION - 02 83 13 - USER-LEAD IN CONSTRUCTION CONTROL PROCEDURES**

1. This is a new Added section. See attached new specifications.

**DRAWINGS**

**A. See table below and attached revised Drawings for changes made to individual drawings.**

<b>Drawing List</b>			
<b>Sheet Designation</b>	<b>Sheet #</b>	<b>Sheet Title</b>	<b>Change</b>
G1	1	COVER	Replace Title Block
G2.0	2	CONSTRUCTION ACCESS	Replace Title Block
G2.1	3	CONSTRUCTION LAYDOWN	Replace Title Block
AD1.1	4	FIRST FLOOR AND ENLARGED DEMOLITION PLANS	Replace Title Block, and Add area of ACM Black Mastic Under Floor Tile
AD1.2	5	FIRST FLOOR ENLARGED DEMOLITIONPLAN	Replace Title Block

AD1.3	6	SECOND FLOOR AND ENLARGED DEMOLITION PLANS	Replace Title Block
AD1.4	7	THIRD FLOOR AND ENLARGED DEMOLITION PLANS	Replace Title Block
A1.1	8	FIRST FLOOR ANAD ENLARGED PLANS	Replace Title Block
A1.2	9	FIRST FLOOR ENLARGED PLAN	Replace Title Block
A1.3	10	SECOND FLOOR AND ENLARGED PLANS	Replace Title Block
A1.4	11	THIRD FLOOR AND ENLARGED PLANS	Replace Title Block
A5.1	12	SECTION AND DETAILS	Replace Title Block
A5.2	13	SECTION AND DETAILS	Replace Title Block
A5.3	14	SECTION AND DETAILS	Replace Title Block
A6.1	15	SCHEDULES	Replace Title Block
M0.0	16	HVAC LEGEND, ABBREVIATIONS AND GENERAL NOTES	Replace Title Block
MD1.3	17	SECOND FLOOR ROOF HVAC DEMO PLAN	Replace Title Block
M1.3	18	SECOND FLOOR ROOF HVAC PLAN	Replace Title Block
M6.1	19	HVAC SCHEDULES	Replace Title Block
P0.0	20	PLUMBING LEGEND, ABBREVIATIONS AND GENERAL NOTES	Replace Title Block
PD1.0	21	FOUNDATION PLUMBING DEMO PLAN	Replace Title Block
PD1.1	22	FIRST FLOOR AND ENLARGED PLUMBING DEMO PLAN	Replace Title Block
PD1.2	23	SECOND FLOOR PLUMBING DEMO PLAN	Replace Title Block
PD1.3	24	SECOND FLOOR AND ENLARGED PLUMBING DEMO PLAN	Replace Title Block
PD5.1	25	PLUMBING DEMO DIAGRAMS AND DETAILS	Replace Title Block
P1.0	26	FOUNDATION PLUMBING PLANS	Replace Title Block
P1.1	27	FIRST FLOOR AND ENLARGED PLUMBING PLANS	Replace Title Block

P1.2	28	FIRST FLOOR ENLARGED PLUMBING PLANS	Replace Title Block
P1.3	29	SECOND FLOOR AND ENLARGED PLUMBING PLANS	Replace Title Block
P1.4	30	THIRD FLOOR AND ENLARGED PLUMBING PLANS	Replace Title Block
P5.1	31	PLUMBING DIAGRAMS AND DETAILS	Replace Title Block
P6.1	32	PLUMBING SCHEDULES	Replace Title Block

**ATTACHMENTS:**

- A. Updated Project Drawings
- B. Updated Specification Sections
- C. Appendix C - Hazardous Materials Survey Report

**END OF SECTION**

**Attachment A**  
**Updated Project Drawings**  
**(See separate document)**

**Attachment B**  
**Updated Specification Sections**

The undersigned Engineer of Record hereby certifies that the Technical Specifications for the following portions of this project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington, and hereby affix my Professional Seal and signature.

Those Sections prepared under my direct supervision and being certified by my seal and signature below are as follows:

<b>SEAL &amp; SIGNATURE</b>	<b>SECTION(S)</b>
<p>9406</p>  <p>02/04/2025</p>	<p>00 00 01    08 10 00    09 65 10                      00 00 02    08 21 00    10 14 00                      01 77 00    09 22 16    10 21 14                      02 07 00    09 26 00    10 26 00                      06 64 00    09 30 00    10 28 00                      07 92 00    09 65 00    12 36 61</p>
 <p>10/25/24</p>	<p>20 05 00    22 05 53                      20 05 03    22 10 06                      20 05 05    22 13 00                      20 05 29    22 40 00                      20 05 30    23 05 93                      20 05 90    23 34 00</p>
 <p><b>TETRA TECH</b></p> <p>David Braungardt                      Industrial Hygienist</p>  <p>3/25/2025</p>	<p>02 82 14                      02 83 13</p>

**END OF SECTION**

## **PROCUREMENT AND CONTRACTING REQUIREMENTS**

### **DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS**

- 00 01 01 - Project Title Page
- 00 01 07 - Seals Page
- 00 01 10 - Table of Contents
- 00 01 15 - List of Drawing Sheets
- 00 11 13 - Advertisement for Bids
- 00 21 00 - Instructions to Bidders
- 00 26 00 - Substitution Procedures
- 00 31 00 - Available Project Information
- 00 31 26 - Existing Hazardous Material Information
- 00 41 00 - Bid Form
- 00 43 13 - Bid Security Form
- 00 45 13 - Responsibility Detail Form
- 00 52 00 - Agreement Form
- 00 61 13.13 - Performance Bond
- 00 61 13.16 - Payment Bond
- 00 61 23 - Retainage Bond
- 00 72 00 - General Conditions
- 00 73 16 - Insurance Requirements
- 00 73 46 - Washington State Prevailing Wage Rates
- 00 73 63 - Security Requirements

## **SPECIFICATIONS**

### **DIVISION 01 -- GENERAL REQUIREMENTS**

- 01 10 00 - Summary
- 01 14 00 - Work Restrictions
- 01 20 00 - Price and Payment Procedures
- 01 26 00 - Change Management Procedures
- 01 29 73 - Schedule of Values
- 01 30 00 - Administrative Requirements
- 01 31 23 - Web-based Construction Management
- 01 32 16 - Construction Progress Schedule
- 01 33 00 - Submittal Procedures

01 35 29 - Health, Safety, and Emergency Response Procedures

01 35 43.13 - Hazardous Materials Handling Procedure

01 35 43.19 - Export Soil Management

01 35 47 - Air and Noise Control Procedures

01 41 00 - Regulatory Requirements

01 42 19 - Reference Standards

01 45 00 - Quality Control

01 50 00 - Temporary Facilities and Controls

01 55 00 - Vehicular Access and Parking

01 57 13 - TESC and Project SWPPP

01 60 00 - Product Requirements

01 71 00 - Examination and Preparation

01 74 13 - Construction Cleaning

01 74 16 - Soil Characteristics and Waste Management

01 77 00 - Closeout Procedures

#### DIVISION 02 -- EXISTING CONDITIONS

02 07 00 - Selective Demolition

[02 82 14 – Asbestos Abatement](#)

[02 83 13 – Lead in Construction Control Procedures](#)

#### DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES

06 64 00 - Fiberglass Reinforced Plastic Panels

#### DIVISION 07 -- THERMAL AND MOISTURE PROTECTION

07 92 00 - Joint Sealants

#### DIVISION 08 -- OPENINGS

08 10 00 - Hollow Metal Frames

08 21 00 - Wood Doors

#### DIVISION 09 -- FINISHES

09 22 16 - Non-Structural Metal Framing

09 26 00 - Gypsum Board Assemblies

09 30 00 - Ceramic Tile

09 65 00 - Resilient Base

09 65 10 - Resilient Flooring

09 91 00 - Painting

DIVISION 10 -- SPECIALTIES

10 14 00 - Signage

10 21 14 - Toilet Compartments HDPE

10 26 00 - Wall Protection

10 28 00 - Toilet Room Accessories

DIVISION 12 -- FURNISHINGS

12 36 61 - Solid Surfacing Countertops

APPENDICES

Appendix A - Building Permit BLDCA24-0432

Appendix B - Port of Tacoma SWPPP Short Form

[Appendix C – Hazardous Materials Assessment Report](#)

**END OF SECTION**

**WEST SITCUM BLDG. 950 SEWER AND BATHROOM UPGRADES**

**PROJECT NO. 201189.01 | CONTRACT NO. NWSA-PA-00000072**

- Scope of Work: The Work required for this Project includes:  
Replace all existing plumbing and fixtures in existing restrooms, janitor closets, and breakrooms along with converting one (1) locker room into a new women's restroom. Scope of work also includes replacing floor finishes, all finishes, toilet screens, restroom accessories, countertops, exhaust fans, and painting, and finish work. Abatement of regulated materials.
- Bid Estimate: Estimated cost range is \$916,000 to \$1,012,000, plus Washington State Sales Tax (WSST).  
  
In accordance with RCW 39.04.320, fifteen (15) percent apprenticeship participation is required for certain projects estimated to cost one million (\$1,000,000) dollars or more. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530, by phone (360) 902-5320, or e-mail at [Apprentice@lni.wa.gov](mailto:Apprentice@lni.wa.gov), to obtain information on available apprenticeship programs.
- Sealed Bid Date/  
Time/Location: Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until **2:00 P.M. on 03/27/25 04/09/25**, at which time they will be publicly opened and read aloud and the apparent low bid will be determined.
- Pre-Bid  
Conference and  
Site Tour: A pre-Bid conference and site visit have been set for 3/04/25 at 11:00 AM The site visit will convene at the Port's Administrative building, located at One Sitcum Plaza. The following Personal Protective Equipment is required for the site visit: sturdy shoes, reflective vest, gloves, safety glasses, hearing protection, and hardhat.  
  
Attendees will be required to sign a Release and Acceptance of Responsibility and Acknowledgement of Risks Form prior to entering the site and shall provide their own Personal Protection Equipment (PPE) as required above.
- Bid Security: Each Bid must be accompanied by a Bid security in an amount equal to five (5) percent of the Base Bid in a form allowed by the Instructions to Bidders.

**Contact Information:** Any questions to the Port may be submitted to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

Questions will not be accepted after seven (7) days prior to the Bid Date.

**Bidding Documents:** Plans, Specifications, Addenda, and Plan Holders List for this Project are available on-line through The Port of Tacoma's Website [portoftacoma.com](http://portoftacoma.com). Click on "Contracts," "Procurement," and then the Procurement Number NWSA-PA-000000072. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List.

Holder's Lists will be updated regularly and posted to the specific procurements page. Additional Instructions available in Section 00 21 00 - Instructions to Bidders.

**Public Works Training Requirements:** Effective July 1, 2019, all businesses are required to have training before bidding on public works projects and prevailing wage under RCW 39.04.359 and RCW 39.12, or is on the list of exempt businesses maintained by the Department of Labor and Industries. The bidder must designate a person or persons to be trained on these requirements. The training will be provided by the Department of Labor and Industries or by a training provider whose curriculum is approved by the Department of Labor and Industries.

Please refer to Labor and Industries' web site ([https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm\\_medium=email&utm\\_source=govdelivery](https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm_medium=email&utm_source=govdelivery)) for more information and training dates, requirements, and exemptions. Failure to attend this training could result in a determination of "not responsible" and the bidder not being awarded a public works contract.

Additional Information: In accordance with new legislation HB 1050 all port districts are required to add the requirement that apprentices must perform 15% or more of the total labor hours in public works contracts estimated at \$1 million or more. If the 15% apprenticeship labor hours is met the contractor will receive an incentive fee of \$1,000. If less than 15% apprenticeship labor hours is used a \$500 decrease in the total amount of the contract will be taken for not meeting the required apprenticeship labor hours. L&I will monitor apprenticeship labor hours

**END OF SECTION**

## **PART 1 - GENERAL**

### 1.01 SUMMARY

- A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

### 1.02 HAZARDOUS MATERIALS NOTICE

~~A. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.~~

Contractor is notified that certain portions of the Work area are known to contain lead or asbestos-containing materials (ACM), as detailed in the Hazardous Materials Assessment Report provided in Appendix C.

## **PART 2 - PRODUCTS - NOT USED**

## **PART 3 - EXECUTION - NOT USED**

**END OF SECTION**

**BIDDER'S NAME:** \_\_\_\_\_

**PROJECT TITLE:** WEST SITCUM BLDG. 950 SEWER AND BATHROOM UPGRADES

The undersigned Bidder declares that it has read the Contract Documents (including documents provided by reference), understands the conditions under which the Work will be performed, has examined the Project site, and has determined for itself all situations affecting the Work herein Bid upon. Bidder proposes and agrees, if this Bid is accepted, to provide at Bidder's own expense, all labor, machinery, tools, materials, etc., including all Work incidental to, or described or implied as incidental to such items, according to the Contract Documents, and that the Bidder will complete the Work within the time stated, and that Bidder will accept in full the lump sum or unit price(s) set forth below:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE (QTY. x UNIT PRICE)
1	Mobilization and Demobilization	1	LS		
2	Project Administration	1	LS		
3	Project Demolition and Construction	1	LS		
<u>4</u>	<u>Abatement of Regulated Materials</u>	<u>1</u>	<u>LS</u>		

TOTAL BID AMOUNT	
10.3% WASHINGTON STATE SALES TAX (WSST) ON BASE BID SUBTOTAL	
BID TOTAL (WITH WSST)	

Note: Show prices in figures only.

Evaluation of Bids. In accordance with the provisions of the Contract Documents, Bids will be evaluated to determine the lowest Base Bid Subtotal offered by a responsible Bidder submitting a responsive Bid.

Schedule of Unit Prices. The unit prices are proposed to apply only in the event of additions to, or deletions from, the work required and ordered. All prices shall include complete installation without Washington State Sales Tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The Port reserves the right to accept or reject the unit prices proposed.

Trench Excavation Safety: \_\_\_\_\_ (Total in Written Figures Only)

Principal Subcontractors/Suppliers. For Bids greater than one million (\$1,000,000) dollars, the Bidder shall list below the name of each subcontractor or supplier to whom the Bidder proposes to subcontract the portions of the work listed below, or name itself for the work, in accordance with RCW 39.30.060.

Work to be preformed	License Number	Name of Firm
HVAC (Heating, Ventilation, and Air Conditioning) Work		
Plumbing Work		
Electrical Work		
Structural Steel Installation		
Rebar Installation		

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further represents that the Bidder has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or encouraged any other person or corporation to refrain from bidding; and that the Bidder has not in any manner sought by collusion to secure to the Bidder an advantage over any other bidder or bidders.

RCW 39.04.350 Certification. The Bidder represents and certifies, under penalty of perjury, that within the three- (3-) year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, nor through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, nor 49.52 RCW.

Addenda. Bidder acknowledges receipt and acceptance of all Addenda through No. \_\_\_\_ (Identify Last Addenda By Number)

Bid Security. A certified check, cashier's check, or other obligation of a bank, or a bid bond in substantially the form set forth in Section 00 43 13, Bid Security Form for at least five (5) percent of the Base Bid Subtotal, shall be submitted with this Bid.

Apprenticeship Requirements. For Bids greater than one million (\$1,000,000) dollars, the apprentice labor hours required for this project are fifteen (15) percent of the total labor hours. The Bidder agrees to utilize this level of apprentice participation.

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
By Title

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
City, State Zip Code

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Email Address

\_\_\_\_\_  
WA State Contractor's License No.

\_\_\_\_\_  
Employment Security Department No.

\_\_\_\_\_  
Identification of Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

**END OF SECTION**

## PART 1 - GENERAL

### 1.01 PREVAILING AND OTHER REQUIRED WAGES

- A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.
- B. Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" in effect as of the date that bids are due.
  - 1. Based on the Bid Date, the applicable effective date for prevailing wages for this Project is ~~03/27/25~~ 04/09/25.
- C. The State of Washington prevailing wage rates applicable for this public works Project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>
- D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein, and a printed copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at 1 Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at [procurement@portoftacoma.com](mailto:procurement@portoftacoma.com), the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this Project.
- E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.
  - Mailing Address: Washington State Department of Labor and Industries  
Prevailing Wage Office  
P.O. Box 44540  
Olympia, WA 98504
  - Telephone: (360) 902-5335
  - Facsimile: (360) 902-5300
- 1. If there is any discrepancy between the provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid.
- F. Statement to Pay Prevailing Wages
  - 1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries for approval.
  - 2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor's contractor registration number and other information required by the Department of Labor and Industries.

3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.
- G. The Contractor shall post, in a location readily visible to workers, at the Project site: (i) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (ii) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.
- H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.
- I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.
- J. Immediately following the end of all Work completed under this Contract, the Contractor and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the Department of Labor and Industries.
- K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct, indirect, including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or RCW Title 51 ("Industrial Insurance"), including, but not limited to, RCW 51.12.050.

**PART 2 - PRODUCTS - NOT USED**

**PART 3 - EXECUTION - NOT USED**

**END OF SECTION**

**PART 1 - GENERAL**

1.01 SCOPE

- A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.
  - 1. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in the project plans and specifications.
  - 2. The West Sitcum Bldg. 950 Sewer and Bathroom Upgrades scope of work includes but is not limited to replacing all existing plumbing and fixtures in existing restrooms, janitor closets and breakrooms along with converting one (1) locker room into a new women's restroom. Scope of Work also includes replacing floor finishes, wall finishes, toilet compartments, restroom accessories, countertops, exhaust fans, and painting in these rooms as well. Work also includes abatement of regulated materials.

1.02 LOCATION

- A. The work is located at:  
1675 Lincoln Ave, Bldg.950 Tacoma WA, 98421

**PART 2 - PRODUCTS - NOT USED**

**PART 3 - EXECUTION - NOT USED**

**END OF SECTION**

## **PART 1 - GENERAL**

### 1.01 SUMMARY

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

### 1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
  - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
- B. Occupied Building
  - 1. The Contractor will be working in an existing building which is occupied during normal business hours, as stipulated below.
  - 2. Protect materials and equipment in areas adjoining the immediate work area.
- C. Working Facility
  - 1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.
  - 2. Building 950 is located on the West Sitcum Terminal, a secure and restricted site. All work performed at the West Sitcum Terminal will require Transportation Worker Identification Credentials (TWIC) as specified in Section 00 73 63 Security Requirements
  - 3. TWIC Escorting Requirements:
    - a. All contractor personnel, including subcontractors will be required to have TWIC cards. Escorting personnel without TWIC cards will only be allowed for deliveries
- D. Work Site Regulations
  - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
    - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.
    - b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.
    - c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

### 1.03 CONSTRAINTS - GENERAL

- A. Contractor is to use all means possible to minimize noise, dust and smell inside the building during construction work. This includes but is not limited to using fans to blow the smell outside of the building, and temporary capping cut sewer pipes to eliminate the smell.
- B. Sheet vinyl floor in break rooms and hallways will be installed over the weekend when the building is not occupied.
- C. Storage, and placement of contractor equipment, material and dumpster will be limited to the laydown area as shown on the drawings. Contractor will not be allowed to have dumpster in front of the entrance, or other locations during construction.
- D. Contractor is to schedule work in a manner that allows at least one of the breakrooms to be available to the terminal workers during construction.
- E. Saw cutting and noisy demolition is to be performed during weekends and / or nights when the building is not occupied
- F. The Port will provide temporary bathrooms for the tenant to use during construction.

### PART 2 - PRODUCTS

### PART 3 - EXECUTION

**END OF SECTION**

## **PART 1 - GENERAL**

### 1.01 SUMMARY

- A. Procedures for preparation and submittal of applications for progress payments.

### 1.02 PAYMENT PROCEDURES

- A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.
  - 1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.
- B. For each pay estimate the Contractor shall submit the following:
  - 1. Completed Contractor invoice and updated Schedule of Values tracking sheet as required by Division 01 or as established by the Engineer.
  - 2. Baseline Project Schedule and narrative updated as required by Section 01 32 16 of the Project Manual.
  - 3. Completed "Amounts Paid to Subcontracts and Suppliers" showing total contract amount, amount paid this estimate, total paid to date, and balance owing.
  - 4. Completed "Conditional Release and Waiver of Liens and Claims."
  - 5. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.
- C. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.
  - 1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.
  - 2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.
  - 3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.
  - 4. The Contractor shall submit the updated baseline project schedule for review prior to submitting the payment application to ensure the payment processing is not held up due to necessary schedule revisions.
- D. Following the Engineers' review, the Contractor shall submit the agreed upon pay estimate electronically, with complete supporting documentation, using Microsoft Dynamic 365, or as directed by the Engineer.

### 1.03 PAYMENT PRICING

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.
- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

### 1.04 LUMP SUM MEASUREMENT

- A. Lump sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.
  - 1. If the Contractor requests progress payments for lump sum items, such progress payments will be made in accordance with an approved Schedule of Values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

### 1.05 MEASUREMENT OF QUANTITIES FOR UNIT PRICES

- A. Measurement Standards:
  - 1. All Work to be paid for at a contract price per unit measurement, as indicated in the Contractor's submitted bid, will be measured by the Engineer in accordance with United States Standard Measures.
- B. Measurement by Weight:
  - 1. Reinforcing steel, steel shapes, castings, miscellaneous metal, metal fabrications, and similar items to be paid for by weight shall be measured by scale or by handbook weights for the type and quantity of material actually furnished and incorporated into the Work.

2. Unless shipped by rail, material to be measured and paid for by weight shall be weighed on sealed scales regularly inspected by the Washington State Department of Agriculture's Weights and Measures Section or its designated representative. Measurement shall be furnished by and at the expense of the Contractor. All weighing, measuring, and metering devices shall be suitable for the purpose intended and shall conform to the tolerances and specifications as outlined in Washington State Department of Transportation Standard Specifications, Division 1, General Requirements, Article 1-09.2, Weighing Equipment.
  3. Provide or utilize platform scales of sufficient size and capacity to permit the entire vehicle or combination of vehicles to rest on the scale platform while being weighed. Combination vehicles may be weighed as separate units provided they are disconnected while being weighed. Scales shall be inspected and certified as often as the Engineer may deem necessary to ascertain accuracy. Costs incurred as a result of regulating, adjusting, testing, inspecting, and certifying scales shall be borne by the Contractor.
  4. A licensed weighmaster shall weigh all Contractor-furnished materials. The Engineer may be present to witness the weighing and to check and compile the daily record of such scale weights. However, in any case, the Engineer will require that the Contractor furnish weight slips and daily summary weigh sheets. In such cases, furnish a duplicate weight slip or a load slip for each vehicle weighed, and deliver the slip to the Engineer at the point of delivery of the material.
  5. If the material is shipped by rail, the certified car weights will be accepted, provided only actual weight of material will be paid for and not minimum car weights used for assessing freight tariff. Car weights will not be acceptable for material to be passed through mixing plants. Material to be measured by weight shall be weighed separately for each bid item under which it is to be paid.
  6. Trucks used to haul material being paid for by weight shall be weighed empty daily and at such additional times as the Engineer may require. Each truck shall bear a plainly legible identification mark. The Engineer may require the weight of the material be verified by weighing empty and loaded trucks on such other scales as the Engineer may designate.
- C. Measurement by Volume:
1. Measurement by volume will be by the cubic dimension indicated in the Contractor's submitted bid. Method of volume measurement will be by the unit volume in place or removed as shown on the Contract Drawings or as specified.
  2. When material is to be measured and paid for on a volume basis and it is impractical to determine the volume by the specified method of measurement, or when requested by the Contractor in writing and accepted by the Engineer in writing, the material may be weighed in accordance with the requirements specified for weight measurement. Such weights will be converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Resident Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities will be accepted.
- D. Measurement by Area: Measurement by area will be by the square dimension shown on the Contract Drawings or as specified. Method of square measurement will be as specified.
- E. Linear Measurement: Linear measurement will be by the linear dimension listed or indicated in the Contractor's submitted bid. Unless otherwise indicated, items, components, or Work to be measured on a linear basis will be measured at the centerline of the item in place.
-

F. Field Measurement for Payment:

1. The Contractor shall take all measurements by providing equipment, workers, and survey crews as required to measure quantities in accordance with the provisions for measurement specified herein. No allowance will be made for specified tolerances.
2. The Engineer will verify all quantities of Work performed by the Contractor on a unit-price basis, for progress payment purposes.

1.06 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.07 MEASUREMENT AND PAYMENT

A. Item #1: Mobilization and Demobilization

1. Payment for Mobilization and Demobilization shall be for preparatory work and operations performed by the Contractor including, but not limited to, those necessary for the movement of its personnel, equipment, supplies and incidentals to and from the project site; temporary facilities and controls; for the establishment and removal of its offices, buildings and other facilities necessary for work on the project; for other work and operations which it must perform or costs it must incur before beginning production work on the various items on the project site, and for removal of personnel, equipment, supplies, offices, building facilities, sheds, fencing, and other incidentals from the site.
2. Mobilization and Demobilization shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:
  - a. 40% after completion of 5% of the total contract amount of other bid items have been earned.
  - b. 40% after completion of 20% of the total contract amount of other bid items have been earned.
  - c. 20% after completion of all work on the project has been completed, including cleanup and acceptance of the project by the Port.

B. Item #2: Project Administration

1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

C. Item #3: Project Demolition and Construction

1. Item Description: The Work of this item includes all labor and materials to complete the demolition and new construction as defined in the Contract Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

D. Item #4: Abatement of Regulated Materials

1. Item Description: The Work of this item includes all labor and materials for removal/encapsulation and disposal of identified asbestos-containing materials, including all necessary materials, testing, record keeping, safety measures, removal and replacement of building components and furniture, protection of workers, protection of the public and adjacent areas, establishment and maintenance of enclosures, and reference to all federal and local government regulations, cleaning, cleanup and all other activities as necessary.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

**PART 2 - PRODUCTS - NOT USED**

**PART 3 - EXECUTION - NOT USED**

**END OF SECTION**

**PART 1 GENERAL**

**1.01 DESCRIPTION OF WORK:**

- A. The Contractor shall supply all labor, materials, services, insurance, special permits and equipment necessary to remove and dispose of asbestos-containing materials (ACM) within the project areas in accordance with all applicable federal, state and local regulations and these specifications. Coordinate with the specifications for related scopes of work.
- B. The location and approximate quantities of asbestos-containing materials (ACM) to be removed prior to renovation is included in the table below.

Homogenous Sample Description	Homogenous Sample Area	Percent Asbestos	Estimated Quantity*
ACM White undercoating on stainless steel sinks (Non-Friable)	Breakrooms where sinks are to be removed.	2-4% Chrysotile	3 EA
ACM Black mastic and 12" x 12" floor tile (Non-friable), floor tile is assumed contaminated by ACM mastic.	Breakroom 103 (in front of and below the vending machines)	2% Chrysotile	30 SF

EA Each

LF Linear Feet

SF Square Feet

\*Quantity is based on visible materials only (does not account for hidden materials)

**1.02 GENERAL REQUIREMENTS:**

- A. The regulated materials abatement work of this project is in preparation of work to be completed by others. Failure to complete the specified tasks identified within the allotted contract time will result in serious damages. Prior to submitting a bid for this work, the Contractor is responsible for review and coordination with the scheduled work and ensures that adequate resources have been identified to complete the proposed work tasks on schedule.
- B. Contractor is responsible to notify and provide all necessary notifications to the responsible regulatory agencies for all required work.
- C. Contractor is responsible to take appropriate measures ensuring that the project site will be safeguarded from contamination during the asbestos abatement project period.
- D. Building materials in the project area that are not clearly identified within the contract documents shall be treated as ACM unless otherwise noted.
- E. All work is to be performed in accordance with applicable codes, standards, regulations, and accepted industry practices. This includes compliance with regulatory requirements applicable at the time the work is performed and is not limited to requirements at the time of bid. All work, including work practices, is to be craftsman-like and is subject to inspection by the Owner and/or Owner's representative, and regulatory agency personnel.

- F. The work described in this section is a general description and is not intended as a complete listing of the work to be accomplished. The work of this project may be expanded or deleted above and beyond the specified scope by the Owner to include encapsulation, removal, transportation, and disposal of regulated materials that may be encountered during the course of the project.
- G. All required permits and notifications should be kept valid for the duration of the work. This includes any permit and/or notification revisions, such as changes of abatement dates, shift times, work locations, Contractor personnel, etc.
- H. All employees involved in asbestos abatement activities shall be the bearer of a current Certified Asbestos Worker card issued by the Washington State Department of Labor and Industries. Cards shall be available for inspection at the jobsite. The Contractor shall also provide, as a minimum, one (1) person certified by L&I as an Asbestos Abatement Supervisor and this person shall be responsible for overall abatement activities. This person shall be immediately available on-site when any project work is performed. If abatement work is performed on multiple shifts, each shift shall have a Certified Asbestos Supervisor.
- I. Smoking or open fires will not be permitted within the building enclosure or on the facility's premises.
- J. Contractor is responsible for all air sampling in order to comply with WISHA and other local, state and federal regulations. Refer to Paragraph 1.7 of this section for requirements for Contractor air monitoring.
- K. On-site Observation:
  - 1. The safety and protection of the Contractor's employees, sub-contractor's employees, Owner's employees, consultant, the facility, and the public is the sole responsibility of the Contractor.
  - 2. The Owner and/or Owner's representative or representatives of local, state or federal agencies may make unannounced visits to the site during the work. The Contractor shall provide two complete sets of clean, protective clothing and respirators with the same protection factor as required in the regulated area available daily for such visitor use. It is the visitor's responsibility to ensure all necessary medical qualification, training, and "fit test" certificates are current prior to using any respirator or protective clothing provided by the Contractor.
  - 3. If the Owner and/or Owner's representative or agency visitor determines that practices are in violation of applicable regulations, or are endangering workers, the general public or the facility, they will immediately notify the Contractor orally that operations must cease until corrective action is taken.
    - a. All costs resulting from such stop work order and any necessary corrective actions will be borne solely by the Contractor and will not be a basis for an increase in the contract amount or an extension of time.

### 1.03 ASBESTOS ABATEMENT DEFINITION:

- A. Definitions Relevant to Asbestos Abatement:
    - 1. Abatement: Procedures to control fiber release from asbestos-containing materials. Includes removal, enclosure, repair, demolition and renovation activities.
    - 2. ACGIH: American Conference of Governmental Industrial Hygienists.
-

3. Aerosol: A system consisting of particles, solid or liquid, suspended in air.
4. AIHA: American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, OH 44311.
5. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways separated by a distance of at least 3 feet (91.44 cm).
6. Air Monitoring: The process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure most commonly utilized in industry for asbestos follows the WISHA reference method outlined in WAC 296 62 07735, Appendix A, and WAC 296 62 07737, Appendix B. For clearance air monitoring, aggressive monitoring techniques are used and shall be conducted in accordance with EPA document #560/5 85 024 (June 1985). Electron microscopy methods may also be utilized for lower detectability as well as specific fiber identification.
7. Air Sampling Firm (ASF): A professional firm providing specialized services by trained and certified or qualified personnel in the field of asbestos abatement and project management, contracted with or employed by the Contractor or tenant to supervise and/or conduct inspection, monitoring, and analysis services.
8. Amended Water: Water to which a surfactant has been added in order to accomplish more thorough penetration and saturation of the asbestos-containing material.
9. ANSI: American National Standards Institute.
10. Asbestos: The mineral varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite and tremolite. For purposes of determining respiratory and worker protection, both the asbestiform and non-asbestiform varieties of the above minerals and these minerals that have been chemically treated and/or altered shall be considered as asbestos.
11. Asbestos-Containing Material (ACM): Any material containing more than one percent (1%) asbestos as defined under NESHAPS CFR 40, Part 61, and OSHA 29 CFR Part 1926.1101, or at least one percent (1%) asbestos as defined under Regulation III of the Puget Sound Clean Air Agency.
12. ASTM: American Society for Testing and Materials.
13. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches (228.6 mm).
14. Bridging Encapsulant: The application of a sealant over the surface of asbestos-containing material to prevent the release of asbestos fibers.
15. Certified Industrial Hygienist (CIH): An Industrial hygienist certified in the Comprehensive Practice or Chemical Aspects of Industrial Hygiene by the American Board of Industrial Hygiene.
16. Class I Asbestos Work: Activities involving the removal of thermal system insulation or surfacing ACM/PACM.
17. Clean Room: An uncontaminated area or room, which is a part of the worker decontamination enclosure system with provisions for storage of worker's street clothes and clean protective equipment.
18. Containment: An enclosure system.

19. Contractor: The individual or business with which the Owner contracts with to perform the asbestos abatement.
20. Competent Person: The individual onsite (a representative of the contractor) who is capable of identifying existing asbestos, hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective measures to eliminate them as specified in WAC 296-62-07728. The competent person shall meet all requirements specified in WAC 296-62-07728. The competent person shall be certified as an asbestos supervisor in compliance with WAC 296-65-030(3) and 296-65-012.
21. Curtained Doorway: A device to allow ingress or egress from one room to another typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway.
22. Cutting: To penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.
23. Differential Pressure System: A containment system utilizing negative air machines in an airtight enclosure.
24. Disposal Bag: 6 mil (0.1524 mm) thick leak-tight plastic bags used for transporting asbestos waste from the work site and to the disposal site. Each shall be labeled in accordance with WAC 296 62 07721 and 40 CFR 61.150 and PSCAA 4.05(b)10.
25. Encapsulant: A material which is applied to asbestos-containing material to reduce or control the potential release of asbestos fibers from the material, either by creating a membrane over the surface (bridging encapsulant), or by penetrating into the material and binding its components together (penetrating encapsulant).
26. Encapsulation: The application of an encapsulant to asbestos-containing materials in accordance with the manufacturer's specifications.
27. Enclosure: A semi-air tight system used to segregate and isolate an asbestos abatement area, and which is continuously served by a negative pressure ventilation system once abatement activities start.
28. EPA: U.S. Environmental Protection Agency, Region X, 1200 Sixth Avenue, Seattle, WA 98101.
29. Equipment Room: An area or room, which is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.
30. Excursion Limit: The maximum personal exposure concentration of asbestos fibers in air for any 30-minute period (1.0 f/cc).
31. Facility: Any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential dwellings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building.
32. Facility Component: Any part of a facility including equipment.

33. Filter: A media component used in respirators or equipment to remove solid or liquid particles from air or water.
34. Fixed Object: A piece of equipment or furniture that cannot be removed from the work area.
35. Friable Asbestos Material: Any material containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763 section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM) verify the asbestos content by point counting using PLM.
36. Friable Upon Removal: A non-friable material, which becomes friable when disturbed during removal.
37. Fugitive Source: Any source of emissions not controlled by an air pollution control device.
38. Glovebag Technique: A method for removing small amounts of friable asbestos-containing material from fireproofed beams, HVAC ducts, short piping run, valves, joints, elbows and other non-planar surfaces in a non-contained (plasticized) work area. The glovebag assembly is a manufactured or fabricated device consisting of a bag (typically constructed of plastic), two inward projecting long sleeve gloves, an internal tool pouch and an attached or pre-printed label. All workers who are permitted to use the glovebag technique must be trained, experienced and skilled in this abatement method.
39. Grinding: To reduce to powder or small fragments and includes mechanical chipping or drilling.
40. HEPA Filter: A high efficiency particulate air filter capable of removing particles greater than 0.3 microns in diameter with 99.97% efficiency using Dop testing methodology.
41. HEPA Vacuum: A vacuum system equipped with HEPA filtration.
42. HEPA Machine: Negative air machine equipped with HEPA filtration.
43. HVAC: Heating, Ventilation and Air Conditioning System.
44. Installation: Any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).
45. L&I: Washington State Department of Labor and Industries, 805 Plum Street, S.E. (HC 412), Olympia, Washington 98504.
46. Leak-Tight: Solids or liquids cannot escape or spill out. It also means dust-tight.
47. Malfunction: Any sudden and/or unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.
48. Material Decon Unit: A decontamination system, which is utilized for transferring containerized waste from inside to outside of the work area.
49. Movable Object: A piece of equipment or furniture in the work area, which can be removed from the work area.

50. MSDS: Material Safety Data Sheet.
51. Mudded Pipe Insulation Section: A continuous section of pipe insulation less than 12" in length, which may contain one or more plumbing fitting(s) (i.e., elbows, tees, valves, "y's", unions, etc.).
52. Negative Air Machine: A specially designed fan mounted in a cabinet that draws air from the contaminated space into pre-filters and a HEPA filter.
53. Negative Pressure Respirator: A respirator in which the air pressure inside the respirator is negative during inhalation in relation to the air pressure outside the respirator.
54. Negative Pressure Enclosure: The negative pressure/local exhaust system, utilizing HEPA filtration capable of maintaining a negative pressure of 0.02 inches (0.51 mm) of water inside the work area and a minimum of four (4) air exchanges per hour from adjacent areas into the work area and exhausting clean, filtered air outside work area.
55. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from within the containment work area. A sufficient volume of air shall be exhausted to create a minimum pressure of -0.02 inches (0.51 mm) of water within the enclosure with respect to the area outside of the containment work area.
56. NESHAP: The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).
57. Non-Friable Asbestos-Containing Material: Any material containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
58. NIOSH: The National Institute for Occupational Safety and Health, Building "J" N.E., Room 3007, Atlanta, GA 30333.
59. OSHA: The Occupational Safety and Health Administration, 1111 Third Avenue, #715, Seattle, WA 98101-3212.
60. Outside Air: The air outside building, structure, negative air enclosure, containment or designated regulated area.
61. Owner or Operator of a Demolition or Renovation Activity: Any person, who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person, who owns, leases, operates, controls, or supervises the demolition or renovation operation or both.
62. PCM: Phase Contrast Microscopy
63. PLM: Polarized Light Microscopy
64. Particulate Asbestos Material: Finely divided particles of asbestos or material containing asbestos.
65. Penetrating Encapsulant (Lock-down): Liquid material applied to asbestos-containing material to control airborne fiber release by penetrating into the material and binding its components together.
66. Personal Monitoring: Sampling the asbestos fiber concentrations within the breathing zone of an employee during representative operations as required by applicable regulations.

67. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance outside the respirator to the concentration inside the respirator at the breathing zone of the wearer.
68. Prior Experience: Experience required of the Contractor on asbestos projects of similar nature and scope to ensure the capability of performing asbestos abatement in a satisfactory manner. Similarities shall be in areas related to material composition, project size, abatement methods required, number of employees and the engineering, work practice and personal protection controls required.
69. Regulated Area: An area established by the Contractor to demarcate areas where airborne concentrations of asbestos exceed, or can reasonably be expected to exceed the permissible exposure limits. The regulated area may take the form of (a) a temporary enclosure, as required by WAC 296 62 07711, or (b) an area demarcated in any manner that minimizes the number of employees exposed to asbestos.
70. Regulated Asbestos-Containing Material (ACM): (a) Friable asbestos material, (b) Category I Non-friable ACM that has become friable, (c) Category I Non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II Non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.
71. Removal: To take off asbestos containing materials from surfaces or components of a facility.
72. Renovation: Altering a facility or one or more facility components in any way, including the stripping or removal of ACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.
73. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
74. Shower Room: A room between the clean room and the equipment room within the worker decontamination system supplied with hot and cold running water controllable at the tap, adequate soap and suitably arranged for complete showering.
75. Staging Area: Either the holding area or some areas near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.
76. Structural Member: Any loaded-bearing member of a facility, such as beams and load-bearing walls or any non-load supporting member, such as ceilings and non-load supporting walls.
77. Surfactant: A chemical wetting agent added to water to improve penetration.
78. Time Weighted Average (TWA): The average exposure to a contaminant in air measured during a specific time period, usually a shift, adjusted to eight hours.
79. Visible Emissions: An emission containing particulate asbestos material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

80. Waste Generator: Any owner or operator of a source covered by Department of Transportation regulations whose act or process produces asbestos-containing waste material. All demolition debris materials, including asbestos-containing materials, except those containing substances classified as hazardous or dangerous by controlling local, state or federal regulatory agencies, shall upon their demolition become the property of the Contractor.
81. Waste Shipment Record: The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.
82. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with water and afterwards thoroughly decontaminated or disposed of as asbestos contaminated waste.
83. Work Area: Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions.
84. Worker Decontamination System: A series of connected rooms, consisting of a clean room, a shower room and an equipment room separated from each other and from the work area by curtained doorways. This system is used for all worker entries and exits from the work area.
85. WSDOT: Washington State Department of Transportation, Transportation Building, KF-01, Olympia, WA 98504.

#### 1.04 REFERENCE STANDARDS:

##### A. General Requirements:

1. All work under this contract shall be done in strict accordance with all applicable regulations, standards and codes governing asbestos abatement and in accordance with the "Standards of the Industry". This includes any other work, including trade work conducted in conjunction with the project.
2. The most recent edition of any relevant regulation, standard, document or code shall be in effect during the work, regardless of the effective date of this specification's governing contract. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be utilized. All regulatory revisions and requirements relating to this project after the contract is signed shall, nonetheless, be incorporated at no additional cost to the Owner.

##### B. EPA Guidance Documents: Which discuss asbestos abatement work or hauling and disposal of asbestos waste materials are listed below for the Contractor's information only. These documents do not describe the work and are not a part of the work of this contract. EPA maintains an information number (800) 334 8571.

1. Asbestos-Containing Materials in Buildings - A Guidance Document. Parts 1&2 (Orange Books) EPA C00090 (out of print).
2. Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book) EPA 560/5-85-024.
3. Friable Asbestos-Containing Materials in Schools: Identification and Notification Rule (40 CFR Part 763).

4. Evaluation of the EPA Asbestos-in-Schools Identification and Notification Rule. EPA 560/5-84-005.
  5. Asbestos in Buildings: National Survey of Asbestos-Containing Friable Materials. EPA 560/5-84-006.
  6. Asbestos in Buildings: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018.
  7. Asbestos Waste Management Guidance. EPA 530-SW-85-007.
  8. Asbestos Fact Book. EPA Office of Public Affairs.
  9. Asbestos in Buildings. Simplified Sampling Scheme for Friable Surfacing Materials.
  10. Commercial Laboratories with Polarized Light Microscopy Capabilities for Bulk Asbestos Identification.
  11. A Guide to Respiratory Protection for the Asbestos Abatement Industry. EPA-560-OPTS-86-001.
- CODES AND REGULATIONS:
- C. General Applicability of Codes, Regulations and Standards: Except to the extent that more stringent requirements are written directly into the contract documents, all applicable codes, regulations and standards have the same force and effect and are incorporated into the contract documents by reference as if copied directly into the contract documents.
- D. Federal Requirements: Which govern asbestos abatement work or hauling and disposal of asbestos waste materials including but not limited to the following:
1. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), including but not limited to:
    - a. Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite; Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 58 of the Code of Federal Regulations.
    - b. Respiratory Protection Title 29, Part 1910, Section 134 of the Code of Federal Regulations.
    - c. Construction Industry Title 29, Part 1926, of the Code of Federal Regulations.
    - d. Access to Employee Exposure and Medical Records Title 29, Part 1910, Section 2 of the Code of Federal Regulations.
    - e. Hazard Communication Title 29, Part 1910, Section 1200 of the Code of Federal Regulations.
    - f. Specifications for Accident Prevention Signs and Tags Title 29, Part 1910, Section 145 of the Code of Federal Regulations.
  2. U.S. Environmental Protection Agency (EPA), including but not limited to:
    - a. Regulation for 40 A of the Code of Federal Regulations 763.
    - b. National Emission Standard for Hazardous Air Pollutants; Asbestos, NESHAP Revision; Final Rule, 40 CFR, Part 61, of the Federal Register.
    - c. Office of Solid Waste publication Asbestos: Waste Management Guidance (EPA/530-SW-85-007).
  3. Department of Transportation (DOT) including, but not limited to the following:
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- a. Hazard Material Regulations (HMR) 49 CFR parts 171-180.
  - b. 49 CFR part 107, et. seq., Performance-Oriented Packaging Standards; Changes of Classification, Hazard Communication, Packaging and Handling Requirements Based on UN Standards and Agency Initiative; Final Rule.
- E. Washington State Requirements: WISHA rules which govern asbestos abatement work or hauling and disposal of asbestos waste material including but are not limited to the following:
- 1. General Occupational Health Standards Chapter WAC 296 62.
  - 2. Asbestos Removal and Encapsulation Chapter WAC 296 65.
  - 3. Safety Standards for Construction Work Chapter WAC 296 155.
  - 4. Parts – Demolition WAC 296.155.975.
  - 5. WISHA Regional Directives 79 23 (Amended) regarding minimum airborne fiber concentration for initiation and continuing asbestos medial examinations, 80 16 (amended) regarding respirable air supplied by oil-lubricated compressors, 83 10 (Amended) regarding respirator requirements for removal, demolition, and spraying of asbestos, 87 2 Respiratory Protection Requirements for negative pressure enclosures
  - 6. Safety Standards Chapter WAC 296 24.
- F. Local Requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
- 1. Puget Sound Clean Air Agency (PSCAA) Regulation III, Article 4-Asbestos Control Standard.

#### 1.05 ASBESTOS ABATEMENT SUBMITTALS:

- A. Contractors shall provide complete submittals for review by the Owner's representative.
- B. Pre-Work Submittals: Submittals must be suitably titled and indexed, providing detailed information concerning the following items as a minimum in the order listed below:
  - 1. Written Health and Safety Plan that includes the following elements:
    - a. Company Accident Prevention Plan; that includes a phone contact list containing the names, addresses, telephone numbers and email addresses of the contractor; contractor's supervisor, and all other contractor personnel who may be required to assist during project work.
    - b. Hazard Communication Plan: submit MSDS for all materials to be used in the work.
    - c. Respiratory Protection Plan (for each contractor that has workers onsite that may be required to wear respirators).
      - 1) Documentation by letter signed by Contractor that all employees or agents required to wear a negative pressure respirator has been medically evaluated in accordance with WAC 296-62, Part E.
      - 2) Document NIOSH approvals for all respiratory protective devices utilized on site, including a list of approved components (parts) for each type of respirator that may potentially be used on the project.

- 3) Document by letter signed by Contractor that respirator fit testing for all contractor employees and agents who wear a negative pressure respirator is current. This fit testing shall be in accordance with quantitative procedures as detailed in the WAC 296 62, Part E.
  - 4) Medical Surveillance Program
  - 5) Site Housekeeping Plan
  - 6) Daily Job Submittals (examples of forms to be submitted)
2. Asbestos Work Plan (General): Include a detailed plan of the procedures proposed for use in complying with the requirements, including the following:
- a. Methods: A description of all techniques, methods, and special equipment to be used during the contract, including methods for abatement work required for this project (negative pressure enclosures with worker decontamination and waste load-out, mini-enclosures, glovebags, removal of contaminated soils, etc.). Include typical work procedures for each unit of work identified on the bid documents. Refer to section 02 82 14 and abatement drawings for further information on typical abatement work included within this project.
  - b. Shop Drawings: Provide shop drawings at each work area throughout the contract duration to show the layout of containment, exhaust route, regulated area barriers, construction barriers, etc. Show where the negative air machines, worker decontamination chambers, waste load-out areas, power, and make-up air will be placed. Include view window and manometer locations. This information will be submitted and approved by the Owner's representative, 72 hours prior to the start of work.
  - c. Handling of Waste: Specific information relating to handling, transport, and disposal of asbestos-containing waste.
    - 1) Landfill: Identify the proposed disposal site at which any waste material generated during the project will be disposed and furnish evidence of all necessary government approvals to dispose of the waste.
3. Laboratory Qualification Information: Submit the proposed Independent Testing Laboratory's written Laboratory Quality Control Program.
- a. The Laboratory shall prove proficiency in the AIHA/NIOSH PAT Program and NVLAP program. The submitted copy of the Quality Control Program shall minimally meet or exceed WISHA standards. Failure to comply with these standards will require lab work to be subcontracted to another laboratory at no additional cost to the Owner.
4. Air Monitoring Program: The Air Monitoring Program shall include the proposed sampling plan, sampling procedures, and field quality control procedures of the firm conducting the air monitoring. Each type of enclosure will require a specific air monitoring plan (negative pressure enclosures with worker decontamination and waste load-out, mini-enclosures, glovebags).
- a. Worker Certification: Submit copies of Asbestos Supervisor and Asbestos Worker Certifications for employees scheduled to work on the project in compliance with WAC Chapter 296-65-010.
  - b. Contractor Certification: Contractor shall submit proof of current certification of Contractor by L&I as a certified asbestos abatement firm.

- c. Asbestos Supervisor/Competent Person: Submit the name, Asbestos Supervisor Certification, and resume of experience of the assigned onsite supervisor. At a minimum, the supervisor shall have successfully completed a Supervisor Training Course in compliance with WAC Chapter 296-65-007.
  - d. Respirator Fit Test Records: Submit a copy of the quantitative and qualitative fit-test records for personnel performing asbestos work.
5. Notifications: Submit a copy of all required notifications and permits obtained by the Contractor (Washington State Department of Labor and Industries and Puget Sound Clean Air Agency PSCAA). Submit upon receipt any approved amendments to notifications or re-notification for multi-phase activities.
- C. Construction Phase Submittals: Submit the following information daily to the Owner and Owner's representative. This information shall be submitted prior to the start of work on the next scheduled work shift (if applicable).
1. Air and bulk sample data collection sheets and laboratory analytical results. The laboratory results, signed by the lab manager, shall be returned to the site prior to the start of abatement for the same work shift the following day.
  2. Certified Asbestos Supervisor daily inspection report.
  3. Bonds and Insurance: Submit upon receipt any approved amendments to notifications or re-notification for multi-phase activities.
- D. Post construction submittals: Asbestos Work Records – The Contractor shall submit to the Owner and Owner's representative within TWENTY-FIVE days after substantial completion of the regulated building material work, the following:
1. Project Overview: Provide a basic project summary identifying the scope and summarizing the work performed by the Contractor. Provide enough information to have a basic understanding of the project and include project and contact names and ID numbers, Contractor's company name, where, when, and what type of work was completed, and discussion of significant problems encountered during the course of the work. Written summary shall include a description of all changes or modifications to the Contractor's pre-construction Work Plan.
  2. Certification: Provide written certification from the Contractor's Project Manager or Supervisor that the Contractor has fully inspected the work area and completed work in strict accordance with the Specifications.
  3. Air Monitoring: Submit documentation of all contractor/sub-contractor air monitoring results relative to regulatory compliance. Include copies of all air monitoring data sheets, chain-of-custody documentation and analysis reports for sampling conducted at the site.
  4. Project Record Documents: Provide project records including documentation of all contract changes, and copies of work site entry log books, safety logs, sign-in sheets, and supervisor daily field reports. Provide copies of project meetings for pre-abatement, construction period, and project closeout meetings.
  5. Disposal Manifests: Submit copies of all asbestos waste disposal transportation and disposal manifests including signed receipts from the landfill, and chain-of-custody.
  6. Submit copies of amendments or modifications to pre-construction, Notices, and Permits that were filed with regulatory agencies during the course of the project.

7. Submit copies of inspections or visits by regulatory agencies. Include copies of any citations or notices received by the Contractor from regulatory agencies during the course of the project.

1.06 AIR MONITORING:

- A. The following describes air monitoring to verify that the building beyond the work area and the outside environment remain uncontaminated. This section also sets forth airborne fiber levels both inside and outside the work area as action levels and describes the action required by the Contractor if an action level is met or exceeded.
- B. The Contractor is required at its own expense to take its own employee air samples by L&I per the following regulations:
  1. WAC 296-62-07709 (Exposure Monitoring)
  2. WAC 296-62-07735 (Appendix A)
- C. The air samples must be analyzed by a laboratory in accordance with the following:
  1. Personnel conducting onsite asbestos air sample analysis shall be listed on AIHA's Registry of Proficiency and shall have successfully completed NIOSH 582 (or equivalent) training.
  2. The laboratory conducting bulk sample analysis shall be accredited by the United States Department of Commerce, National Institute of Standards and Technology's NVLAP program.
  3. The laboratory conducting analysis of air samples shall be satisfactory participants in the NIOSH Proficiency Analytical testing (PAT) program and AIHA Registry and shall produce their PAT number and results on request.
- D. Air Monitoring Requirements (interior abatement areas only):
  1. Baseline/Pre-abatement Air Monitoring: Prior to beginning asbestos abatement tasks, the Contractor shall conduct air monitoring to determine the relative airborne fiber concentrations in an area during the normal functioning of that building or space.
  2. Personal Samples: The Contractor shall daily conduct representative personal monitoring in each abatement work area on each representative work activity.
  3. Final Air Clearance: The contractor shall conduct aggressive air sampling of the regulated area after the Owner and/or Owner's representative certifies visual clearance and bridging and penetrating encapsulant has been applied. The containment will remain in place until the Contractor's final air clearance analytical results meet acceptable levels. Paragraph 3.09 details the work area clearance process.
  4. Where feasible, samples shall be collected according to the WISHA Reference Method (WAC 296 62 07735, Appendix A) and Detailed Procedure for Asbestos Sampling and Analysis (WAC 296 62 07737, Appendix B) and NIOSH Method 7400 (as revised). All samples shall be collected at a height of approximately 60 inches (1524 mm) above the working floor for projects with 8-10 foot (304.8 cm) ceiling heights, unless otherwise directed.
- E. Analytical Methods: The following methods will be used for analyzing filters used to collect air samples other than clearance:

1. Twenty-five millimeter (0.98 inch (25 mm)) cellulose ester filters with 50mm conductive cowl extensions will be used for all sampling. Sampling and analysis for personal samples will be conducted according to the OSHA/WISHA Reference Method. Area clearance samples will be analyzed according to the NIOSH 7400 Method using airflow rates between 1 - 10 liters per minute. At least 1200 liters of air will be collected. All inside and outside air sampling shall be continuous throughout work shift.
  2. TEM analysis will be NIOSH 7402 method.
- F. Sample Volumes: Sample volumes shall be sufficient to establish the quantification limit (QL) necessary for the type of sample collected. The formulas listed in the WISHA Reference Method will be used to calculate sample volumes and/or flow rates. Sample volumes will be sufficient to collect between 100-1300 fibers per square millimeter (f/mm<sup>2</sup>) of filter area. At a minimum, for Pre-abatement and Clearance samples, the QL will be 0.005 f/cc based on the EPA suggested minimum filter loading of 10 fibers in 100 fields counted. For personal samples, the QL will be 0.05 f/cc. Note: this cannot be accomplished with a STEL.
- G. Laboratory Testing:
1. The Contractor will have a qualified laboratory perform analysis of the air samples required to monitor abatement procedures. The laboratory results, signed by the lab manager, shall be returned to the site prior to the start of abatement for the same work shift the following day.
  2. Written Reports: All air monitoring test results and daily inspection logs will be posted at the job site on a daily basis.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS:**

#### **A. GENERAL:**

1. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the worksite and disposed of properly.
2. Polyethylene sheeting for walls and stationary objects shall be a minimum of 6 mil (0.1524 mm) thick. For floors and all other uses sheeting of at least 6 mil thickness shall be used in widths selected to minimize the frequency of joints. Polyethylene shall be fire retardant per UL Ratings and ASTM standards D-2898-81 and D-3201-79.
3. Disposal bags shall be 6 mil (0.1524 mm) polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.150 (a) (i) (iv) (v) or WISHA Chapter 296 62 0072.
4. Disposal drums shall be metal or fiberboard with locking ring tops; labeled in accordance with EPA regulation 40 CFR 61.150 (a) (i) (iv) (v).
5. Warning signs as required by WISHA Chapter 296 62 07721.

- B. SURFACTANT: (wetting agent): shall be a 50/50 mixture of Polyethylene ester and polyoxyethylene ester, or equivalent, mixed in a proportion of 1 fluid ounce to 5 gallons of water as specified by manufacturer. (An equivalent surfactant shall be understood to mean a material with surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331 56- "Surface and Interfacial Tension of Solutions of Surface Active Agents.")

#### **C. ENCAPSULATION PRODUCTS:**

1. Encapsulation materials shall be the penetrating type and conform with the following characteristics:
  - a. Encapsulants should not be solvent-based or utilize a vehicle consisting of hydrocarbons.
  - b. Encapsulants shall be non-flammable.

D. ENCLOSURE:

1. Enclosure materials shall be fire-retardant and conform to the applicable local fire codes.
2. The enclosures shall be constructed of materials such that when the enclosure is completed there is limited potential for impact damage to the enclosure and no potential for fiber release.

2.02 EQUIPMENT:

A. GENERAL:

1. If required, provide a sufficient quantity of negative pressure ventilation units equipped with HEPA filtration and operated in accordance with ANSI 29.2 79 (local exhaust ventilation requirements) and EPA guidance document EPA 560/5 83-002 Guidance for Controlling Friable Asbestos-Containing Materials in Buildings Appendix F: Recommended Specifications and operating procedures for the use of negative pressure systems for asbestos abatement shall be utilized so as to provide one work place air change every 15 minutes.
2. To calculate total air flow requirement:
  - a. Total ft<sup>3</sup>/min = Vol. of work area (in ft<sup>3</sup>)
  - b. 15 min
  - c. To calculate the number of units needed for the abatement:
  - d. Number of units needed =  $\frac{\text{Total ft}^3/\text{min}}{\text{Capacity of unit in ft}^3/\text{min} \times 70\%}$
  - e. Capacity of unit in ft<sup>3</sup>/min x 70%
  - f. If air-supplied respirators are utilized, estimate the volume of supplied air and add to work place air volume when calculating ventilation requirements. For mini-enclosures and glove bags, a HEPA filtered vacuum system may be utilized to provide negative air pressure. A sufficient quantity of air shall be exhausted to create a minimum pressure of -0.02 inches (0.51 mm) of water at all times within the enclosure with respect to outside the enclosure.
3. Contractor shall install and maintain a continuous read strip chart, or similar digital recording differential pressure meter (manometer).
  - a. Adhere strictly to manufacturer's recommendations for calibration of manometer.
  - b. The manometer must be equipped with an audible system programmed to sound if pressure within the enclosure in respect to pressure outside the enclosure drops to -0.01 inches (0.25 mm) of water or lower.

4. Type "C" air supplied respirators operated in the pressure demand mode with full face pieces and HEPA-filtered escape cylinders are required by WISHA for negative pressure containment abatement work until the successful completion of final clearance air monitoring. Spectacle kits and eyeglasses must be provided for employees who wear glasses and who must wear full-face piece respirators. Respirators shall be provided that have been tested and approved by the National Institute of Occupational Safety and Health for use in asbestos contaminated atmospheres.
  5. Compressed air systems shall be designed to provide air volumes and pressures to accommodate respirator manufacturer's specifications. The compressed air systems shall have a receiver of adequate capacity to allow escape of all respirator wearers from contaminated areas in the event of compressor failure. Compressors must meet the requirements of 29 CFR 1910.134(d). Compressors must have an in-line carbon monoxide monitor, and periodic inspection of the carbon monoxide monitor must be evidenced. Documentation of adequacy of compressed air systems/respiratory protection system must be retained onsite at all times. This documentation will include a list of compatible components with the maximum number and type of respirators that may be used with systems providing air of sufficient quality (Grade D breathing air as described in Compressed Gas Association Commodity Specifications G 7.1.)
    - a. At least two (2) dedicated air lines and respirators shall be available to the Owner and/or Owner's representative or regulatory agency personnel at all times. Contractor shall provide clean respirators in good repair for the Owner and/or Owner's representative or regulatory agency personnel's use.
  6. Full body disposable protective clothing, including head, body and foot coverings (unless using footwear as described in 2.02 A 8) consisting of material impenetrable by asbestos fibers (Tyvek or equivalent) shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing.
  7. Additional safety and fall protection equipment (e.g., hard hats meeting the requirements of ANSI Standard Z89.1 2009, eye protection meeting the requirements of ANSI Standard Z87.1 2003, safety shoes meeting the requirements of ANSI Standard Z41.1 1991, disposable PVC gloves) as necessary shall be provided to all workers and authorized visitors.
  8. Non-skid footwear shall be provided to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
  9. Only single-use, disposable towels and clothing will be allowed.
  10. A sufficient supply of disposable mops, rags and sponges for work area decontamination shall be available.
  11. For mini-enclosures and glove bags, a HEPA-filtered vacuum system shall be utilized to provide negative air pressure where applicable.
- B. Scaffolding:
1. Any scaffolding used must be cleaned with no visible debris prior to bringing scaffolding onsite and completely free of debris during and after installation.
  2. Follow all manufacturer recommendations and all applicable regulations in the set-up, use and teardown of all scaffolding used.

3. The Contractor's designated competent person shall be onsite during all scaffolding set-up, use and teardown.

### **PART 3 EXECUTION**

#### **3.01 INSPECTIONS:**

##### **A. Pre-abatement:**

1. The abatement work shall not begin until:
  - a. The Contractor and the Owner and/or Owner's representative have inspected the site to ensure that work can begin.
  - b. Negative pressure ventilation and supplied air systems, if used, are functioning adequately. Contractor must test all systems.
  - c. All required pre-work submittals, notifications, postings and permits have been provided and are satisfactory to the Owner and/or Owner's representative.
  - d. All equipment for abatement cleanup and disposal are on hand.
  - e. All worker and supervisor training, certification and medical monitoring are current and documentation is available on the job site.

- ##### **B. Throughout the Project:** The Contractor's competent person shall perform daily inspections of the site. The Owner and/or Owner's representative may perform routine inspections of the site to assure compliance with applicable regulations and the project plans and specifications. The Contractor's competent person must generate a written daily report.

- ##### **C. Post-Abatement:** The Clearance process is discussed in Paragraph 3.8 of this section.

#### **3.02 SITE SECURITY:**

- ##### **A.** The work area is to be restricted only to authorized, trained and protected personnel. These may include the Contractor's employees; employees of subcontractors; and Owner and/or Owner's representative employees; federal, state and local inspectors and other authorized or designated individuals. A list of authorized personnel shall be established by the Contractor prior to job start and posted as directed by these specifications. With the exception of emergency response personnel, the Contractor shall approve unannounced visitors not listed above prior to project area entry.
- ##### **B.** For projects requiring the use of a negative pressure enclosure, a logbook shall be maintained in the clean room area of the worker decontamination system. Everyone who enters the work area must sign in, recording: name, affiliation (Contractor, regulatory agency, etc.), work phone number, purpose of entry: acknowledge existence, review and understanding of the project's emergency contingency plan and time in and time out for each entry. Contractor shall be responsible for site security during abatement operations.

#### **3.03 EMERGENCY PLANNING:**

- ##### **A.** Emergency contingency plans shall be developed by the Contractor prior to initiation of any work. These plans shall be a component of the Contractor's Health and Safety Plan.

- B. Emergency planning shall include consideration of containment collapse (through negative pressure pull-down) or breach (hit, cut or torn by), fire explosion, toxic atmosphere, electrical hazards, slips, trips and falls, confined spaces and heat related injury. Written procedures shall be developed and employee training in these procedures shall be provided and documented. Emergency planning shall include procedures to follow in the event of power disruptions during work in a negative air enclosure.
- C. Employees shall be trained in evacuation procedures in the event of workplace emergencies.
  - 1. For non-life threatening situations - employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the work place to obtain proper medical treatment.
  - 2. For a life-threatening injury or illness, measures to stabilize the injured worker, remove them from the work place and secure proper medical treatment shall take priority over worker decontamination.
- D. Telephone numbers of all emergency response personnel shall be prominently posted in the clean room, adjacent to the containment in the project area.

#### 3.04 PERSONNEL PROTECTION REQUIREMENTS:

- A. Training: All personnel accomplishing asbestos abatement shall be the bearer of current "Certified Asbestos Worker Certificate" issued by the Washington State Department of Labor and Industries.
  - 1. Special onsite training specific to equipment and procedures unique to this job site shall be performed as required.
- B. Safety Meeting: The Contractor shall conduct a safety meeting at the beginning of the project and weekly thereafter. Topics to be discussed include, but are not limited to: emergency exiting routes and procedures, location of telephone and emergency numbers, fire extinguisher locations, first aid kit, special precautions for toxic or hazardous materials (MSDS information), protective equipment, scaffolding procedures, proper use of ladders, electrical safety, previous week's air sample results, etc. All attendees shall sign an acknowledgment of attendance.
- C. Protective Clothing: Provide protective equipment to all workers in the work area per paragraph 2.2.

#### 3.05 PREPARATION OF THE WORK AREA:

- A. Post barrier tape and caution signs meeting the specifications of WISHA Chapter 296 62 07711 at the locations and approaches to a location where airborne concentrations of asbestos may be expected to exceed the pre-abatement concentration. Signs shall be posted at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of work place enclosures or barriers. Placement of these signs will be behind the construction barrier walls erected by the Contractor and shall not be placed in a location visible to the public outside of the project area.
- B. All conduit joints, junction boxes, motor connections, motors, conveyors, control panels and associated equipment in the work areas shall be protected from amended water. All wire in conduit that passes through the work area shall remain energized at all times, however the Contractor is responsible for all electrical safety.

- C. Pre-clean, remove furnishings and install drop cloths using HEPA filtered vacuums or wet cleaning methods as appropriate. Do not use methods that would raise dust such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not disturb asbestos-containing materials during the pre-cleaning phase.
- D. Remove from the work area all objects that are movable to protect them from potential asbestos contamination.

### 3.06 GENERAL REMOVAL PROCEDURES:

- A. Wet all asbestos containing material with amended water solution using equipment capable of providing a fine spray mist. Avoid knocking the material loose during the wetting operation. Saturate the material to substrate prior to removal; however, do not allow excessive water to accumulate in the work area. Keep all removed material saturated until it can be containerized for disposal. Maintain a high humidity in the barrier or enclosure throughout the abatement period by misting or spraying to ensure material saturation and reduce the potential for elevated airborne concentrations. Wetting procedures are not equally effective on all types of asbestos-containing materials. Nonetheless, they shall be used in all cases.
- B. Double bag all waste material prior to removal from the enclosure system or immediately upon removal of the barrier (glove bag).
- C. The work area shall be cleaned of all ACM prior to the visual inspection by the Owner and/or Owner's representative. If any accumulation of residue is observed, it will be assumed to be asbestos. Re-cleaning may be required, at no additional cost to the Owner, until all suspect material is removed. Re-cleaning and inspection will continue until no visible suspect material remains. After the work area passes the visual inspection, the Contractor shall perform encapsulation of all cleaned surfaces.
- D. Refer to Paragraph 3.08 of this specification for work area clearance process.

### 3.07 NEGATIVE PRESSURE ENCLOSURE:

- A. Prepare work area as indicated in Paragraph 2.01, this section.
- B. Verify shut down and lock out all heating, cooling and air conditioning system (HVAC) components that are in, supply, or pass through the containment area, if possible. Seal all ducts and smoke test the containment before beginning abatement work within the enclosure.
- C. Pre-clean all fixed objects in the containment area using HEPA filtered vacuums and/or wet cleaning techniques as appropriate. Careful attention must be paid to machinery bind grills or gratings where access may be difficult, but contamination significant. Pay particular attention to wall, floor, and ceiling penetrations behind fixed items. After pre-cleaning, enclose fixed objects in 6-mil polyethylene sheeting and seal securely in place with tape.
- D. Seal off all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers and all other openings between the containment area and uncontaminated areas outside of the containment area including the outside of the building, tunnels and crawl spaces with 6 mil (0.1524 mm) polyethylene sheeting and tape.
- E. Cover floors in the containment area with polyethylene sheeting as follows:
  - 1. Seal all floor drains and other floor openings in area with 6 mil (0.1524 mm) sheeting and duct tape.

2. Plastic shall be sized to minimize seams. If the floor area necessitates seams, those on successive layers of sheeting shall be staggered to reduce the potential for water to penetrate to the flooring material. A distance of at least 6 feet (182.88 cm) between seams is required. Do not locate seams at wall/floor joints or cracks in the concrete flooring.
  3. Floor sheeting shall extend to at least 12 inches (304.8 mm) up the sidewalls of the containment area.
  4. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material.
- F. Clearly identify and maintain emergency and fire exits from the work area.
- G. Cover walls in the containment area with polyethylene sheeting as follows:
1. Seal all opening in wall with critical barriers with 6 mil (0.1524 mm) polyethylene sheeting and duct tape. Ensure airtight seal.
  2. Each wall surface shall be covered with two (2) layers of 6 mil (0.1524 mm) polyethylene sheeting.
  3. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least 6 feet (182.88 cm).
  4. Wall sheeting shall overlap floor sheeting by at least 12 inches (304.8 mm) beyond the wall/floor joint to provide a better seal against water damage and for negative pressure.
  5. Install two or more transparent plastic viewing ports in the walls of the enclosure in such a manner to allow unobstructed viewing of all components within the enclosure, which are involved in the project. Existing windows shall be utilized for viewing ports as needed. Movable curtains on the outside shall cover viewing ports.
- H. Worker Decontamination Facility:
1. Worker decontamination enclosure systems shall be provided for workers entering or exiting the containment area. The worker decontamination shall consist of a clean change room, a shower and an equipment room, each separated from each other and from the containment area by curtained doorways. The decontamination unit shall be constructed of metal, wood or plastic framing systems. A worker decontamination facility is required for any Class I asbestos work involving greater than 25 linear feet or 10 sq feet (0.01076 sq cm).
  2. The worker decontamination enclosure systems constructed at the work site shall utilize 6 mil (0.1524 mm) opaque black or white polyethylene sheeting or other acceptable materials for privacy.
  3. The worker decontamination facility should be constructed contiguous to the negative - pressure work area or regulated area for Class I work. Where construction contiguous to work area is not feasible, the decontamination facility shall be constructed with a polyethylene-lined tunnel connecting the decontamination facility to the work.

4. Entry to and exit from all material decontamination chambers and decontamination enclosure systems shall be through curtained doorways consisting of two (2) sheets of overlapping polyethylene sheeting. One sheet shall be secured at the top and left side, the other sheet at the top and right side. Both sheets shall have weights attached to the bottom to ensure that they hang straight and maintain a seal over the doorway when not in use. Doorway designs providing equivalent protection and acceptable to the Owner and/or Owner's Consultant may be utilized. Inverted T double sheet doorway with a flap door is also acceptable.
5. Clean room shall be sized to adequately accommodate the work crew. Benches shall be provided as well as storage for employees' street clothes. Shelves for storing respirators shall also be provided in this area. Clean work clothes (if required under disposables); clean disposable clothing, replacement filters for respirators, towels and other necessary items shall be provided in adequate supply at the clean room. A location for postings shall be provided in this area. Lighting, heat, and electricity shall be provided as necessary for comfort.
  - I. Air Pressure Differential:
    1. Provide a fully operational negative air system within the work area and continuously maintain a pressure differential across work area enclosures of 0.02 inches (0.51 mm) of water column.
    2. Provide fully operational negative pressure systems supplying a minimum of one air change every 15 minutes. Determine the volume in cubic feet of the work area by multiplying floor area by ceiling height. Determine total ventilation requirement in cubic feet per minute (CFM) for the work area by dividing this volume by the air change rate.
    3. Provide a minimum of one back-up negative air for every four primary negative air units used. A minimum of one back-up negative air unit will be required if less than four primary units are used. The back-up negative air unit(s) shall be of equal capacity to primary unit(s).
  - J. Once constructed and reinforced as necessary with negative pressure ventilation units in operation as required, test enclosure for leakage utilizing smoke tubes. Repair or reconstruct as needed.
  - K. Clearly identify and maintain emergency and fire exits from the containment area.
  - L. Remove, clean and enclose in polyethylene the ceiling mounted objects such as lights and other items that may interfere with the abatement process and were not previously cleaned and sealed off. Utilize localized spraying of amended water and/or HEPA vacuums to reduce fiber dispersal during the removal of these fixtures.

### 3.08 WORK AREA CLEARANCE

- A. The abatement work is complete when the work area is visually clean and the Contractor determines that the area is ready for the visual inspection process. The following work area clearance process shall apply to all work areas where Class I or II asbestos project work was completed, except for outdoor work, where clearance sampling is not required.
  1. Following Contractor certification that work area is visually clean the Owner's Consultant will perform a visual inspection of the project area.
  2. If deficiencies are encountered during the inspection, the Owner's Consultant shall create a punch list and forward to the Contractor.

3. Contractor shall resolve all punch list items and repeat the work area clearance process at no additional cost to the owner. The Owner will not be charged for the cleanup time, materials, air monitoring costs, or delay costs. Delays resulting from non-compliant visual inspections will not constitute an extension to the project time.
  4. Upon receipt of visual clearance, the Contractor shall apply a lockdown type encapsulant to surfaces on which asbestos has been removed.
    - a. In cases when negative pressure enclosures have been used, maintain operation of negative air system during the encapsulation process.
    - b. Mix ratio of encapsulant shall be manufacturer's to recommendations.
    - c. Apply encapsulant with airless sprayer on to substrate.
  5. After encapsulation, the Contractor shall conduct final clearance sampling as per this section.
  6. All enclosures clearance samples will be taken as follows.
    - a. Before sampling pumps are started, the exhaust from forced air equipment (leaf blower with at least 1 horsepower electric motor) will be swept against the walls, ceilings, floors, ledges and other surfaces in the room. This procedure will be continued for 1 minute per 1,000 sq feet (1.07643 sq cm) of area. Fans may be used to circulate air within work enclosure.
    - b. Samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations and sites near windows, doors or vents in areas coinciding with pre-abatement sample locations.
    - c. The HEPA machines must be left running during the procedure.
    - d. The Owner's Consultant may collect quality assurance final clearance air samples. Conflicts between Contractor's clearance air monitoring analytical results and Owner's Consultant QA/QC analytical results will be resolved as specified in 1.7 Air Monitoring.
- B. General: The number and volume of air samples taken and analytical methods used will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical instruments used.
- C. In each work area after completion of all cleaning work, a minimum of one (1) sample and one lab blank will be taken at a flow rate of 1 to 10 liters per minute to give a fiber density of between 100 to 1,300 fibers/mm<sup>2</sup> on the filter and analyzed as follows:
1. Analysis: Fibers on each filter will be measured using the NIOSH 7400 procedures. At least 1200 liters of air will be collected.
  2. Release Criteria: Decontamination of the work area is complete when every clearance sample is equal or less than 0.01 fibers/cc or less than pre-abatement levels whichever is lower. If any sample exceeds 0.01 fibers/cc, then the decontamination is incomplete and re-cleaning is required.
  3. The services of a testing laboratory will be employed by the Contractor to perform laboratory analysis of the air samples. Verbal laboratory results will be available within eight (8) hours of taking clearance samples. A complete record of all air monitoring tests and inspections will be furnished to the Owner and/or Owner's Consultant via the Contractor within 24 hours of sample collection.

- D. Following review and acceptance of the Contractor and Owner's consultant's QA/QC final air clearance results, the Owner's consultant will complete the Certificate of Clearance form.

**3.09 DISPOSAL PROCEDURES:**

- A. Shower water shall be drained, collected and filtered through a system with at least a 5.0-micron particle size collection capability.
- B. Sealed and labeled containers of asbestos containing waste shall be removed from the immediate project area and transported to the prearranged disposal location as the work progresses.
- C. Labeling: Each bag of asbestos waste shall be pre-labeled in accordance with 29 CFR 1910.1200 (f) of OSHA's Hazard communication Standard as follows:

**DANGER**  
**CONTAINS ASBESTOS FIBERS**  
**MAY CAUSE CANCER**  
**CAUSES DAMAGE TO LUNGS**  
**DO NOT BREATHE DUST**  
**AVOID CREATING DUST**

In addition, a second pre-printed label must be present on each bag in accordance with 49 cfr parts 171 and 172 of u.s. department of transportation regulation as follows:

**RQ HAZARDOUS SUBSTANCE**  
**SOLID, NOS**  
**ORM-E, NA 9188**  
**(ASBESTOS)**

- D. All demolition debris materials, including asbestos-containing materials, except those containing substances classified as hazardous or dangerous by controlling local, state or federal regulatory agencies, shall upon their demolition become the property of the Contractor. All such material, including those containing hazardous or dangerous substances, shall be removed and properly disposed of away from the site and on property not owned by the Owner.
- E. Disposal must occur at an authorized site in accordance with regulatory requirements of PSCAA, Article 4, Regulation III and applicable state and local guidelines and regulations.
- F. Waste shipment, waste manifest, and disposal records shall be delivered to the Owner and/or Owner's Consultant within 25 days of completion of the abatement work. This information shall document the pickup site and disposal site, the quantity of the asbestos waste and the type of containers used. The Contractor and the Disposal Site Operator shall sign waste manifest. If a separate hauler is employed, their name, address, telephone number and signature shall also appear on the manifest.
- G. Transportation to the Landfill:

1. All transportation of asbestos containing waste material shall adhere to federal, state and local regulations, including, but not limited to:
    - a. Hazard material regulation 48 CFR parts 171.180.
    - b. 49 CFR part 107.
- H. Disposal at the Landfill:
1. Bags, drums and components may be inspected, as they are off-loaded at the disposal site. Material in damaged containers shall be repacked in empty drums or bags as necessary.
  2. Waste containers shall be placed on the ground at the disposal site, not pushed, thrown or dumped out of trucks.
  3. Following the removal of all containerized waste, the truck cargo shall be decontaminated using HEPA vacuums or wet methods to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded along with contaminated cleaning materials and protective clothing in bags or drums at the disposal site.

**PART 4 MEASUREMENT AND PAYMENT**

4.01 MEASUREMENT:

- A. Asbestos Abatement will be measured as a unit (lump sum) for the satisfactorily completed work.

4.02 4.2 PAYMENT:

- A. The applicable lump sum price paid for Regulated Material Removal as stated in the Bid Form or Proposal, shall constitute full compensation for removal/encapsulation and disposal of identified asbestos-containing materials, complete, including all necessary materials, testing, record keeping, safety measures, removal and replacement of building components and furniture, protection of workers, protection of the public and adjacent areas, establishment and maintenance of enclosures, and reference to all federal and local government regulations, cleaning, cleanup and all other activities as necessary.

**CERTIFICATE OF CLEARANCE**

**CONTRACTOR CERTIFICATION OF VISUAL INSPECTION**

In accordance with Section 02 82 14, Paragraph 3.08 "Work Area Clearance", the Contractor's supervisor/competent person hereby certifies that he/she has visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and has found no dust, debris or residue.

IDENTITY OF WORK AREA	QUANTITY REMOVED	DATE	TIME
COMPETENT PERSON	SIGNATURE	CERTIFICATE #	EXPIRATION

**OWNER'S REPRESENTATIVE CERTIFICATION OF VISUAL INSPECTION**

In accordance with Section 02 82 14, Paragraph 3.08 "Work Area Clearance" the Owner's Representative hereby certifies that they have visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and have found no dust, debris or residue.

AMERA BUILDING INSPECTOR	SIGNATURE	CERTIFICATE NO.	EXPIRATION
IDENTITY OF WORK AREA	QUANTITY REMOVED	PASS	FAIL
			SEE PUNCHLIST

**CONTRACTOR'S FINAL AIR CLEARANCE CERTIFICATION**

The Contractor hereby certifies that he/she has conducted air clearance sampling (after encapsulation) according to the specifications and this sampling is valid to the best of his/her knowledge and belief. Contractor must attach chain of custody and final laboratory results.

IDENTITY OF WORK AREA		AIR SAMPLE I.D. #	FLOW RATE	VOLUME
DATE	TIME	ANALYST	LABORATORY	RESULTS

**AMERA PROJECT DESIGNER APPROVAL FOR RE-OCCUPANCY / DEMOLITION**

by:  
 (Signature) \_\_\_\_\_ Date \_\_\_\_\_  
 PRINT NAME \_\_\_\_\_ Certificate No. \_\_\_\_\_ Exp. \_\_\_\_\_  
 Date \_\_\_\_\_

**END OF SECTION**

## **PART 1 GENERAL**

### **1.01 RELATED WORK DESCRIBED ELSEWHERE**

- A. The provisions and intent of the contract, including the General Conditions, Special Conditions and General Requirements apply to this work as if specified in this Section. Work related to this Section is described in:
  - 1. Section 02 82 14 – Asbestos Abatement

### **1.02 DESCRIPTION OF WORK**

- A. General work items include, but are not necessarily limited to:
  - 1. Building materials within the project building are assumed to contain low but detectable concentrations of lead in paint, and plumbing fixtures, and glazed wall tiles.
  - 2. No sampling for lead in either paint or plumbing fixtures or glazing on wall tiles were performed.
  - 3. There is a potential for exposure to lead and lead dust during renovation work depending on how the contractor disturbs any of the materials assumed to contain lead. The Contractor is responsible for monitoring work activities and determining when work involves hazardous materials and conditions that require conformance with specified regulatory requirements. Applicable regulations regarding exposure to lead (WAC 296-155-176) apply to this project.
  - 4. Waste Characterization and Recycling of Demolition Debris is the responsibility of the contractor.

### **1.03 CODES AND REGULATIONS**

- A. Due to the potential health and environmental hazards associated with the work at this site as described in this section, the work shall be performed in compliance with the applicable provisions of the Washington Industrial Safety and Health Act, and the Washington State Hazardous Waste Management Act, as well as other applicable federal, state, and local codes and regulations governing hazardous materials and hazardous waste. The Contractor is fully responsible for planning and executing all the work under this Contract in a manner that meets or exceeds the requirements of the Washington Administrative Code (WAC 296-62-07521 and WAC 296-155-176) for protecting the health and safety of employees, the public, and for protecting the environment.
- B. The following regulations of the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), the U.S. Environmental Protection Agency (EPA) and applicable requirements of the State of Washington are pertinent to this work. Other applicable regulations not specifically identified herein also apply.
  - 1. United States Department of Labor, Occupational and Health Administration (OSHA):
    - a. 29 CFR 1910 Occupational Safety and Health Standards
    - b. 29 CFR 1910.134 Respiratory Protection
    - c. 29 CFR 1910.1025 Lead
    - d. 29 CFR 1910.1200 Hazard Communication
    - e. 29 CFR 1910 Safety and Health Regulations for Construction

- f. 29 CFR 1926.55 Gases, Vapors, Fumes, Dusts, and Mists
  - g. 29 CFR 1926.57 Ventilation
  - h. 29 CFR 1926.62 Lead Exposure in Construction; Interim Rule (with appendices A, B, C and subpart D)
2. United States Environmental Protection Agency:
- a. 40 CFR 148 Hazardous Waste Injection Restrictions
  - b. 40 CFR 260 Hazardous Waste Management Systems: General
  - c. 40 CFR 261 Identification and Listing of Hazardous Waste
  - d. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
  - e. 40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
  - f. 40 CFR 264 Standards for Owners and Operators of Hazardous Waste, Treatment, Storage, and Disposal Facilities
  - g. 40 CFR 265 Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
  - h. 40 CFR 268 Land Disposal Restrictions
  - i. 40 CFR 745 Lead; Requirements for Lead-based Paint Activities; Proposed Rule
  - j. 49 CFR 172 Hazardous Materials Tables and Hazardous Materials Communications Regulations
  - k. 49 CFR 178 Specifications for Packaging
3. National Fire Protection Association (NFPA):
- a. NFPA 701 (1996) Methods of Fire Test for Flame-Resistant Textiles and Films
4. National Institute for Occupational Safety and Health (OSHA):
- a. NIOSH OSHA Booklet 3142 Lead in Construction
5. State Requirements: Washington State Requirements, and/or L&I rules which govern lead paint work or hauling and disposal include but are not limited to:
- a. WAC 296-62 General Occupational Health Standards
  - b. WAC 296-24 Safety Standards for Construction Work
  - c. WAC 173-303, 304 Dangerous Waste Regulations, Minimum Functional Standards for Solid Waste Handling
  - d. WAC 296-155-176 Occupational Health and Environmental Control; Lead

#### 1.04 DEFINITIONS

- A. Whenever the terms below occur in this Contract Document, they will have the meanings which follow:
- 1. Action Level: Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period. As used in this section, "30 micrograms per cubic meter of air" refers to the action level.

2. Air Monitoring: The process of measuring the concentration of lead in a specific volume of air in a stated period of time. Air samples shall be collected and analyzed in accordance with the methods specified by the National Institute for Occupational Safety and Health (NIOSH Method 7105) and as required by WAC-296-155-176.
3. Area Monitoring: Sampling of lead concentrations within the lead control area, inside the physical boundaries that are representative of the airborne lead concentrations that may reach the breathing zone of personnel potentially exposed to lead.
4. Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead averaged over an 8-hour workday to which an employee is exposed.
5. Lead: Metallic lead, inorganic lead compounds, and organic lead soaps. Excluded from this definition are other organic lead compounds.
6. Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter of air as an 8-hour time weighted average.
7. Personal Monitoring: Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with WAC 296-155-176. Samples shall be Consultant of the employee's work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 6 to 9 inches (228.6 mm) and the center at the nose or mouth of an employee.
8. Industrial Hygienist: The Industrial Hygienist shall be at least one of the following:
  - a. Certified by the American Board of Industrial Hygiene and have prior experience in the health and safety aspects of a lead hazard control work project.
  - b. A professional engineer or certified safety professional with a minimum of three (3) years prior experience in industrial hygiene relating to lead hazard control work.

#### 1.05 QUALITY ASSURANCE

- A. The Contractor shall submit a work plan (pursuant to Paragraph 1.6 A of this Section) if work, other than heavy equipment general building demolition, will impact lead containing materials or if there is a potential for occupational exposure to lead above the action limit. The work plan will demonstrate that abatement, demolition, recycling and disposal of lead-coated and lead containing building materials will be performed in a manner consistent with pertinent federal, state, and local regulation and this specification. The work plan will be submitted to the owner for review prior to the start of any lead related work.
- B. The Owner or the Owner's Consultant will perform periodic observation of the site work to ensure that it is being performed in a manner consistent with the Contractor's reviewed work plan and this specification.

#### 1.06 SUBMITTALS

- A. Contractors shall provide complete submittals for review by the Owner's representative.
- B. Pre-Job Submittals: Lead Work Plan (General): Provide a site-specific work plan that demonstrates the methods by which handling and disposal of lead-containing coatings and building materials will be performed. The Owner realizes that this project may or may not involve actual "lead abatement," instead the project involves demolition of building components that have paint of varying lead concentrations. At a minimum, the work plan shall include:

1. A general description of work practices, engineering controls, air monitoring, and decontamination involving lead-containing coatings. Describe whether the job will involve removing lead paint, or demolition of materials containing lead.
  2. Qualification / certification / training certificates and role of each contractor's personnel;
  3. Qualifications of the proposed testing laboratory (to perform analysis of air and waste characterization samples);
  4. Site inspection process logs / documents;
  5. Procedures for personnel and equipment cleanup / decontamination;
  6. Lead waste management and disposal / recycling plan including waste minimization efforts; container selection and labeling;
  7. Qualification / certificates of lead waste transportation subcontractor;
  8. Qualification / certification of lead waste disposal / recycle facilities;
- C. Construction Phase submittals: Submit the following information daily (at the end of the work shift) to the Owner and Owner's representative or as designated during the pre-construction meeting.
1. Air and bulk sample data sheets and laboratory results including chain of custody and analytical results.
  2. Negative Exposure Assessment Reports
    - a. Include laboratory analytical testing
    - b. Documentation of the work activities included in the NEA.
  3. Supervisor or Superintendent daily inspection report.
  4. Any additional waste characterization testing for waste streams or combination of waste streams other than those including in section 1.2 above.
- D. Post Construction Submittals - At the completion of the contract, the Contractor shall provide a report of completion including:
1. All employee exposure monitoring information;
  2. Documentation of final lead waste;
  3. Documentation of final recycled waste streams;
  4. Documentation of final lead waste transportation and disposition
  5. Documentation of final recycled waste streams & quantities and locations of recycling facilities;
  6. Certification that the work has been completed pursuant to this specification.

## **PART 2 PRODUCTS**

### **2.01 EQUIPMENT AND SUPPLIES**

- A. Provide a list and description of equipment and supplies necessary to support the work as described in the work plan. Equipment and supplies may include but are not limited to:
1. Chemicals to be used on-site including dust suppressants/wetting agents, fuels/lubricants, cleaning degreasing, and/or welding/cutting supplies;

2. Enclosure equipment (for dust control);
3. Fencing, barriers and signs;
4. Demolition equipment;
5. Materials and debris hauling/moving equipment;
6. Material storage containers and supplies;
7. Decontamination equipment and supplies;
8. Protective clothing and respirators;
9. Labels, manifests and other shipping documentation;
10. Release prevention equipment;
11. Field documentation logs/supplies; and,
12. Protective clothing, respirators, equipment and supplies necessary to support the work.

### **PART 3 EXECUTION**

#### **3.01 WORK AREA PREPARATION**

- A. As required, perform the following preliminary steps to prepare the Work Areas prior to work impacting lead or lead-coated building materials:
  1. Establish a Control Area that includes a perimeter sufficient to perform the work around each building or area that contains lead or lead-coated building materials. The control area shall also consist of the pathway for transport of any lead-contaminated material to a stockpile or storage receptacle if lead-containing debris is not immediately transported from the site. Provide and display caution signs, in clearly visible areas, at entrances indicating that hazardous material work is being conducted and that unauthorized persons should not enter. Signs shall be comply with WAC 296-155-176 regulations.
  2. Emergency Procedures: Establish and post written emergency procedures within each Work Area, including emergency contact names and contact phone numbers, plans for medical emergencies, temporary loss of electrical power or water, and procedures for an emergency. Contractor is responsible for establishing and posting contingency procedures to all workers on site.
  3. Health and Safety Briefing: Conduct a health and safety briefing prior to the start of work and weekly to discuss the health and safety plan, hazardous materials, hazardous work and other related items per the specified health and safety plan. More frequent briefings should be performed as required by project activities or changes in the work.
  4. Log-in Sheet: Restrict access to work sites by maintaining a daily log of personnel entering Work Areas; including workers and other authorized personnel and their start/stop times.
  5. Decontamination Unit: Prepare the decontamination unit for use at all entrances and exits from the Work Area as described in the approved work plan.

### 3.02 WORK PROCEDURE

- A. General Procedures: Perform all work and comply with the safety and health provisions in the site-specific Health and Safety Plan. The work includes all measures necessary to adequately protect workers, authorized personnel, and the public from lead exposures during abatement and demolition activities.
- B. Coordination of Work of all Trades: Coordinate the work of all trades to ensure that work is performed in accordance with the applicable regulations and that the control limits are maintained at all times both inside and outside the control area.
- C. Access to Work Area: Access to work areas shall be through decontamination areas. Only the Contractor, subcontractors, authorized Owner personnel, project consultants, and regulatory personnel shall have access to the work area.
- D. Means of Egress: Establish and maintain emergency and fire exits from the work area.
- E. Prevent dust generation at all times to the maximum extent practicable. Provide hand wash stations at appropriate and approved locations for the duration of demolition.
- F. The use of water shall be restricted to the smallest quantity necessary to minimize dust and to avoid the potential of contaminant migration through run-off or ponding. In no case shall liquids generated during building demolition come into contact with uncontaminated soils, storm drains, surfaces or conduits which may constitute a release to the environment.
- G. Demolition Procedures: Perform general demolition or demolition required for hazardous material abatement in areas of lead-containing paints in accordance with approved Health & Safety Plans. Use procedures and equipment required to limit occupational and environmental exposure to lead when lead-containing paint is impacted or when building components are demolished. The procedures employed by the Contractor shall not create the potential for contaminating surrounding areas or materials with lead-containing coatings or dust. Dust generation shall be kept to a minimum. Dry scraping, dry sanding, or dry grinding on lead-containing paints or lead contaminated surfaces will not be permitted without a full enclosure.
- H. All lead-coated demolition debris shall be handled, stored and disposed or recycled to meet applicable federal, state and local requirements.
- I. Personnel and equipment decontamination shall occur whenever people or equipment leave the work site as described in the approved work plan. Decontamination waste shall be packaged, stored, labeled and disposed of according to all applicable requirements at the cost of the Contractor. All contaminated equipment, tools or materials that cannot be decontaminated shall be stored and disposed of by the Contractor in accordance with all federal, state and local regulations.
- J. Grossly inadequate health, safety or environmental precautions on the part of the Contractor or the belief that the Contractor's personnel, the general public or the environment are or may be exposed to an immediate hazard, may be cause for the Owner to suspend the Contractor's site work and ask the Contractor's personnel to evacuate the hazard area. The Contractor shall not be compensated for such delays. The contractor is responsible for costs identified by the Owner as a consequence of the contractor's actions.
- K. The Owner or the Owner's Consultant may inspect the Contractor's operations and work areas daily for job site cleanliness and conformance with the specifications. The Contractor shall locate any fuels, solvents or lubricants in a common area in a manner that will prevent releases to the environment. Any hazardous materials shall be appropriately labeled with the generic name of the contents and the Contractor's name.

- L. Waste Sampling: Contractor will be required to collect representative samples of demolition debris for analysis as required under WAC 173-303, Dangerous Waste Regulations, to determine appropriate disposal or recycling methods. Select materials that were tested and determined to have lead in the coating for sampling and submittal to an approved laboratory for Toxicity Characteristic Leachate Procedure (TCLP) testing.

### 3.03 SITE QUALITY CONTROL AND MONITORING

- A. Site Inspection: While performing the work, the Contractor may be subject to on-site inspection by L&I/WISHA, OSHA, EPA/Ecology inspectors and/or local building or health officials. If found to be in violation of pertinent regulations, the Contractor shall cease all work immediately until the violation is resolved. Standby time required to resolve the violation shall be at the Contractor's expense. Complete sets of equipment (such as respirators and disposable clothing) that may be required for entry to the control area shall be made available at all times by the Contractor to the Owner and/or agency inspectors for inspection of the control area. Such requests will only be made during working hours.
- B. Quality Assurance
  - 1. Restrict the spread of dust and debris from being distributed over the work area.
  - 2. Area air quality monitoring and personnel monitoring shall be conducted throughout the work as appropriate.
  - 3. Air Monitoring: Monitoring of airborne concentrations of lead shall be in accordance with WAC 296-115-176, and as specified herein. Air monitoring, testing, and reporting shall be performed in accordance with an Air Monitoring Plan prepared and signed by the Contractor's Industrial Hygienist. The plan shall include personal monitoring in accordance with regulatory requirements and area monitoring outside the lead control area.
    - a. Submit results of air monitoring samples within 24 hours after the air samples were taken.
    - b. Notify the Owner immediately of the corrective action taken if the exposure to lead is at or in excess of the action level of 30 micrograms per cubic meter of air outside of the lead control area.
    - c. If the area air monitoring results are above the action level of 30 micrograms, the Owner shall have the option of stopping all work until the work procedures and lead hazard controls are revised to the Owner's satisfaction.

### 3.04 CLEAN-UP, TESTING AND DISPOSAL

- A. Housekeeping: Housekeeping and clean-up procedures are essential tasks for contamination control. Maintain all surfaces throughout the area free of contaminated debris to the maximum extent practical. Restrict debris from being distributed over the general area. In all possible instances workers shall clean-up their own areas. Equip personnel engaged in cleaning up scrap and demolition debris with necessary respiratory equipment and protective clothing.
- B. Cleanup: Maintain surfaces of the lead control area as free of accumulation of paint chips and dust as practicable. Restrict the spread of dust and debris; keep waste from being distributed over the work area. The use of compressed air to clean up the area is strictly prohibited. At the end of each shift, clean the area of visible lead paint contamination by vacuuming with a HEPA-filtered vacuum cleaner, wet mopping the area, or cleanup by other appropriate means.

- C. Testing of Demolition Debris: The Contractor will be required to collect representative sample(s) of the actual demolition debris stream for Toxicity Characteristic Leaching Procedure (TCLP) analysis as required under WAC 173-303, Dangerous Waste Regulations. The Owner's Consultant reserves the right to review sampling procedures and analytical data before disposal of demolition waste.
- D. Disposal of Lead Demolition Waste: If any lead dangerous waste is identified the following requirements shall be met for the disposal of lead dangerous waste:
  - 1. Collect lead dangerous waste, scrap, debris, bags, containers, equipment, and lead contaminated clothing that may produce airborne concentrations of lead particles. Label the containers in accordance with 29 CFR 1910.1025.
  - 2. Handle, store, transport, and dispose of lead or lead dangerous waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265 and WAC 173-303. Comply with land disposal restriction notification requirements as required by 40 CFR 268.
  - 3. The Transporter and Disposal Facility must each have an EPA identification number. The Contractor shall submit the name, address, and EPA Identification Number of the Transporter and Disposal Site to the Owner prior to the disposal of hazardous waste.
- E. Disposal Documentation: Disposal documentation is required for all waste streams. At a minimum, provide a disposal receipt or manifest for all non-dangerous waste streams. For lead dangerous waste, if any is generated, submit written evidence that the hazardous waste treatment, storage, or disposal facility (TSD), or recycling facility is approved for lead dangerous waste disposal or recycling by the EPA and state or local regulatory agencies. Submit one (1) copy of the completed manifest, signed and dated by the initial transporter in accordance with 40 CFR 262. Final payment for the project shall not be made until all disposal documentation has been submitted and accepted by the Owner.

#### **PART 4 MEASUREMENT AND PAYMENT**

- 4.01 No separate measurement or payment for lead handling, waste disposal, and/or training will be made. The cost shall be considered incidental to and included in the lump sum price of the project.

**END OF SECTION**

**Attachment C**  
**Appendix C**  
**Hazardous Materials Survey Report**

# Appendix C – Limited Hazardous Materials Survey

# Limited Hazardous Materials Survey

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Port of Tacoma

**West Sitcum Building 950 Sewer and Bathroom Upgrades**

**Project No. 201189.01**

Tacoma, WA 98421

*Prepared for:*

**Elly Bulega, PE**

Project Manager II

PORT OF TACOMA

*Prepared by:*

**David Braungardt**

Project Manager | AHERA Building Inspector

*Reviewed by:*

**Jim Kapin, MPH, CIH, CSP**

Principal Industrial Hygienist



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March 20, 2025

Tetra Tech Project No. 117-171188-25003

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Figure 1: Sheet AD1.1, First floor and Enlarged Demolition Plans – Asbestos Sample Locations

Figure 2: Sheet AD1.2, First floor and Enlarged Demolition Plan – Asbestos Sample Locations

Figure 3: Sheet AD1.3, Second floor and Enlarged Demolition Plans – Asbestos Sample Locations

Figure 4: Sheet AD1.4, Third Floor and Enlarged Demolition Plans - Asbestos Sample Locations

## TABLES

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Table 1: Summary of Asbestos Bulk Sampling and Analytical Results

Table 2: Summary of Mercury, and other Regulated Materials

## APPENDICES

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APPENDIX A: Inspection Certifications

APPENDIX B: Laboratory Analytical Reports and Chain-of-Custody Forms

APPENDIX C: Laboratory Certifications

APPENDIX D: Photo Log

## EXECUTIVE SUMMARY

Port of Tacoma has contracted with Tetra Tech, Inc. (Tetra Tech), to conduct a Hazardous Materials Survey (Survey) prior to a renovation project known as the West Sitcum Building 950 Sewer and Plumbing Upgrade project at Building 950 behind Gate #3 on the Sitcum Waterway, Tacoma, Washington (the Site).

This survey was limited to the areas slated for demolition as shown on drawings prepared by Sitts and Hill, dated 11/22/2024. The survey included asbestos-containing materials (ACM), and visual identification of other regulated materials such as mercury, and chlorofluorocarbon (CFC)-containing equipment. The ACM survey was performed in accordance with local, state, and federal regulations.

### Asbestos-Containing Building Materials

Tetra Tech collected 55 bulk samples of 31 different suspect ACM at the Site on 3/6 and 3/17/2025. Of the 55 bulk samples, laboratory analysis revealed 4 bulk samples from 2 homogenous materials contained greater than 1 percent asbestos. Materials with >1% asbestos are regulated ACM, which are required to be removed and disposed properly prior to renovation or demolition. Specific sample locations of the suspect materials can be referenced in Table 1, and photos of materials containing asbestos are found in the photo log, Appendix D. See the attached Figures 1-4 for sample location drawings, on the four demolition drawings included in the Sitts and Hill design set of drawings.

The 2 ACMs that were identified at the Site during this assessment and their friability, as determined by the building inspector, include:

- 3 EA - ACM White undercoating on stainless steel sinks (Non-Friable) | Material is located on sinks in breakrooms that are scheduled to be removed and possibly replaced.
- 30 SF - ACM Black mastic under 12" x 12" floor tile (Non-friable) | The mastic tested positive at two locations of what looks to be "repair" floor tiles in the breakroom. The floor tiles were non-asbestos, but are considered an ACM since the mastic is adhered to the tiles.

**Discussion:** It is unclear if this ACM black mastic occurs in any other locations in the building as the floor tiles where the ACM mastic was found appear to be a floor tile "repair" area. While samples of black mastic for the predominant floor tile in the building were negative for asbestos.

On March 17, 2025, Tetra Tech returned to the site and collected four additional samples of floor tile, mastic, and concrete. These samples were collected in close proximity to the area with 30 SF of known ACM mastic. In addition, Tetra Tech inspected under tile in multiple locations to determine if similar black mastic existed that matched the area of known ACM identified during the initial assessment.

- Based on the results of the 3/17/25 assessment, the ACM black mastic is likely limited to the "repair" area in front of, and under the existing vending machines in Breakroom 103.
- Any future abatement of floor tile in this building may still find areas of black mastic that should be characterized further if found during flooring removal.

### Lead-Containing Paint

Tetra Tech did not perform any lead paint sampling. Instead, it is assumed that based on the buildings age, lead in paint is likely a low concentration throughout. Additionally, the glazed plumbing fixtures and glazed wall tiles are also assumed to have lead in the glazing on the tiles.

The U.S. Department of Labor and the Washington State Department of Labor and Industries require that the Washington State Construction Standards for Lead (WAC 296-155-176) be followed during "new construction, alteration, repair, or renovation of structures, substrates, or portions thereof that contain lead, or materials containing lead." These standards consider paint with any detectable concentration of lead to

be “Lead Containing Paint” (LCP) and to be a potential hazard during construction activities. During renovation or demolition activities, Tetra Tech recommends that the contractor use precautions and follow health and safety guidelines, as the paint throughout is assumed to be LCP. Tetra Tech recommends that demolition contractor(s) who will disturb any paint or glazed plumbing fixtures during demolition activities should evaluate potential occupational lead exposures for workers with respect to Washington State Department of Labor and Industries action level (AL) or permissible exposure limit (PEL) and implement appropriate controls,

### **Polychlorinated Biphenyl Light Ballasts and Mercury-Containing Fluorescent Light Tubes, and other Regulated Materials**

As part of the Survey for hazardous materials, Tetra Tech conducted a visual survey to estimate the amount of universal waste or otherwise-regulated materials throughout the renovation areas of Building 950. The visual survey included a prepared inventory of installed regulated materials that may classify as universal hazardous wastes or other regulated wastes that may impact the demolition project. These materials included mercury-containing items such as fluorescent light tubes, thermostats, and light ballasts. Other regulated materials included chlorofluorocarbon (CFC)-containing items, and items such as exit signs containing tritium and smoke detectors. Based on the age of the building, the light fixtures are assumed to have electronic ballasts and are not likely to have PCB-containing ballasts.

Generally, it is not necessary to sample these materials because their presence within the buildings represents a future cost for disposal of the facility’s installed components. The following regulated materials were identified throughout the Site as part of Hazardous Materials Survey:

- 106 each – 4-foot fluorescent light tubes (mercury)
- 4 each – compact fluorescent light bulbs (mercury)
- 53 each – electronic light ballasts
- 3 each – refrigerator/freezer condenser units (CFCs)

It is assumed that these materials may be removed and replaced in the building upon completion of the work. The contractors should be made aware of the potential hazards associated with these building materials.

## 1. INTRODUCTION

Port of Tacoma has contracted with Tetra Tech, Inc. (Tetra Tech), to conduct a Hazardous Materials Survey (Survey) prior to a renovation project known as the West Sitcum Building 950 Sewer and Plumbing Upgrade project at Building 950 behind Gate #3 on the Sitcum Waterway, Tacoma, Washington (the Site).

This survey was limited to the areas slated for demolition as shown on drawings prepared by Sitts and Hill, dated 11/22/2024. The survey included asbestos-containing materials (ACM), and visual identification of other regulated materials such as mercury, and chlorofluorocarbon (CFC)-containing equipment.

The ACM survey was performed in accordance with local, state, and federal regulations.

### 1.1 Scope of Work

The scope of services for the hazardous materials survey consisted of the following tasks:

- Collect bulk suspect ACM samples as necessary to identify ACM on the Site.
- Inventory universal waste items or other regulated wastes that may be disturbed, removed, and replaced as part of the contractor's planned scope of work.
- Prepare a summary report documenting the findings of the Survey and provide tables summarizing ACM, analytical data, listing of other regulated materials, plus comments and recommendations for handling and control.

### 1.2 Building Description(s)

The West Sitcum 950 Building is a terminal management and maintenance building currently occupied by SSA Marine as it operates the terminal on the West Sitcum Waterway in the Port of Tacoma. The building is 3 floors, with the first floor occupying about 10,600 SF, second floor 8,000 SF, and the third floor, 2,600 SF. The area of our survey was much smaller and included bathrooms, breakrooms, janitor closets, and hallways.

The building was reportedly built in the mid 1980's and is three stories, wood, and steel frame construction with slab on grade first floor. The second and third floors have lightweight concrete as a base flooring surface. The exterior walls are metal siding, with an EPDM flat roof on top. The interior finishes are generally floor tile on concrete, drywall walls, with either a heavy wallpaper, or fiberglass re-enforced panels (FRP) over drywall. Ceilings are generally suspended acoustic tiles, except in bathrooms, locker rooms, where they are either drywall, or glazed tile over drywall. Bathrooms, showers, and locker rooms generally have a combination of glazed wall tiles, FRPs over drywall, or heavy wall paper on drywall. Flooring in bathrooms and janitor closets are 1"x1" ceramic type tiles.

The building is generally heated by roof mounted heating ventilating and air conditioning equipment ducted throughout, but this is not expected to be disturbed by this project.

### 1.3 Limitations

The conclusions of the report are professional opinions based solely upon visual site observations and interpretations of sample analyses as described in this report. The opinions presented herein apply to conditions existing at the time of the investigation and interpretation of current regulations pertaining to ACM and other regulated building materials. Therefore, opinions and recommendations provided herein might not apply to future conditions that may exist at the Site. Current applicable regulations should always be verified prior to any work involving asbestos or other regulated materials. This Survey is not intended to be used as an abatement design document. All existing conditions, quantities, and locations should be verified prior to abatement. ACM may be located within areas that were not accessible during this Survey.

It should be noted that no survey can be comprehensive or exhaustive enough to eliminate the possibility that ACM present may not be detected during the Survey. Therefore, the completion of this or any survey for ACM or other hazardous materials should not be considered a warranty or guarantee that these materials do not exist, even if they are not detected through a survey.

Areas that were inaccessible or not included in this survey include;

- All areas of the building not included on the demolition sheets AD1.1, AD1.2, AD1.3, AD1.4 as prepared by Sitts and Hill.
- All wiring and electrical equipment that may be energized

## 2. METHODOLOGY

Information concerning the West Sitcum Building 950 Sewer and Bathroom Upgrades Project was obtained from an inspection conducted by Mr. David Braungardt, Project Manager and building inspector for Tetra Tech. Copies of his Asbestos Hazard Emergency Response Act (AHERA) building inspector certification is included in **Appendix A**. This section describes the sampling methodology and applicable regulations.

### 2.1 Asbestos Inspection Methodology

Prior to the survey, Tetra Tech viewed the drawings prepared by Sitts and Hill, dated 11/22/2024 to determine areas of the building expected to be impacted by this project. The owner did not provide a copy of any previous asbestos surveys, or other hazardous materials surveys for this building.

To perform this survey, a visual inspection of accessible areas was conducted to identify suspect and assumed ACM. The asbestos survey was performed by an AHERA-certified building inspector in accordance with a sampling protocol appropriate for a renovation project. The sampling protocol was developed in accordance with the following regulations:

- EPA Asbestos Regulation within the Toxic Substances Control Act (Part 763 of Title 40 of the Code of Federal Regulations [40 CFR 763])
- Asbestos NESHAP, 40 CFR 61 Subpart M
- Washington Administrative Code (WAC) 296-62-07721(1)(C)(i) Communication of Hazards
- Puget Sound Clean Air Agency (PSCAA) Regulation III, Article 4-Asbestos Control Standard

The sampling plan included, at a minimum, the collection and analysis of suspect ACM samples as follows:

- Surfacing material: Tetra Tech collected a minimum of three samples in a distributive manner from each homogenous area that was 1,000 SF or less in area. A minimum of five samples collected from each homogenous area that was more than 1,000 SF but less than or equal to 5,000 SF in area. A minimum of seven samples collected from each homogenous area that was more than 5,000 SF in area.
- Miscellaneous material: Tetra Tech collected bulk samples of suspect ACM in a distributive manner as deemed sufficient by the AHERA-certified building inspector. At least one sample was collected of each suspect miscellaneous material not presumed to contain asbestos.
- Non-suspect materials: According to 40 CFR 763.86(b)(4), sampling is not required where the accredited inspector has deemed the material to be fiberglass, foam glass, rubber, or other recognized non-ACM. Samples were collected by carefully removing small portions of the suspect material with a sharp knife or other hand tool suitable for the material being sampled. The sampling instrument was wiped with a clean moist cloth to decontaminate the tool and minimize the potential release of asbestos fibers or cross-contamination of subsequent samples. Once collected, each bulk sample was sealed in a new, clean plastic bag to eliminate the possibility of cross-contamination, labeled with the sample name, and sent to the analytical laboratory under standard chain-of-custody protocols. Bulk ACM sample locations are included in **Table 1**. Pictures of ACMs are provided in **Appendix D**, Photo Log. Tetra Tech placed our sample locations onto drawings prepared by Sitts and Hill, identified as **Figures 1-4**.

### 2.1.1 Sample Documentation

A unique sample identification system was employed for bulk samples of suspect ACMs collected during the Survey that includes the project number and sample sequence number.

Data pertinent to each sample (e.g., date, sample name, material description, and material category) was recorded on a field data sheet. The material determination of friability was made by the AHERA-certified building inspector in the field. Details regarding the bulk samples of suspect ACMs and their friability are summarized in **Table 1**.

### 2.1.2 Laboratory Analysis

As specified in 40 CFR 763.87, each sample was analyzed using polarized light microscopy with dispersion staining in accordance with EPA Method 600/R-93/116. Samples were analyzed for asbestos content by NVL Laboratories, Inc. (NVL) of Seattle, Washington. NVL participates in the National Institute for Standards and Technology National Voluntary Laboratory Accreditation Plan (NVLAP). Only materials containing greater than 1 percent total asbestos were classified as “asbestos-containing” based on EPA, state, and local regulations.

Laboratory analytical reports and chain of custody forms are provided in **Appendix B**. Laboratory certifications are provided in **Appendix C**.

## 2.3 Regulated Materials Inspection Methodology

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Verifying the presence or absence of mercury, or other regulated materials by laboratory analysis was beyond the scope of this survey. The survey did include a visual identification and determination of quantities of fluorescent light ballasts, mercury containing light tubes, CFC-containing items and compact fluorescent light bulbs that may be removed and replaced as part of this renovation project. Mercury is assumed to be present in fluorescent lamps in fluorescent light fixtures. A summary of mercury-containing fluorescent light tubes, and other regulated materials is provided in **Table 2**.

## 3. RESULTS

This section summarizes the results of the hazardous materials survey conducted as part of the West Sitcum Building 950 Sewer and Bathroom Upgrades Project.

### 3.1 Asbestos

The following known and assumed ACMs and their friability, as determined by the building inspector, were identified at the Site as summarized below by area.

- 3 EA - ACM White undercoating on stainless steel sinks (Non-Friable) | Material is located on sinks in breakrooms that are scheduled to be removed and possibly replaced.
- 30 SF - ACM Black mastic under 12" x 12" floor tile (Non-friable) | The mastic tested positive at two locations of what looks to be repair floor tiles in the breakroom. The floor tiles were non-asbestos, but are considered an ACM since the mastic is adhered to the tiles.

A detailed summary of materials sampled for asbestos including the sample number, homogenous material description, material classification, analytical results, and quantity is provided in **Table 1**. Copies of the analytical laboratory reports and chain of custody forms for bulk samples of suspect ACM are included in **Appendix B**. Select photographs of ACMs are provided in **Appendix D**.

### 3.2 Lead Paint

No sampling for lead paint was performed. However, lead is assumed in low concentrations in paint and glazing on plumbing fixtures and wall tiles.

### 3.3 Mercury, and Other Hazardous Materials

A tabulated summary of light ballasts, mercury-containing light tubes, CFC-containing items, and compact fluorescent light bulbs are included in **Table 2**.

## 4. CONCLUSIONS AND RECOMMENDATIONS

A copy of this report must be provided to any contractor bidding and/or conducting work on the project. The contractor must also have a copy of this report during renovation demolition activities as part of the project. Conclusions and recommendations are summarized below.

Tetra Tech recommends that all ACM are removed prior to demolition. Lead in paint and plumbing fixtures should be incorporated into the contractor's demolition plan as it relates to worker & environmental protection, but removal is not necessary for this renovation project. PCBs are not expected to be in the building based on its age. The contractor should be made aware that other regulated materials such as mercury light tubes, compact fluorescent light bulbs, and CFC-containing equipment will be a part of the project. It does not appear that these items will be removed, recycled, and disposed, but may be removed and re-installed as part of the project.

### 4.1 Asbestos-Containing Materials

ACMs were identified within the West Sitcum 950 building. Tetra Tech recommends that a licensed asbestos-abatement contractor in accordance with WAC 296-62 remove all asbestos-containing and asbestos-contaminated building materials prior to disturbance. Site specific recommendations are provided for your consideration:

- ACM Sink undercoating - if the existing sinks will be removed and replaced, then procedures for the contractor to properly handle the sinks, rather than replace can be provided. Otherwise, we recommend removing and disposing of the sinks with ACM coating on them.
- ACM black mastic under floor tile – Based on subsequent sampling and inspection of non-ACM tiles around the area of “repair” tiles, we have determined that the ACM mastic appears to be isolated to 30 square feet of “repair” tiles in the breakroom 103. Additional samples were collected of the non-ACM tile and mastic surrounding these areas, and no asbestos was identified.

The contractor should use caution when performing demolition or other activities within the project areas even after asbestos abatement activities, as concealed materials may be encountered during the project. ACM may be located between walls, above ceilings, in pipe chases, or other inaccessible areas.

If additional suspect building materials not identified specifically in this report as either ACM or non-ACM are identified during construction activities, they should be treated as asbestos-containing until sampled by an AHERA Building Inspector and proven to not contain asbestos through laboratory analysis.

### 4.2 Lead Paint

LCP and lead glazing on wall tile and plumbing fixtures is assumed in the project work area. It is unclear how these items would be disturbed during this project, and it is the contractor's responsibility to determine how these materials will be disturbed.

The Occupational Safety and Health Administration (OSHA) considers any detectable concentration of lead to be a potential hazard during construction, renovation, or demolition activities. The Washington State Department of Labor and Industries Lead in Construction Standard applies to construction-related tasks that impact any detectable level of lead. During demolition activities, we recommend that the contractor use precautions and follow health and safety guidelines, since all painted surfaces within the project area are considered to contain detectable levels of lead. It is recommended that the contractor perform negative exposure air monitoring to evaluate the potential for elevated occupational lead exposures during renovation or demolition activities.

## 4.3 Mercury, and Other Regulated Materials

The various waste categories have differing requirements depending on whether they will be recycled or disposed. In this project, it is unclear whether these items will be removed, recycled, or disposed. Therefore, the contractor must determine what occurs, and then choose the appropriate procedures to handle the items discovered as part of this survey.

The following descriptions are separated by the major category of regulated materials or universal waste designation as described throughout this report. The identified regulated materials or universal waste materials should be properly removed and handled before demolition activities begin in the buildings. A removal plan should be developed that includes worker training and protection, identification and removal procedures, storage, transport, and disposal procedures. The following sections generally provide appropriate disposal options for the identified materials.

### 4.3.1 Mercury

Many fluorescent light tubes and compact fluorescent light bulbs contain mercury that is harmful to the environment and human health. The EPA has placed these materials in a special category of dangerous waste known as universal waste. Some of the requirements included with the Universal Waste rule and Dangerous Waste lamps include:

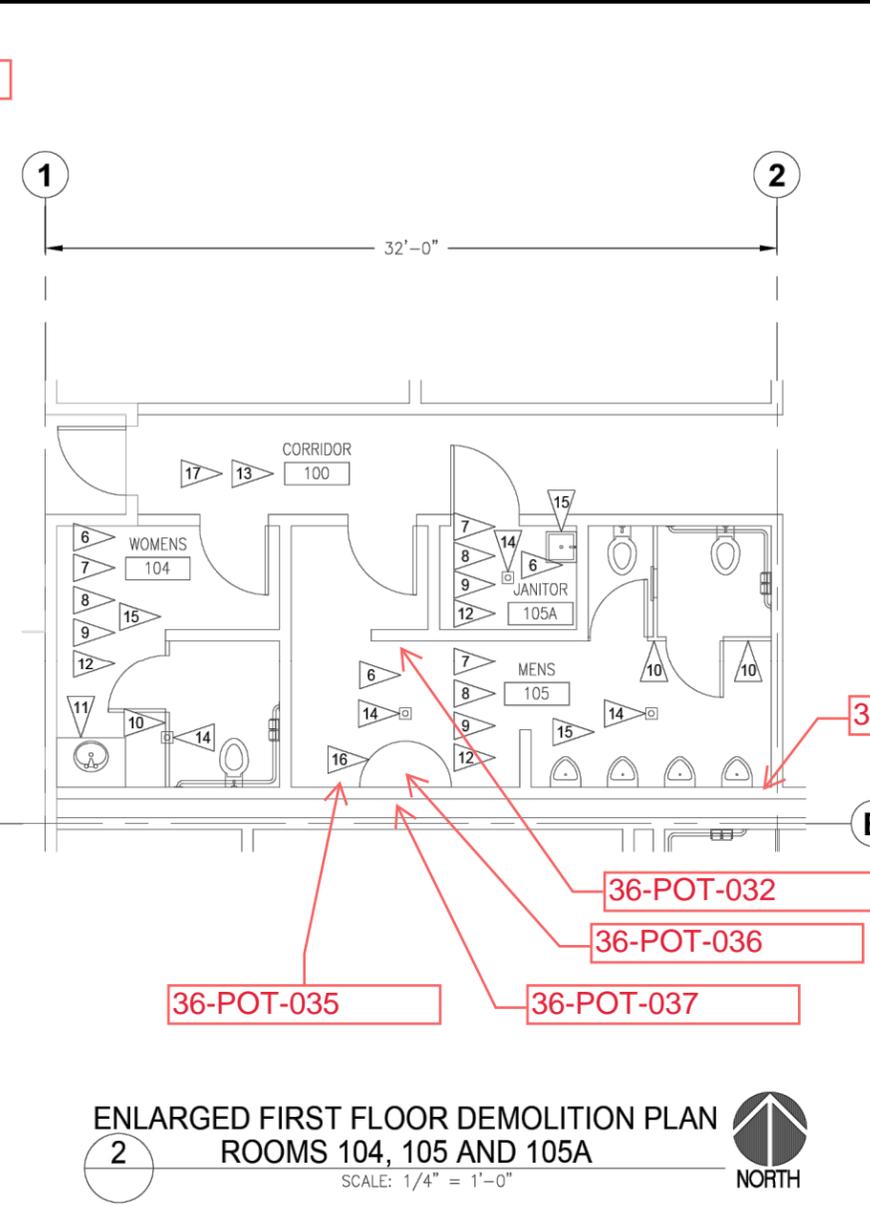
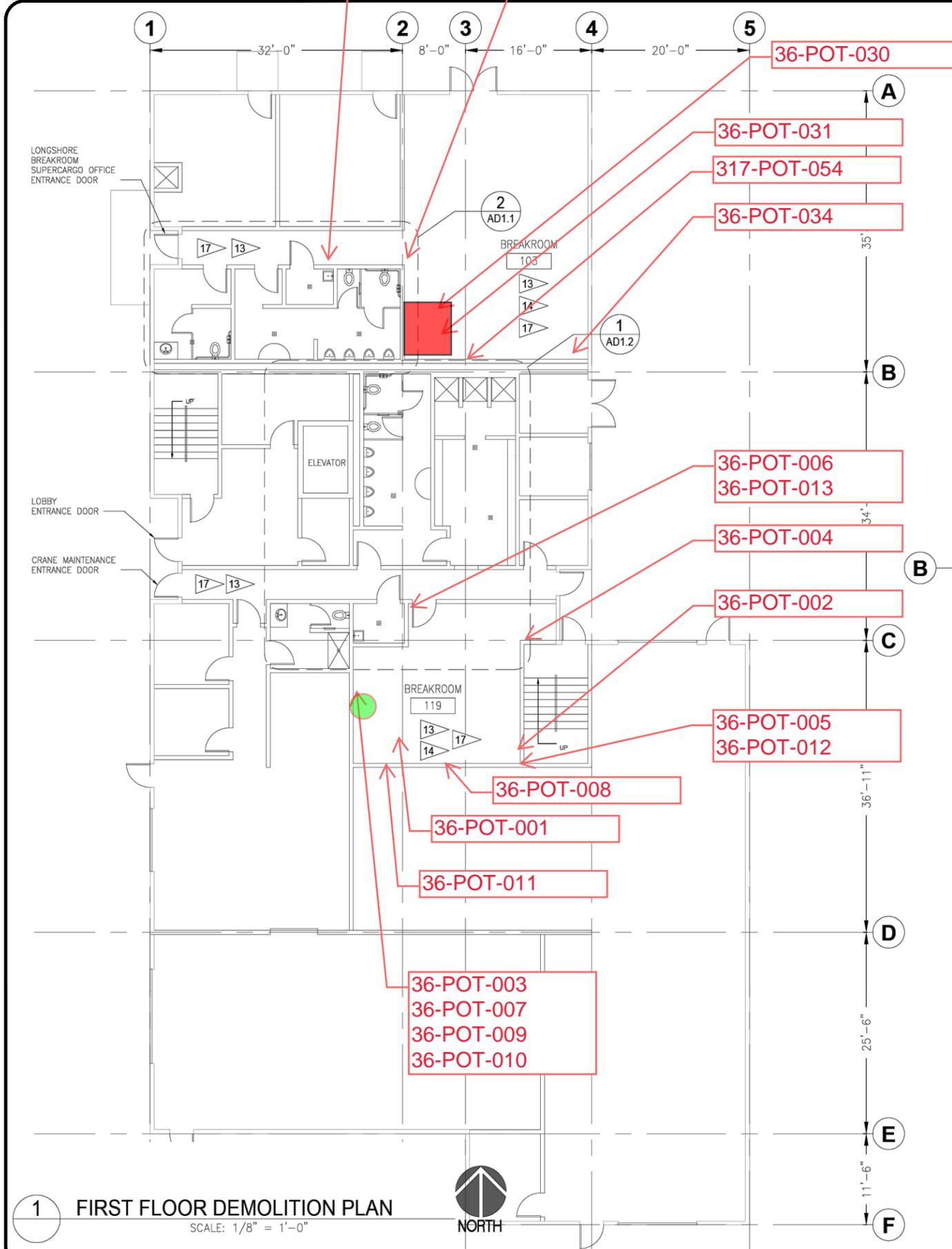
- Immediately place lamps showing evidence of leakage, damage, etc. into a container following removal.
- Containerize in closed, structurally sound, compatible containers appropriate for the size of the lamps. Cardboard containers may be used for inside storage only.
- Label container as follows: "Universal Waste Lamps."
- Track the length of time since waste lamp generation. Acceptable methods of proof include date on label, inventory system, etc. Universal waste must be managed for offsite recycling or recovery within one year of the date of generation.
- Respond immediately to potential releases. If determined to be a release, contain the release, and determine whether it designates as a dangerous waste.
- Disposal of universal waste as general or construction debris is not permitted.
- The crushing of fluorescent light tubes on site is not allowed. In addition, measures should be taken to prevent breakage of fluorescent light tubes while the light tubes are in transit to their destination.
- Provide training to employees on the proper handling and emergency procedures for universal waste lamps.
- Track shipments of universal waste lamps and keep records (invoice, manifest, etc.) for a minimum of three years.

### 4.3.2 Other Regulated Wastes – Chlorofluorocarbons

Installed items containing CFCs, such as refrigerators, should be handled appropriately during the planned project. Items containing CFCs are not allowed to be disposed of as solid waste. It is determined that the refrigerators will be removed and not returned to the building, Tetra Tech recommends recycling CFC-containing items at an approved facility to help ensure that CFCs and other refrigerants are properly removed from the item prior to disposal. Refrigerants should be reclaimed and recycled by a qualified CFC reclamation contractor prior to disturbance.

## FIGURES

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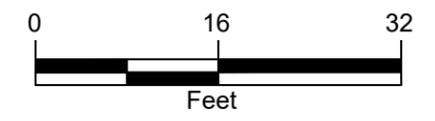
NOTE: SAMPLE LOCATION FIGURE IS A PARTIAL REPRODUCTION OF A DRAWING PREPARED BY OTHERS, TETRA TECH MAKES NO WARRANTY TO ACCURACY OF THE DRAWING.

**DEMOLITION PLAN LEGEND**  
 XXX AS SHOWN ON PLAN INDICATES ROOM NUMBER

**DEMOLITION PLAN NOTES**

- SEE ROOM FINISH SCHEDULE AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
- PLUMBING INFORMATION SHOWN ON ARCHITECTURAL DRAWINGS TO BE USED FOR DIAGRAMMATICAL PURPOSES ONLY. REFER TO PLUMBING DRAWINGS FOR PLUMBING INFORMATION.
- DIMENSIONS FROM EXISTING WALLS ARE FROM FACE OF FINISH.
- CONTRACTOR TO SCAN FOR ALL UTILITIES & STRUCTURAL IMPACTS AT ALL EXISTING CONCRETE SLABS PRIOR TO SAWCUTTING, TRENCHING OR PERFORMING ANY POTENTIALLY IMPACTFUL WORK.
- SEE PLUMBING DRAWINGS FOR AREAS OF CONCRETE FLOOR SAWCUTTING, TRENCHING AND BACKFILLING. REFER TO DETAIL 8/A5.3 FOR TYPICAL UTILITY TRENCH SECTION INFORMATION FOR SAWCUTTING AT EXISTING SLAB.
- REMOVE CLUED ON CEILING TILE IN ENTIRE ROOM AND CUT GYPSUM WALLBOARD AS NEEDED FOR PLUMBING WORK. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.
- REMOVE GYPSUM WALLBOARD ON ALL WALLS IN ROOM. PREPARE STUDS FOR NEW WALL SUBSTRATE PER ROOM FINISH SCHEDULE.
- REMOVE ALL PLUMBING FIXTURES IN ROOM PER PLUMBING DRAWINGS.
- REMOVE ALL FLOOR FINISH, WALL SUBSTRATE, IN THIS ROOM. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE TOILET SCREEN.
- REMOVE LAVATORY & COUNTER.
- REMOVE ALL ROOM WALL ACCESSORIES AND SALVAGE FOR REINSTALLATION.
- REMOVE FLOOR FINISH AND WALL BASE IN THIS ROOM.
- REMOVE ALL FLOOR DRAINS AND CLEANOUTS IN THIS ROOM. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE SERVICE SINK PER PLUMBING DRAWINGS.
- REMOVE LAVATORY WASH FOUNTAIN PER PLUMBING DRAWINGS.
- REMOVE SUSPENDED ACOUSTICAL CEILING SYSTEM AS NECESSARY FOR PLUMBING WORK AND SALVAGE FOR REINSTALLATION. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.

**LEGEND**  
 50 SF ACM FLOOR TILE AND MASTIC  
 36-POT-XXX ASBESTOS SAMPLE LOCATION  
 ACM COATING ON SINK BOTTOM



BID SET  
 FEBRUARY 06, 2025

**TETRA TECH**  
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 BELLEVUE, WA 98004  
 PHONE: 425.732.5651

WEST SITCUM BUILDING 950 SEWER AND UPGRADES  
 PROJECT NO. 201189.01  
 PORT OF TACOMA  
**1ST FLOOR AND ENLARGED DEMOLITION PLANS  
 SAMPLE LOCATIONS**

Project No.: 117-171188-25003  
 Date: 03/17/25  
 Drawn By: CP  
 Checked By: DB

FIGURE  
**1**

Bar Measures 1 inch

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**ENLARGED FIRST FLOOR DEMOLITION PLAN**  
**1 ROOMS 109, 110, 111, 117 AND 118**

SCALE: 1/4" = 1'-0"



**DEMOLITION PLAN LEGEND**

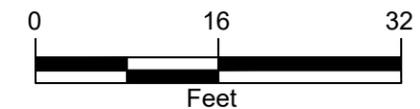
XXX  
 XXX AS SHOWN ON PLAN INDICATES ROOM NUMBER

**DEMOLITION PLAN NOTES**

- SEE ROOM FINISH SCHEDULE AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
- PLUMBING INFORMATION SHOWN ON ARCHITECTURAL DRAWINGS TO BE USED FOR DIAGRAMMATICAL PURPOSES ONLY. REFER TO PLUMBING DRAWINGS FOR PLUMBING INFORMATION.
- DIMENSIONS FROM EXISTING WALLS ARE FROM FACE OF FINISH.
- CONTRACTOR TO SCAN FOR ALL UTILITIES & STRUCTURAL IMPACTS AT ALL EXISTING CONCRETE SLABS PRIOR TO SAWCUTTING, CORE DRILLING OR PERFORMING ANY POTENTIALLY IMPACTFUL WORK.
- SEE PLUMBING DRAWINGS FOR AREAS OF CONCRETE FLOOR SAWCUTTING, TRENCHING AND BACKFILLING. REFER TO DETAIL 8/AS.3 FOR TYPICAL UTILITY TRENCH SECTION INFORMATION FOR SAWCUTTING AT EXISTING SLAB.
- REMOVE GLUED ON CEILING TILE IN ENTIRE ROOM AND CUT GYPSUM WALLBOARD AS NEEDED FOR PLUMBING WORK. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.
- CUT OPENING IN WALL TO RECEIVE NEW DOOR PER FLOOR PLAN A1.2.
- REMOVE ALL PLUMBING FIXTURES IN ROOM PER PLUMBING DRAWINGS.
- REMOVE ALL FLOOR FINISH, WALL SUBSTRATE, WALL FINISH AND WALL BASE IN THIS ROOM. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
- REMOVE TOILET SCREEN.
- REMOVE LAVATORY & COUNTER.
- REMOVE ALL ROOM WALL ACCESSORIES AND SALVAGE FOR REINSTALLATION.
- REMOVE FLOOR FINISH AND WALL BASE IN THIS ROOM.
- REMOVE ALL FLOOR DRAINS AND CLEANOUTS IN THIS ROOM, REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE GYPSUM WALLBOARD ON ALL WALLS IN ROOM. PREPARE STUDS FOR NEW WALL SUBSTRATE PER ROOM FINISH SCHEDULE.
- REMOVE LOCKERS AND BENCHES.
- REMOVE WALL.
- REMOVE DOOR AND FRAME.
- REMOVE SERVICE SINK PER PLUMBING DRAWINGS.
- REMOVE LAVATORY WASH FOUNTAIN PER PLUMBING DRAWINGS.
- REMOVE SUSPENDED ACOUSTICAL CEILING SYSTEM AS NECESSARY FOR PLUMBING WORK AND SALVAGE FOR REINSTALLATION. SEE PLUMBING DRAWING FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.

**LEGEND**

36-POT-XX ASBESTOS SAMPLE LOCATION



**NOTE: SAMPLE LOCATION FIGURE IS A PARTIAL REPRODUCTION OF A DRAWING PREPARED BY OTHERS, TETRA TECH MAKES NO WARRANTY TO THE ACCURACY OF THE DRAWING.**

BID SET  
 FEBRUARY 06, 2025



**TETRA TECH**

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 BELLEVUE, WA 98004  
 PHONE: 425.732.9651

WEST SITCUM BUILDING 950 SEWER AND UPGRADES  
 PROJECT NO. 201189.01  
 PORT OF TACOMA

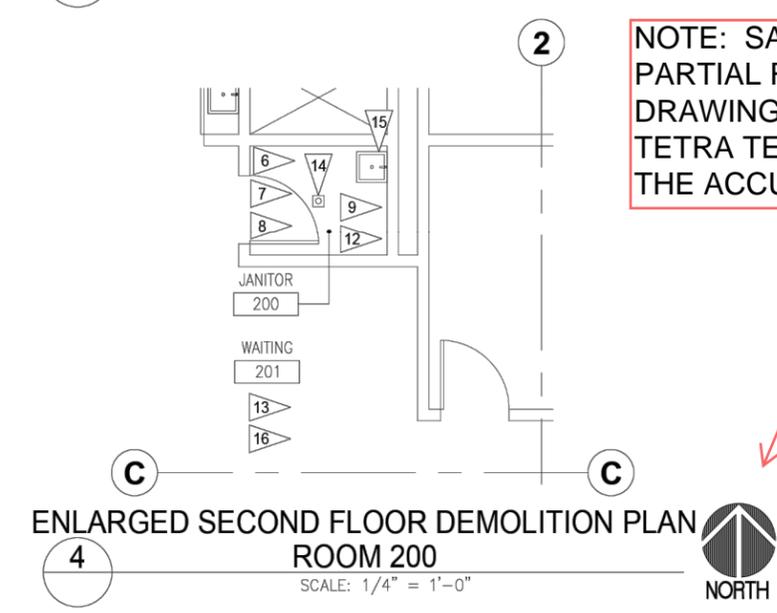
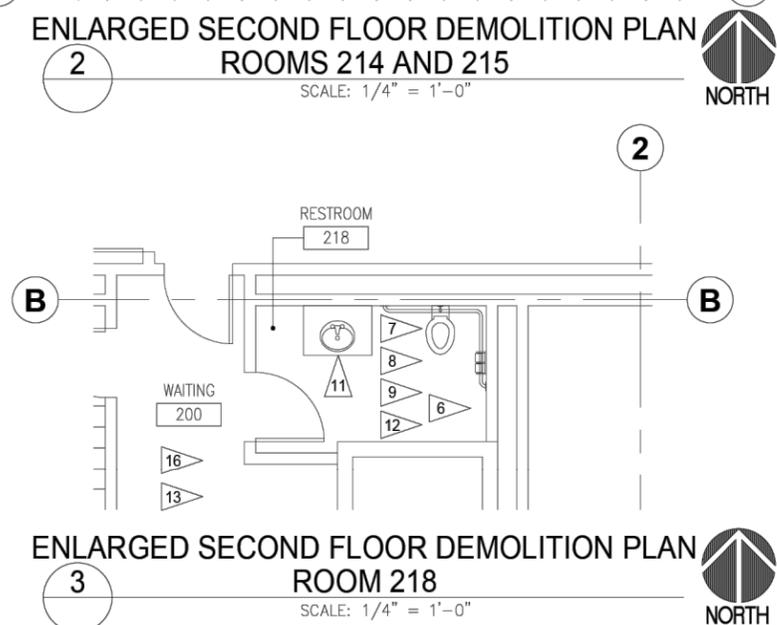
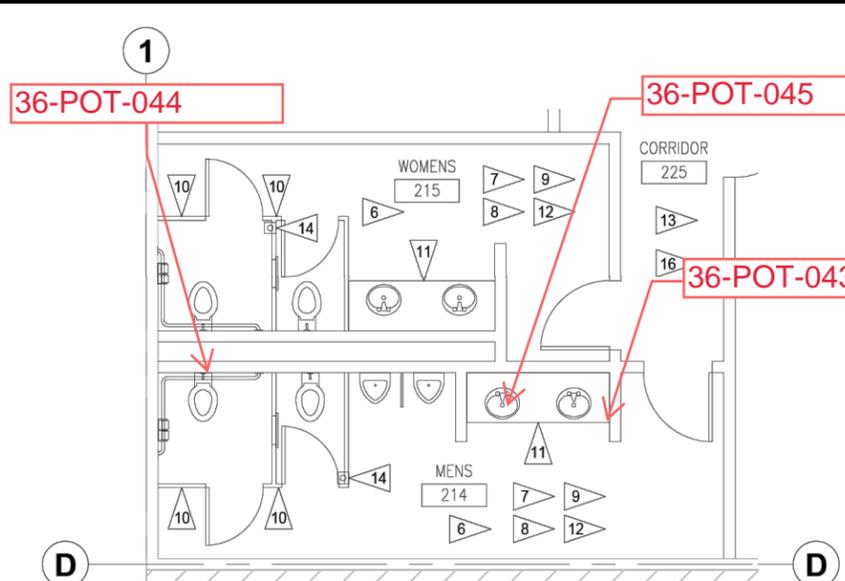
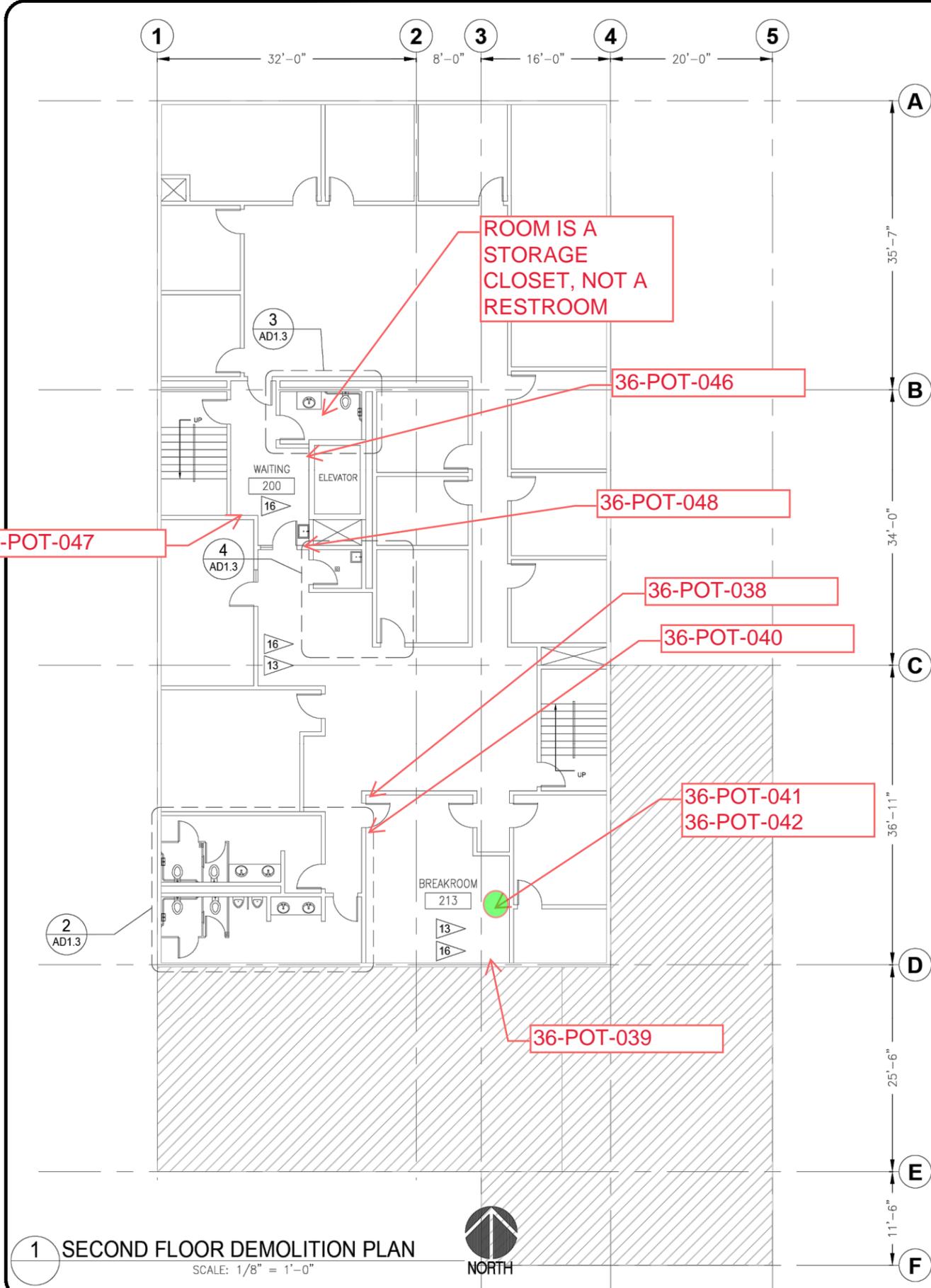
**1ST FLOOR ENLARGED DEMOLITION PLAN  
 SAMPLE LOCATIONS**

Project No.: 117-171188-25003  
 Date: 03/17/25  
 Drawn By: CP  
 Checked By: DB

FIGURE  
**2**

Bar Measures 1 inch

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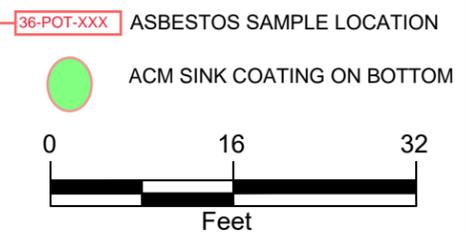
**DEMOLITION PLAN LEGEND**  
 XXX AS SHOWN ON PLAN INDICATES ROOM NUMBER

**DEMOLITION PLAN NOTES**

- SEE ROOM FINISH SCHEDULE AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
- PLUMBING INFORMATION SHOWN ON ARCHITECTURAL DRAWINGS TO BE USED FOR DIAGRAMMATICAL PURPOSES ONLY. REFER TO PLUMBING DRAWINGS FOR PLUMBING INFORMATION.
- DIMENSIONS FROM EXISTING WALLS ARE FROM FACE OF FINISH.
- CONTRACTOR TO SCAN FOR ALL UTILITIES & STRUCTURAL IMPACTS AT ALL EXISTING AREAS PRIOR TO PERFORMING WORK.
- NOT USED.
- REMOVE GLUED ON CEILING TILE IN ENTIRE ROOM AND CUT GYPSUM WALLBOARD AS NEEDED FOR PLUMBING WORK. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.
- REMOVE GYPSUM WALLBOARD ON ALL WALLS IN ROOM. PREPARE STUDS FOR NEW WALL SUBSTRATE PER ROOM FINISH SCHEDULE.
- REMOVE ALL PLUMBING FIXTURES IN ROOM PER PLUMBING DRAWINGS.
- REMOVE ALL FLOOR FINISH, WALL SUBSTRATE, WALL FINISH AND WALL BASE IN THIS ROOM. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
- REMOVE TOILET SCREEN.
- REMOVE LAVATORY & COUNTER.
- REMOVE ALL ROOM WALL ACCESSORIES AND SALVAGE FOR REINSTALLATION.
- REMOVE FLOOR FINISH AND WALL BASE IN THIS ROOM.
- REMOVE ALL FLOOR DRAINS AND CLEANOUTS IN THIS ROOM. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE SERVICE SINK PER PLUMBING DRAWINGS.
- REMOVE SUSPENDED ACOUSTICAL CEILING SYSTEM AS NECESSARY FOR PLUMBING WORK AND SALVAGE FOR REINSTALLATION. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.

**NOTE: SAMPLE LOCATION FIGURE IS A PARTIAL REPRODUCTION OF A DRAWING PREPARED BY OTHERS, TETRA TECH MAKES NO WARRANTY TO THE ACCURACY OF THE DRAWING.**

**LEGEND**



BID SET  
 FEBRUARY 06, 2025

**TETRA TECH**  
 www.tetrattech.com  
 400 112TH AVENUE  
 BELLEVUE, WA 98004  
 PHONE: 425.732.9651

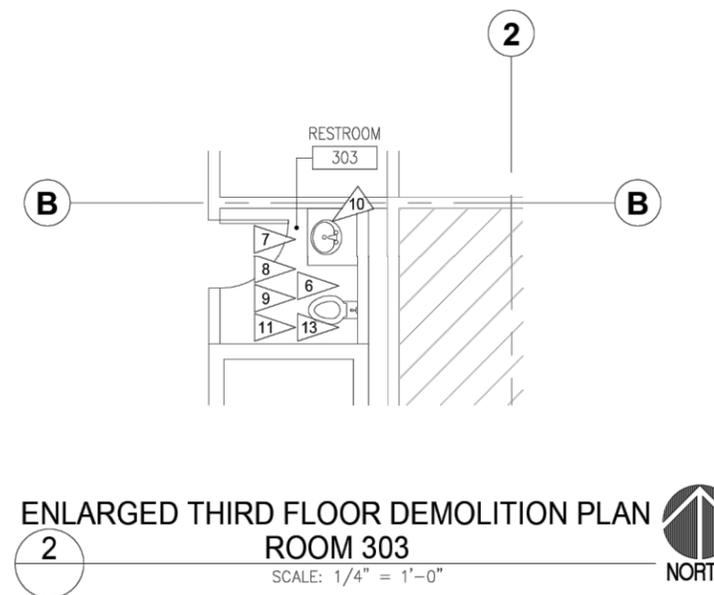
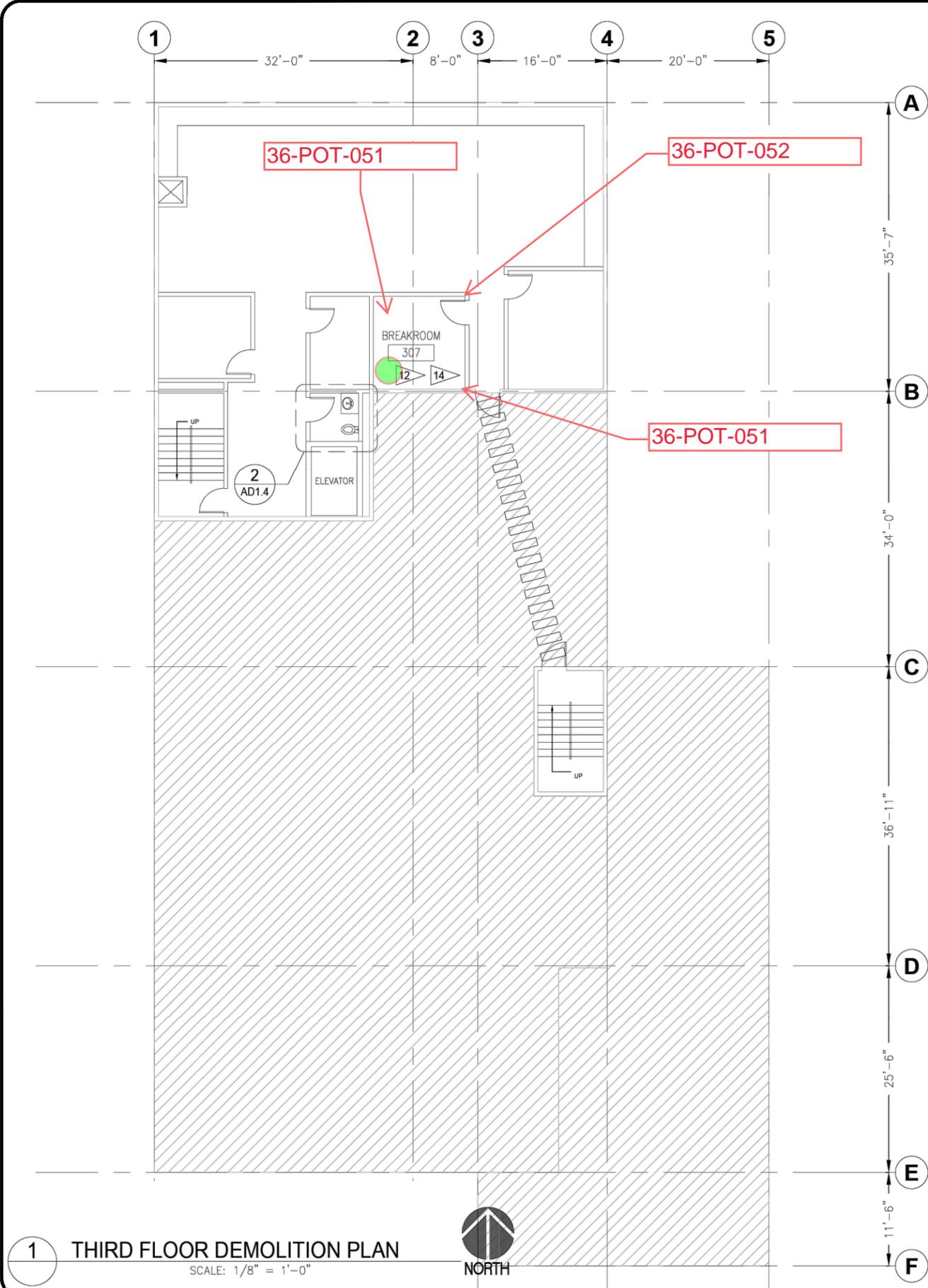
WEST SITCUM BUILDING 950 SEWER AND UPGRADES  
 PROJECT NO. 201189.01  
 PORT OF TACOMA  
**2ND FLOOR AND ENLARGED DEMOLITION PLANS  
 SAMPLE LOCATIONS**

Project No.:	117-171188-25003
Date:	03/17/25
Drawn By:	CP
Checked By:	DB

FIGURE  
**3**

Bar Measures 1 inch

3/17/2025 3:34:08 PM - P:\ACAD\171188-25003-TACO\171188-25003-001A.DWG - PAUGH, CHRISTINA



**NOTE: SAMPLE LOCATION FIGURE IS A PARTIAL REPRODUCTION OF A DRAWING PREPARED BY OTHERS, TETRA TECH MAKES NO WARRANTY TO THE ACCURACY OF THE DRAWING.**

**DEMOLITION PLAN LEGEND**

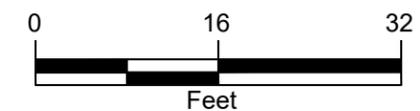
XXX  
 XXX AS SHOWN ON PLAN INDICATES ROOM NUMBER

**DEMOLITION PLAN NOTES**

- SEE ROOM FINISH SCHEDULE AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
- PLUMBING INFORMATION SHOWN ON ARCHITECTURAL DRAWINGS TO BE USED FOR DIAGRAMMATICAL PURPOSES ONLY. REFER TO PLUMBING DRAWINGS FOR PLUMBING INFORMATION.
- DIMENSIONS FROM EXISTING WALLS ARE FROM FACE OF FINISH.
- CONTRACTOR TO SCAN FOR ALL UTILITIES & STRUCTURAL IMPACTS AT ALL EXISTING AREAS PRIOR TO PERFORMING WORK.
- NOT USED.
- REMOVE GLUED ON CEILING TILE IN ENTIRE ROOM AND CUT GYPSUM WALLBOARD AS NEEDED FOR PLUMBING WORK. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.
- REMOVE GYPSUM WALLBOARD ON ALL WALLS IN ROOM. PREPARE STUDS FOR NEW WALL SUBSTRATE PER ROOM FINISH SCHEDULE.
- REMOVE ALL PLUMBING FIXTURES IN ROOM PER PLUMBING DRAWINGS.
- REMOVE ALL FLOOR FINISH, WALL SUBSTRATE, WALL FINISH AND WALL BASE IN THIS ROOM. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
- REMOVE LAVATORY & COUNTER.
- REMOVE ALL ROOM WALL ACCESSORIES AND SALVAGE FOR REINSTALLATION.
- REMOVE FLOOR FINISH AND WALL BASE IN THIS ROOM.
- REMOVE ALL FLOOR DRAINS AND CLEANOUTS IN THIS ROOM. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE SUSPENDED ACOUSTICAL CEILING SYSTEM AS NECESSARY FOR PLUMBING WORK AND SALVAGE FOR REINSTALLATION. SEE PLUMBING DRAWINGS FOR AREAS OF CEILING WORK FOR ACCESSING PLUMBING PIPING.

**LEGEND**

- 36-POT-XXX ASBESTOS SAMPLE LOCATION
- ACM SINK COATING ON BOTTOM



BID SET  
 FEBRUARY 06, 2025

**TETRA TECH**  
 www.tetrattech.com  
 400 112TH AVENUE  
 BELLEVUE, WA 98004  
 PHONE: 425.732.9651

WEST SITCUM BUILDING 950 SEWER AND UPGRADES  
 PROJECT NO. 201189.01  
 PORT OF TACOMA  
**3RD FLOOR AND ENLARGED DEMOLITION PLANS  
 SAMPLE LOCATIONS**

Project No.: 117-171188-25003  
 Date: 03/17/25  
 Drawn By: CP  
 Checked By: DB

FIGURE  
**4**

Bar Measures 1 inch

## TABLES

**Table 1**  
**Summary of Asbestos Bulk Sampling and Analytical Results**  
**West Sitcum Building 950 - Sewer and Bathroom Upgrades Project No. 201189.01**  
**Port of Tacoma**

Sample Number	Floor	HSA #	HSA Location	Sample Description	Result	Quantity	Units	Material Type	Friable/ Non-Friable
36-POT-001 36-POT-002	1	1	Breakroom 119, but assumed throughout building	12" x 12" floor tile (cream with brown spots) and black mastic	ND (all layers)	Throughout (except repair areas)	--	Misc.	NF
36-POT-003 36-POT-004 36-POT-038	1,2	2	Breakroom 119 Breakroom 213, but assumed throughout building	4" dark brown cove base and mastic on drywall	ND (all layers)	180	LF	Misc.	NF
36-POT-005 36-POT-006	1	3	Breakroom 119, but assumed throughout building	Drywall, tape, mud, and heavy wallpaper	ND (all layers)	800	SF	Misc.	NF
36-POT-007 36-POT-008	1	4	Breakroom 119, and other areas of building	2' x 4' ceiling tile	ND	420	SF	Misc.	F
<b>36-POT-009</b> <b>36-POT-041</b>	<b>1,2,3</b>	<b>5</b>	<b>Breakroom 119</b> <b>Breakroom 213</b> <b>Breakroom 307</b>	<b>White undercoating on stainless steel kitchen sink</b>	<b>2-4% Chrysotile</b>	<b>3</b>	<b>EA</b>	<b>Misc.</b>	<b>NF</b>
36-POT-010 36-POT-027	1	6	Breakroom 119, Men's Restroom 117, and other areas of the building	Brown pipe dope on threaded fitting of drain pipe	ND	Throughout	--	Misc.	NF
36-POT-011 36-POT-012 36-POT-013	1	7	Breakroom 119, and other areas of the building	Thick white drywall mud (above ceilings, likely for fire protection)	ND	Throughout	--	Misc.	F
36-POT-014 36-POT-015	1	8	Men's Restroom 109, and throughout all restrooms and locker rooms	12" x 12" ceiling tile and tan mastic "pucks" on drywall	ND (all layers)	Throughout	--	Misc.	F
36-POT-016 36-POT-017	1	9	Men's Restroom 109	3" x 3" wall tile, grout, and tan mastic, on drywall walls	ND (all layers)	Throughout all restrooms and showers	--	Misc.	NF
36-POT-018 36-POT-019	1	20	Men's Restroom 109	1" x 1" floor tile, grout, on mortar bed over concrete	ND (all layers)	Throughout, restrooms, showers janitor closets	--	Misc.	NF
36-POT-020 36-POT-021	1	11	Men's Restroom 109	Brown caulking, at transition of floor tile to wall tiles	ND (all layers)	Throughout all restrooms and showers	--	Misc.	NF
36-POT-022	1	12	Men's locker room 110	4" x 5" white cove tile and grout, around perimeter of wall	ND (all layers)	Throughout locker room, janitor closets	--	Misc.	NF
36-POT-023 36-POT-024	1	13	Men's locker room 110	fiberglass reinforced wall panels and tan mastic, on drywall	ND (all layers)	Throughout building	--	Misc.	NF
36-POT-025	1	14	Janitor Room 118	Brownish yellow caulk/sealant at utility sink drain	ND	2	EA	Misc.	NF
36-POT-026	1	15	Janitor Room 118	White caulk, around utility sink	ND	4	LF	Misc.	NF
36-POT-028	1	16	Men's restroom 109	Blue pipe dope on threaded drain pipe	ND	2	EA	Misc.	NF

**Table 1**  
**Summary of Asbestos Bulk Sampling and Analytical Results**  
**West Sitcum Building 950 - Sewer and Bathroom Upgrades Project No. 201189.01**  
**Port of Tacoma**

Sample Number	Floor	HSA #	HSA Location	Sample Description	Result	Quantity	Units	Material Type	Friable/ Non-Friable
36-POT-029 36-POT-045	1,2,3	17	Restroom 117 Men's Restroom 214	Red and black gasket, at sink drain		4	EA	Misc.	F
<b>36-POT-030</b> <b>36-POT-031</b>	<b>1</b>	<b>18</b>	<b>Breakroom 103</b>	<b>12" x 12" floor tile (light cream and tan swirl), and black mastic, on concrete (tile repair area)</b>	ND <b>2% Chrysotile</b>	<b>30</b>	<b>SF</b>	<b>Misc.</b>	<b>NF</b>
36-POT-032 36-POT-033	1	20	Men's restroom 105	White caulking at wall tile to ceiling tile gap	ND	80	LF	Misc.	NF
36-POT-034	1	19	Breakroom 103	12" x 12" floor tile (off white with tan and white streaks) random tiles, and black mastic, on concrete (tile repair area)	ND (all layers)	8	SF	Misc.	NF
36-POT-035	1	21	Men's Restroom 105	Brown mastic on tile (under soap dispensers)	ND (all layers)	4	SF	Misc.	NF
36-POT-036	1	22	Men's Restroom 105	Gray paper gasket, on 3 way stainless steel sink drain		1	EA	Misc.	F
36-POT-037	1	23	Men's Restroom 105	White/tan pipe dope, on threaded galvanized drain pipe	ND	Throughout	--	Misc.	NF
36-POT-039 36-POT-040	2	24	Breakroom 213	2' x 4' ceiling tile, dots with odd shapes	ND	400	SF	Misc.	F
36-POT-042	2	25	Breakroom 213	Tan brittle caulking, at stainless steel sink garbage disposal	ND	1	LF	Misc.	NF
36-POT-043 36-POT-044	2	26	Men's restroom 214	White caulk, around sinks and toilets	ND	Throughout	--	Misc.	NF
36-POT-046 36-POT-047	2	27	Waiting Room 200	Carpet squares, over brown mastic, on lightweight concrete	ND (all layers)	Throughout 2nd and 3rd Floors	--	Misc.	NF
36-POT-048	2	28	Waiting Room 200	Black 4" cove base and tan mastic, on drywall	ND (all layers)	64	LF	Misc.	NF
No sample -049									
36-POT-050 36-POT-051	3	30	Breakroom 307	12"x12" blue floor tile and mastic, on lightweight concrete floor	ND (all layers)	144	SF	Misc.	NF
36-POT-052	3	29	Breakroom 307	4" blue cove base and clear mastic, on drywall	ND (all layers)	48	LF	Misc.	NF
317-POT-053*	1	1	Breakroom 103	12" x 12" floor tile (cream with brown spots), black mastic, and concrete	ND (all layers)	Throughout	--	Misc.	NF
317-POT-054*	1	1	Breakroom 103	12" x 12" floor tile (cream with brown spots), black mastic, and concrete	ND (all layers)	Throughout	--	Misc.	NF
317-POT-055*	1	1	Corridor 100	12" x 12" floor tile (cream with brown spots), black mastic, and concrete	ND (all layers)	Throughout	--	Misc.	NF
317-POT-056*	1	1	Corridor 114	12" x 12" floor tile (cream with brown spots), black mastic, and concrete	ND (all layers)	Throughout	--	Misc.	NF

**NOTES:**

**Bold red text** indicates sample layer contains with >1% regulated ACM.

\*Additional samples were collected to determine if ACM mastic under "repair tile" in breakroom is isolated to just the 30 SF in repair tiles, or found elsewhere.

**ACCRONYMS:**

ACM = asbestos containing material

F = friable

LF = lineal feet      NF = non-friable

EA = each

HSA = homogenous sample area

ND = non-detect      SF = square feet

**Table 2**  
**Summary of Light Ballasts, Mercury, and other Regulated Materials**  
**West Sitcum Building 950 Sewer and Bathroom Upgrades Project No. 201189.01**  
**Port of Tacoma**

Material Description	Quantity	Fixtures	Light Tubes	Electronic Ballasts
2-foot by 8-foot fluorescent light fixture with two light tubes and one ballast	--	28	56	28
1 foot by 4 foot fluorescent light fixture with two light tubes and one ballast	--	25	50	25
CFC-containing refrigerator	3	--	--	--
Compact Fluorescent light bulbs	4	--	--	--
<b>TOTAL</b>	<b>7</b>	<b>53</b>	<b>106</b>	<b>53</b>

**NOTES:**

CFC = chlorofluorocarbon

**APPENDIX A:  
Inspection Certifications**

# Certificate of Completion

This is to certify that

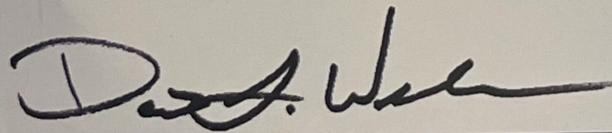
**David A. Braungardt**

has satisfactorily completed  
4 hours of refresher training as an  
AHERA Building Inspector

to comply with the training requirements of  
TSCA Title II, 40 CFR 763 (AHERA)

EPA Provider # 1085

194257  
Certificate Number



Instructor: David Welch

Jul 2, 2024

Expires in 1 year.

Date(s) of Training

Exam Score: N/A  
(if applicable)



- Facilities
- Environmental
- Geotechnical
- Materials

**APPENDIX B:**  
**Laboratory Analytical Reports and Chain-of-Custody Forms**

March 13, 2025



David Braungardt  
Tetra Tech, Inc. - Bellevue  
400 112th Ave NE, Ste. 300  
Bellevue, WA 98004

**RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2504247.00**

Client Project: 117-171188-25003  
Location: Building 950

Dear Mr. Braungardt,

Enclosed please find test results for the 17 sample(s) submitted to our laboratory for analysis on 3/7/2025.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink that reads "Hilary Crumley".

Hilary Crumley, Manager Asbestos Laboratory

The logo for NVL LABS, featuring the letters "NVL" in a large, outlined, sans-serif font, with "LABS" in a smaller, outlined, sans-serif font to its right.

Testing

Lab Code: 102063-0

Enc.: Sample Results

**Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)**  
**4708 Aurora Avenue North | Seattle, WA 98103-6516**



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504247.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 17  
 Samples Analyzed: 17  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

**Lab ID: 250024346      Client Sample #: 36-POT-001**

Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White vinyl tile with debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Vinyl/Binder, Debris, Fine particles	None Detected	ND	<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Asphalt/Binder, Asphaltic Particles, Debris	None Detected	ND	<b>None Detected ND</b>

**Lab ID: 250024347      Client Sample #: 36-POT-002**

Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> White vinyl tile with debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Vinyl/Binder, Debris, Fine particles	None Detected	ND	<b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Asphalt/Binder, Asphaltic Particles, Debris	None Detected	ND	<b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Gray crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Mineral grains, Fine particles	None Detected	ND	<b>None Detected ND</b>

**Lab ID: 250024348      Client Sample #: 36-POT-003**

Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> Black rubbery material with debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Rubber/Synthetic Binder, Debris, Fine particles	None Detected	ND	<b>None Detected ND</b>

<b>Sampled by:</b> Client		
<b>Analyzed by:</b> Hieu Ta	<b>Date:</b> 03/13/2025	
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/13/2025	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504247.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 17  
 Samples Analyzed: 17  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 2 of 2</b>	<b>Description:</b> Tan mastic			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Mastic/Binder, Debris, Fine particles	None Detected ND	<b>None Detected ND</b>

**Lab ID: 250024349**      **Client Sample #: 36-POT-004**

Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Black rubbery material with debris			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Rubber/Synthetic Binder, Debris, Fine particles	None Detected ND	<b>None Detected ND</b>

<b>Layer 2 of 3</b>	<b>Description:</b> Tan mastic			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Mastic/Binder, Debris, Fine particles	None Detected ND	<b>None Detected ND</b>

<b>Layer 3 of 3</b>	<b>Description:</b> White compacted powdery material with coating and fibrous mesh			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Calcareous binder, Calcareous particles, Debris	Synthetic fibers 22%	<b>None Detected ND</b>

**Lab ID: 250024350**      **Client Sample #: 36-POT-005**

Location: Building 950

<b>Layer 1 of 4</b>	<b>Description:</b> White compacted powdery material with coating and fibrous mesh			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Calcareous binder, Calcareous particles, Debris	Synthetic fibers 28%	<b>None Detected ND</b>

<b>Layer 2 of 4</b>	<b>Description:</b> Off-white crumbly material			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Binder/Filler, Debris, Fine particles	None Detected ND	<b>None Detected ND</b>

<b>Layer 3 of 4</b>	<b>Description:</b> White compacted powdery material with paper			
		Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
		Calcareous binder, Calcareous particles, Fine grains	Cellulose 30%	<b>None Detected ND</b>

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Hieu Ta	<b>Date:</b> 03/13/2025
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/13/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government





# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504247.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 17  
 Samples Analyzed: 17  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

Glass fibers 23%

**Lab ID: 250024353 Client Sample #: 36-POT-008**

Location: Building 950

**Layer 1 of 1 Description:** Tan compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>	
Binder/Filler, Paint, Fine particles	Cellulose 61%		<b>None Detected ND</b>
	Glass fibers 21%		

**Lab ID: 250024354 Client Sample #: 36-POT-009**

Location: Building 950

**Layer 1 of 1 Description:** Gray crumbly material

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Binder/Filler, Debris, Fine particles	None Detected ND	

**Lab ID: 250024355 Client Sample #: 36-POT-010**

Location: Building 950

**Layer 1 of 1 Description:** Off-white soft material with debris

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Synthetic/Binder, Debris, Fine particles	Mineral fibers 13%	

**Lab ID: 250024356 Client Sample #: 36-POT-011**

Location: Building 950

**Layer 1 of 1 Description:** White crumbly material

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Binder/Filler, Debris, Fine particles	None Detected ND	

**Lab ID: 250024357 Client Sample #: 36-POT-012**

Location: Building 950

<b>Sampled by:</b> Client		
<b>Analyzed by:</b> Hieu Ta	<b>Date:</b> 03/13/2025	
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/13/2025	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government





# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

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**Batch #: 2504247.00**  
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 Date Received: 3/7/2025  
 Samples Received: 17  
 Samples Analyzed: 17  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 2 of 2</b>	<b>Description:</b> Brown mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Mastic/Binder, Debris, Fine particles	Wollastonite 8%		<b>None Detected ND</b>

**Lab ID: 250024361**      **Client Sample #: 36-POT-016**

Location: Building 950

<b>Layer 1 of 4</b>	<b>Description:</b> White ceramic tile with debris			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Ceramic/Binder, Mineral grains, Debris	Cellulose 2%		<b>None Detected ND</b>
		Organic fibers 2%		

<b>Layer 2 of 4</b>	<b>Description:</b> Tan mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Mastic/Binder, Debris, Fine particles	None Detected ND		<b>None Detected ND</b>

<b>Layer 3 of 4</b>	<b>Description:</b> White compacted powdery material with paper & paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Calcareous binder, Calcareous particles, Paint	Cellulose 28%		<b>None Detected ND</b>

<b>Layer 4 of 4</b>	<b>Description:</b> White crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Debris, Fine particles	None Detected ND		<b>None Detected ND</b>

**Lab ID: 250024362**      **Client Sample #: 36-POT-017**

Location: Building 950

<b>Layer 1 of 4</b>	<b>Description:</b> White ceramic tile with debris			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Ceramic/Binder, Mineral grains, Debris	Cellulose 3%		<b>None Detected ND</b>
		Organic fibers <1%		

<b>Sampled by:</b> Client		
<b>Analyzed by:</b> Hieu Ta	<b>Date:</b> 03/13/2025	
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/13/2025	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
Address: 400 112th Ave NE, Ste. 300  
Bellevue, WA 98004

**Batch #: 2504247.00**  
Client Project #: 117-171188-25003  
Date Received: 3/7/2025  
Samples Received: 17  
Samples Analyzed: 17  
Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
Project Location: Building 950

<b>Layer 2 of 4</b>	<b>Description:</b> Tan mastic Non-Fibrous Materials: Mastic/Binder, Debris, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 4</b>	<b>Description:</b> Tan chalky material with paper Non-Fibrous Materials: Gypsum/Binder, Binder/Filler, Fine grains	Other Fibrous Materials:% Cellulose 20% Glass fibers 7%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 4 of 4</b>	<b>Description:</b> White crumbly material Non-Fibrous Materials: Binder/Filler, Debris, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Hieu Ta	
<b>Reviewed by:</b> Hilary Crumley	
<b>Date:</b> 03/13/2025	<b>Date:</b> 03/13/2025
Hilary Crumley, Manager Asbestos Laboratory	

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

# ASBESTOS LABORATORY SERVICES



<b>Company</b> Tetra Tech, Inc. - Bellevue	<b>NVL Batch Number</b> <b>2504247.00</b>
<b>Address</b> 400 112th Ave NE, Ste. 300 Bellevue, WA 98004	<b>TAT</b> 5 Days <span style="float: right;"><b>AH</b> No</span>
<b>Project Manager</b> Mr. David Braungardt	<b>Rush TAT</b> _____
<b>Phone</b> (425) 732-5651	<b>Due Date</b> 3/14/2025 <b>Time</b> 9:35 AM
<b>Direct</b> (425) 482-7830	<b>Email</b> david.braungardt@tetrattech.com
	<b>Fax</b> _____

**Project Name/Number:** 117-171188-25003 **Project Location:** Building 950

**Subcategory** PLM Bulk  
**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

**Total Number of Samples** 17 **Rush Samples** \_\_\_\_\_

Lab ID	Sample ID	Description	A/R
1	250024346	36-POT-001	A
2	250024347	36-POT-002	A
3	250024348	36-POT-003	A
4	250024349	36-POT-004	A
5	250024350	36-POT-005	A
6	250024351	36-POT-006	A
7	250024352	36-POT-007	A
8	250024353	36-POT-008	A
9	250024354	36-POT-009	A
10	250024355	36-POT-010	A
11	250024356	36-POT-011	A
12	250024357	36-POT-012	A
13	250024358	36-POT-013	A
14	250024359	36-POT-014	A
15	250024360	36-POT-015	A
16	250024361	36-POT-016	A
17	250024362	36-POT-017	A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
<b>Received by</b>	Kelly AuVu		NVL	3/7/25	935
<b>Analyzed by</b>	Hieu Ta		NVL	3/13/25	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b> <input type="checkbox"/> <b>Emailed</b>					

**Special Instructions:** \_\_\_\_\_

Date: 3/7/2025  
 Time: 10:58 AM  
 Entered By: Kelly AuVu



## Asbestos Laboratory Services Chain Of Custody

### Section 1: Contact

#### Company Information

Tetra Tech (206) 510-8305  
400 112th Ave. NE  
Bellevue WA 98004  
United States

#### Project Manger Information Project Information

David Braungardt **Name/#:** 117-171188-25003  
david.braungardt@tetrattech.com **Location:** Building 950  
(206) 510-8305

### Section 2: Analysis

#### Sub Category

PLM Bulk

#### Method

EPA 600/R-93-116 Asbestos by PLM

#### Turn Around Time

5 Days

#### Reporting Instructions

Email david.braungardt@tetrattech.com

#### Client Sample Information

Sample ID	Description	A/R
36-POT-001		
36-POT-002		
36-POT-003		
36-POT-004		
36-POT-005		
36-POT-006		
36-POT-007		
36-POT-008		
36-POT-009		
36-POT-010		
36-POT-011		
36-POT-012		
36-POT-013		
36-POT-014		
36-POT-015		
36-POT-016		
36-POT-017		

March 14, 2025



David Braungardt  
Tetra Tech, Inc. - Bellevue  
400 112th Ave NE, Ste. 300  
Bellevue, WA 98004

**RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2504248.00**

Client Project: 117-171188-25003  
Location: Building 950

Dear Mr. Braungardt,

Enclosed please find test results for the 34 sample(s) submitted to our laboratory for analysis on 3/7/2025.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink that reads "Hilary Crumley".

Hilary Crumley, Manager Asbestos Laboratory

The logo for NVL LABS, featuring the letters "NVL" in a large, outlined, sans-serif font, followed by "LABS" in a smaller, outlined, sans-serif font.

Testing

Lab Code: 102063-0

Enc.: Sample Results

**Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)**  
**4708 Aurora Avenue North | Seattle, WA 98103-6516**



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
Address: 400 112th Ave NE, Ste. 300  
Bellevue, WA 98004

**Batch #: 2504248.00**  
Client Project #: 117-171188-25003  
Date Received: 3/7/2025  
Samples Received: 34  
Samples Analyzed: 34  
Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
Project Location: Building 950

**Lab ID: 250024363      Client Sample #: 36-POT-018**

Location: Building 950

Comments: Unsure of correct layer sequence.

<b>Layer 1 of 5</b>	<b>Description:</b> Beige ceramic tile	Non-Fibrous Materials: Ceramic/Binder, Fine particles	Other Fibrous Materials:% None Detected    ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 5</b>	<b>Description:</b> Gray brittle material with debris	Non-Fibrous Materials: Putty Compound, Fine particles, Quartz	Other Fibrous Materials:% Cellulose    1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 5</b>	<b>Description:</b> Yellow soft material	Non-Fibrous Materials: Binder/Filler, Fine particles, Fine grains	Other Fibrous Materials:% None Detected    ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 4 of 5</b>	<b>Description:</b> White crumbly material	Non-Fibrous Materials: Binder/Filler, Fine particles, Fine grains	Other Fibrous Materials:% None Detected    ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 5 of 5</b>	<b>Description:</b> Gray crumbly sandy material	Non-Fibrous Materials: Concrete/Binder, Fine particles, Mineral grains	Other Fibrous Materials:% Cellulose    1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024364      Client Sample #: 36-POT-019**

Location: Building 950

Comments: Unsure of correct layer sequence.

<b>Layer 1 of 5</b>	<b>Description:</b> Beige ceramic tile	Non-Fibrous Materials: Ceramic/Binder, Fine particles	Other Fibrous Materials:% None Detected    ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
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**Sampled by:** Client  
**Analyzed by:** Urooj Yousuf      **Date:** 03/13/2025  
**Reviewed by:** Hilary Crumley      **Date:** 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 2 of 5</b>	<b>Description:</b> Thin layer light gray soft elastic material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Debris	Other Fibrous Materials:% Cellulose 2%	<b>Asbestos Type: % None Detected ND</b>
<b>Layer 3 of 5</b>	<b>Description:</b> Gray brittle material	Non-Fibrous Materials: Putty Compound, Fine particles, Quartz	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: % None Detected ND</b>
<b>Layer 4 of 5</b>	<b>Description:</b> Yellow soft material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Fine grains	Other Fibrous Materials:% Cellulose 2%	<b>Asbestos Type: % None Detected ND</b>
<b>Layer 5 of 5</b>	<b>Description:</b> Gray crumbly sandy material	Non-Fibrous Materials: Concrete/Binder, Fine particles, Mineral grains	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: % None Detected ND</b>

**Lab ID: 250024365**      **Client Sample #: 36-POT-020**  
 Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Thin layer light gray soft elastic material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Debris	Other Fibrous Materials:% Cellulose 4%	<b>Asbestos Type: % None Detected ND</b>
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**Lab ID: 250024366**      **Client Sample #: 36-POT-021**  
 Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Thin layer light gray soft crumbly material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Debris	Other Fibrous Materials:% Cellulose 3%	<b>Asbestos Type: % None Detected ND</b>
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**Lab ID: 250024367**      **Client Sample #: 36-POT-022**  
 Location: Building 950

<b>Sampled by:</b> Client	 Hilary Crumley, Manager Asbestos Laboratory
<b>Analyzed by:</b> Urooj Yousuf	
<b>Reviewed by:</b> Hilary Crumley	
<b>Date:</b> 03/13/2025	
<b>Date:</b> 03/14/2025	

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
Address: 400 112th Ave NE, Ste. 300  
Bellevue, WA 98004

**Batch #: 2504248.00**

Client Project #: 117-171188-25003

Date Received: 3/7/2025

Samples Received: 34

Samples Analyzed: 34

Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**

Project Location: Building 950

<b>Layer 1 of 4</b>	<b>Description:</b> Off-white ceramic tile	Non-Fibrous Materials: Ceramic/Binder, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 4</b>	<b>Description:</b> Off-white brittle material with debris	Non-Fibrous Materials: Putty Compound, Fine particles, Organic debris	Other Fibrous Materials:% Spider silk 2%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 4</b>	<b>Description:</b> White brittle material	Non-Fibrous Materials: Binder/Filler, Fine particles	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 4 of 4</b>	<b>Description:</b> Gray brittle material	Non-Fibrous Materials: Binder/Filler, Fine particles, Quartz	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024368**      **Client Sample #: 36-POT-023**

Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige hard brittle material covering white fibrous meshes	Non-Fibrous Materials: Binder/Filler, Fine particles, Wall board	Other Fibrous Materials:% Glass fibers 8%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Tan crumbly mastic	Non-Fibrous Materials: Mastic/Binder, Fine particles, Fine grains	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Backing white powdery material	Non-Fibrous Materials: Binder/Filler, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024369**      **Client Sample #: 36-POT-024**

Location: Building 950

**Sampled by:** Client

**Analyzed by:** Urooj Yousuf

**Reviewed by:** Hilary Crumley

**Date:** 03/13/2025

**Date:** 03/14/2025

Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige hard brittle material covering white fibrous meshes	Non-Fibrous Materials: Binder/Filler, Fine particles, Wall board	Other Fibrous Materials:% Glass fibers 9%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Tan crumbly mastic	Non-Fibrous Materials: Mastic/Binder, Fine particles, Fine grains	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Clear soft adhesive	Non-Fibrous Materials: Adhesive/Binder, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024370**      **Client Sample #: 36-POT-025**  
 Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Brown soft elastic material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
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**Lab ID: 250024371**      **Client Sample #: 36-POT-026**  
 Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> White soft elastic material with dust debris	Non-Fibrous Materials: Caulking compound, Fine particles, Debris	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
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**Lab ID: 250024372**      **Client Sample #: 36-POT-027**  
 Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Off-white crumbly loose material with debris	Non-Fibrous Materials: Binder/Filler, Fine particles, Talc Metallic flakes	Other Fibrous Materials:% Wollastonite 6%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
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**Sampled by:** Client  
**Analyzed by:** Urooj Yousuf      **Date:** 03/13/2025  
**Reviewed by:** Hilary Crumley      **Date:** 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

**Lab ID: 250024373      Client Sample #: 36-POT-028**

Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> Blue soft material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Wollastonite 7%		<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Backing black plastic sheet with brown crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles, Talc	Wollastonite 4%		<b>None Detected ND</b>
	Plastic	Cellulose 1%		

**Lab ID: 250024374      Client Sample #: 36-POT-029**

Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Red soft material with backing fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Cellulose 7%		<b>None Detected ND</b>

**Lab ID: 250024375      Client Sample #: 36-POT-030**

Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Backing black asphaltic mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Mastic/Binder, Fine particles	None Detected ND		<b>Chrysotile 2%</b>

**Lab ID: 250024376      Client Sample #: 36-POT-031**

Location: Building 950

<b>Sampled by:</b> Client		
<b>Analyzed by:</b> Urooj Yousuf	<b>Date:</b> 03/13/2025	
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/14/2025	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Backing black asphaltic mastic	Non-Fibrous Materials: Mastic/Binder, Fine particles	Other Fibrous Materials:% Cellulose 1%	<b>Asbestos Type: %</b> <b>Chrysotile 2%</b>

**Lab ID: 250024377**      **Client Sample #: 36-POT-032**  
 Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White soft crumbly material	Non-Fibrous Materials: Binder/Filler, Fine particles	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Backing beige fibrous material	Non-Fibrous Materials: Binder/Filler, Fine particles, Perlite Glass beads	Other Fibrous Materials:% Glass fibers 14% Cellulose 5%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024378**      **Client Sample #: 36-POT-033**  
 Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White soft crumbly material	Non-Fibrous Materials: Binder/Filler, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Backing beige fibrous material	Non-Fibrous Materials: Binder/Filler, Fine particles, Perlite	Other Fibrous Materials:% Glass fibers 13% Cellulose 6%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Sampled by:** Client  
**Analyzed by:** Urooj Yousuf      **Date:** 03/13/2025  
**Reviewed by:** Hilary Crumley      **Date:** 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

**Lab ID: 250024379      Client Sample #: 36-POT-034**

Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> White crumbly vinyl tile with dust debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Vinyl/Binder, Fine grains, Debris	Cellulose <1%		<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Baking tan adhesive with debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Adhesive/Binder, Fine particles, Debris	Cellulose 1%		<b>None Detected ND</b>

**Lab ID: 250024380      Client Sample #: 36-POT-035**

Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Off-white crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine grains	None Detected ND		<b>None Detected ND</b>

**Lab ID: 250024381      Client Sample #: 36-POT-036**

Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Beige fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Cellulose 29%		<b>None Detected ND</b>

**Lab ID: 250024382      Client Sample #: 36-POT-037**

Location: Building 950

<b>Layer 1 of 1</b>	<b>Description:</b> Beige crumbly loose material with soft elastic piece and debris			
	Non-Fibrous Materials:	Other Fibrous Materials: %		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles, Talc	Cellulose 4%		<b>None Detected ND</b>
	Cellophane, Debris	Wollastonite 3%		

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Urooj Yousuf	<b>Date:</b> 03/13/2025
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

**Lab ID: 250024383      Client Sample #: 36-POT-038**

Location: Building 950

**Layer 1 of 3      Description:** Black rubbery material with surface clear adhesive and fibrous debris

Non-Fibrous Materials:	Other Fibrous Materials:%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
Rubber/Binder, Fine grains, Adhesive	Cellulose 2%	
Debris		

**Layer 2 of 3      Description:** Off-white brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
Mastic/Binder, Fine grains	None Detected ND	

**Layer 3 of 3      Description:** Backing white woven fibrous mesh with tan mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
Mastic/Binder, Fine grains	Synthetic fibers 16%	

**Lab ID: 250024384      Client Sample #: 36-POT-039**

Location: Building 950

**Layer 1 of 1      Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
Paint, Binder/Filler, Perlite	Glass fibers 38%	
Glass beads	Cellulose 21%	

**Lab ID: 250024385      Client Sample #: 36-POT-040**

Location: Building 950

**Layer 1 of 1      Description:** Beige compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
Paint, Binder/Filler, Perlite	Glass fibers 41%	
Glass beads	Cellulose 24%	

**Sampled by:** Client  
**Analyzed by:** Urooj Yousuf      **Date:** 03/13/2025  
**Reviewed by:** Hilary Crumley      **Date:** 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

**Lab ID: 250024386      Client Sample #: 36-POT-041**

Location: Building 950

**Layer 1 of 1      Description:** Pink flaky/loose material

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Binder/Filler, Fine particles	Cellulose 1%	<b>Chrysotile 2%</b>

**Lab ID: 250024387      Client Sample #: 36-POT-042**

Location: Building 950

**Layer 1 of 1      Description:** Beige flaky/loose material

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Binder/Filler, Fine particles, Fine grains	Cellulose <1%	<b>None Detected ND</b>

**Lab ID: 250024388      Client Sample #: 36-POT-043**

Location: Building 950

**Layer 1 of 1      Description:** White soft elastic crumbly material

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Binder/Filler, Fine particles	Cellulose 2%	<b>None Detected ND</b>

**Lab ID: 250024389      Client Sample #: 36-POT-044**

Location: Building 950

**Layer 1 of 2      Description:** White soft elastic material with paint

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Paint, Binder/Filler, Fine particles	Cellulose <1%	<b>None Detected ND</b>

**Layer 2 of 2      Description:** Backing tan adhesive with debris

Non-Fibrous Materials:	Other Fibrous Materials: %	<b>Asbestos Type: %</b>
Adhesive/Binder, Fine particles, Debris	Cellulose 1%	<b>None Detected ND</b>

**Lab ID: 250024390      Client Sample #: 36-POT-045**

Location: Building 950

**Sampled by:** Client

**Analyzed by:** Urooj Yousuf

**Reviewed by:** Hilary Crumley

**Date:** 03/13/2025

**Date:** 03/14/2025

Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> Black soft flexible crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine grains, Rubber	Cellulose <1%		<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Small pieces pink fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Cellulose 7%		<b>None Detected ND</b>

**Lab ID: 250024391**      **Client Sample #: 36-POT-046**

Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Multi-colored woven fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Synthetic fibers 21%		<b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Backing gray rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine grains, Rubber	Glass fibers 12%		<b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Backing thin layer pink & light green adhesive with white crumbly sandy material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Adhesive/Binder, Fine grains, Mineral grains	Cellulose <1%		<b>None Detected ND</b>

**Lab ID: 250024392**      **Client Sample #: 36-POT-047**

Location: Building 950

Comments: Unable to separate tan mastic and green adhesive for analysis in layer-3

<b>Layer 1 of 5</b>	<b>Description:</b> Multi-colored woven fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Synthetic fibers 19%		<b>None Detected ND</b>

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Urooj Yousuf	<b>Date:</b> 03/13/2025
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 2 of 5</b>	<b>Description:</b> Backing gray rubbery material	Non-Fibrous Materials: Binder/Filler, Fine grains, Rubber	Other Fibrous Materials:% Glass fibers 13%	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 5</b>	<b>Description:</b> Tan mastic with green adhesive	Non-Fibrous Materials: Mastic/Binder, Adhesive/Binder, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 4 of 5</b>	<b>Description:</b> White brittle material	Non-Fibrous Materials: Binder/Filler, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 5 of 5</b>	<b>Description:</b> Backing off-white crumbly material with paint	Non-Fibrous Materials: Binder/Filler, Fine particles, Paint	Other Fibrous Materials:% Cellulose <1%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024393**      **Client Sample #: 36-POT-048**  
 Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> Black rubbery material	Non-Fibrous Materials: Rubber/Binder, Fine grains	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Off-white mastic with paper	Non-Fibrous Materials: Mastic/Binder, Fine grains	Other Fibrous Materials:% Cellulose 5%	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250024394**      **Client Sample #: 36-POT-050**  
 Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Blue vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Fine particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
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<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Urooj Yousuf	
<b>Reviewed by:</b> Hilary Crumley	
<b>Date:</b> 03/13/2025	<b>Date:</b> 03/14/2025
Hilary Crumley, Manager Asbestos Laboratory	

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bellevue  
 Address: 400 112th Ave NE, Ste. 300  
 Bellevue, WA 98004

**Batch #: 2504248.00**  
 Client Project #: 117-171188-25003  
 Date Received: 3/7/2025  
 Samples Received: 34  
 Samples Analyzed: 34  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Building 950

<b>Layer 2 of 3</b>	<b>Description:</b> Tan mastic with gray brittle material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Mastic/Binder, Fine particles, Fine grains	None Detected ND		<b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> White crumbly material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Binder/Filler, Fine particles	Cellulose <1%		<b>None Detected ND</b>

**Lab ID: 250024395**      **Client Sample #: 36-POT-051**  
 Location: Building 950

<b>Layer 1 of 2</b>	<b>Description:</b> Blue vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Vinyl/Binder, Fine grains, Fine particles	None Detected ND		<b>None Detected ND</b>
<b>Layer 2 of 2</b>	<b>Description:</b> Tan mastic with gray crumbly material with debris			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Mastic/Binder, Fine particles, Fine grains	None Detected ND		<b>None Detected ND</b>

**Lab ID: 250024396**      **Client Sample #: 36-POT-052**  
 Location: Building 950

<b>Layer 1 of 3</b>	<b>Description:</b> Dark blue rubbery material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Rubber/Binder, Fine grains	None Detected ND		<b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Thin layer off-white mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Mastic/Binder, Fine particles	Cellulose <1%		<b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Tan adhesive with fibrous debris			
	Non-Fibrous Materials:	Other Fibrous Materials:%		<b>Asbestos Type: %</b>
	Adhesive/Binder, Fine particles, Debris	Cellulose 2%		<b>None Detected ND</b>

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Urooj Yousuf	<b>Date:</b> 03/13/2025
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/14/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

# ASBESTOS LABORATORY SERVICES



<b>Company</b> Tetra Tech, Inc. - Bellevue <b>Address</b> 400 112th Ave NE, Ste. 300 Bellevue, WA 98004 <b>Project Manager</b> Mr. David Braungardt <b>Phone</b> (425) 732-5651 <b>Direct</b> (425) 482-7830	<b>NVL Batch Number</b> <b>2504248.00</b> <b>TAT</b> 5 Days <b>AH</b> No <b>Rush TAT</b> <b>Due Date</b> 3/14/2025 <b>Time</b> 9:35 AM <b>Email</b> david.braungardt@tetrattech.com <b>Fax</b>
---	---

**Project Name/Number:** 117-171188-25003 **Project Location:** Building 950

**Subcategory** PLM Bulk  
**Item Code** ASB-02 **EPA 600/R-93-116 Asbestos by PLM <bulk>**

**Total Number of Samples** 34 **Rush Samples** \_\_\_\_\_

Lab ID	Sample ID	Description	A/R
1	250024363	36-POT-018	A
2	250024364	36-POT-019	A
3	250024365	36-POT-020	A
4	250024366	36-POT-021	A
5	250024367	36-POT-022	A
6	250024368	36-POT-023	A
7	250024369	36-POT-024	A
8	250024370	36-POT-025	A
9	250024371	36-POT-026	A
10	250024372	36-POT-027	A
11	250024373	36-POT-028	A
12	250024374	36-POT-029	A
13	250024375	36-POT-030	A
14	250024376	36-POT-031	A
15	250024377	36-POT-032	A
16	250024378	36-POT-033	A
17	250024379	36-POT-034	A
18	250024380	36-POT-035	A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
<b>Received by</b>	Kelly AuVu		NVL	3/7/25	935
<b>Analyzed by</b>	Urooj Yousuf		NVL	3/13/25	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b> <input type="checkbox"/> <b>Emailed</b>					

**Special Instructions:** \_\_\_\_\_

Date: 3/7/2025  
 Time: 10:59 AM  
 Entered By: Kelly AuVu

# ASBESTOS LABORATORY SERVICES



**Company** Tetra Tech, Inc. - Bellevue **NVL Batch Number** **2504248.00**  
**Address** 400 112th Ave NE, Ste. 300 **TAT** 5 Days **AH** No  
 Bellevue, WA 98004 **Rush TAT** \_\_\_\_\_  
**Project Manager** Mr. David Braungardt **Due Date** 3/14/2025 **Time** 9:35 AM  
**Phone** (425) 732-5651 **Email** david.braungardt@tetrattech.com  
**Direct** (425) 482-7830 **Fax** \_\_\_\_\_

**Project Name/Number:** 117-171188-25003 **Project Location:** Building 950

**Subcategory** PLM Bulk  
**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

**Total Number of Samples** 34 **Rush Samples** \_\_\_\_\_

Lab ID	Sample ID	Description	A/R
19	250024381	36-POT-036	A
20	250024382	36-POT-037	A
21	250024383	36-POT-038	A
22	250024384	36-POT-039	A
23	250024385	36-POT-040	A
24	250024386	36-POT-041	A
25	250024387	36-POT-042	A
26	250024388	36-POT-043	A
27	250024389	36-POT-044	A
28	250024390	36-POT-045	A
29	250024391	36-POT-046	A
30	250024392	36-POT-047	A
31	250024393	36-POT-048	A
32	250024394	36-POT-050	A
33	250024395	36-POT-051	A
34	250024396	36-POT-052	A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
<b>Received by</b>	Kelly AuVu		NVL	3/7/25	935
<b>Analyzed by</b>	Urooj Yousuf		NVL	3/13/25	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b> <input type="checkbox"/> <b>Emailed</b>					

**Special Instructions:** \_\_\_\_\_

Date: 3/7/2025  
 Time: 10:59 AM  
 Entered By: Kelly AuVu

36-POT-018	
36-POT-019	
36-POT-020	
36-POT-021	
36-POT-022	
36-POT-023	
36-POT-024	
36-POT-025	
36-POT-026	
36-POT-027	
36-POT-028	
36-POT-029	
36-POT-030	
36-POT-031	
36-POT-032	
36-POT-033	
36-POT-034	
36-POT-035	
36-POT-036	
36-POT-037	
36-POT-038	
36-POT-039	
36-POT-040	
36-POT-041	
36-POT-042	
36-POT-043	
36-POT-044	
36-POT-045	
36-POT-046	
36-POT-047	

36-POT-048
36-POT-050 (no sample 49 collected)
36-POT-051
36-POT-052

	Print Name	Signature	Company	Date	Time
Sampled By	David Braungardt		Tetra Tech	03/06/2025	02:00 pm
Relinquish By	David Braungardt		Tetra Tech	03/07/2025	09:30 am

**Office Use Only**

	Print Name	Signature	Company	Date	Time
Received By				3/7/25	9:35
Analyzed By					
Called By					
Faxed/Email By					

March 20, 2025



David Braungardt  
Tetra Tech, Inc. - Bothell  
19803 North Creek Parkway  
Bothell, WA 98011

**RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2504807.00**

Client Project: 117-171188-250003  
Location: Bldg. 950

Dear Mr. Braungardt,

Enclosed please find test results for the 4 sample(s) submitted to our laboratory for analysis on 3/17/2025.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with **U. S. EPA 40 CFR Appendix E to Subpart E of Part 763**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116**, Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink that reads "Hilary Crumley".

Hilary Crumley, Manager Asbestos Laboratory



Testing

Lab Code: 102063-0

Enc.: Sample Results

**Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)**  
**4708 Aurora Avenue North | Seattle, WA 98103-6516**



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bothell  
 Address: 19803 North Creek Parkway  
 Bothell, WA 98011

**Batch #: 2504807.00**  
 Client Project #: 117-171188-250003  
 Date Received: 3/17/2025  
 Samples Received: 4  
 Samples Analyzed: 4  
 Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
 Project Location: Bldg. 950

**Lab ID: 250027271      Client Sample #: 317-POT-053**

Location: Bldg. 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige vinyl tile			
	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Mineral grains	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Brown brittle mastic			
	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Gray cementitious material			
	Non-Fibrous Materials: Binder/Filler, Cementitious particles	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>

**Lab ID: 250027272      Client Sample #: 317-POT-054**

Location: Bldg. 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige vinyl tile			
	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Mineral grains	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Brown brittle mastic			
	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Gray cementitious material			
	Non-Fibrous Materials: Binder/Filler, Cementitious particles	Other Fibrous Materials:% None Detected	ND	<b>Asbestos Type: % None Detected</b>

**Lab ID: 250027273      Client Sample #: 317-POT-055**

Location: Bldg. 950

<b>Sampled by:</b> Client		
<b>Analyzed by:</b> Carena Lan	<b>Date:</b> 03/20/2025	
<b>Reviewed by:</b> Hilary Crumley	<b>Date:</b> 03/20/2025	Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Tetra Tech, Inc. - Bothell  
Address: 19803 North Creek Parkway  
Bothell, WA 98011

**Batch #: 2504807.00**  
Client Project #: 117-171188-250003  
Date Received: 3/17/2025  
Samples Received: 4  
Samples Analyzed: 4  
Method: EPA/600/R-93/116

**Attention: Mr. David Braungardt**  
Project Location: Bldg. 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Mineral grains	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Brown brittle mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Gray cementitious material	Non-Fibrous Materials: Binder/Filler, Cementitious particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>

**Lab ID: 250027274**      **Client Sample #: 317-POT-056**  
Location: Bldg. 950

<b>Layer 1 of 3</b>	<b>Description:</b> Beige vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Fine grains, Mineral grains	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 2 of 3</b>	<b>Description:</b> Brown brittle mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>
<b>Layer 3 of 3</b>	<b>Description:</b> Gray cementitious material	Non-Fibrous Materials: Binder/Filler, Cementitious particles	Other Fibrous Materials:% None Detected ND	<b>Asbestos Type: %</b> <b>None Detected ND</b>

<b>Sampled by:</b> Client	
<b>Analyzed by:</b> Carena Lan	
<b>Reviewed by:</b> Hilary Crumley	

**Date:** 03/20/2025  
**Date:** 03/20/2025      Hilary Crumley, Manager Asbestos Laboratory

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

# ASBESTOS LABORATORY SERVICES



<b>Company</b> Tetra Tech, Inc. - Bothell	<b>NVL Batch Number</b> <b>2504807.00</b>
<b>Address</b> 19803 North Creek Parkway Bothell, WA 98011	<b>TAT</b> 3 Days <b>AH</b> No
<b>Project Manager</b> Mr. David Braungardt	<b>Rush TAT</b>
<b>Phone</b> (425) 482-7800	<b>Due Date</b> 3/20/2025 <b>Time</b> 1:30 PM
<b>Cell</b> (206) 510-8305	<b>Email</b> david.braungardt@tetrattech.com
	<b>Fax</b> (425) 482-7830

**Project Name/Number:** 117-171188-250003 **Project Location:** Bldg. 950

**Subcategory** PLM Bulk

**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

**Total Number of Samples** 4 **Rush Samples** \_\_\_\_\_

Lab ID	Sample ID	Description	A/R
1	250027271	317-POT-053	A
2	250027272	317-POT-054	A
3	250027273	317-POT-055	A
4	250027274	317-POT-056	A

	Print Name	Signature	Company	Date	Time
<b>Sampled by</b>	Client				
<b>Relinquished by</b>	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
<b>Received by</b>	Shazia Hasan		NVL	3/17/25	1330
<b>Analyzed by</b>	Carenna Lan		NVL	3/20/25	
<b>Results Called by</b>					
<input type="checkbox"/> <b>Faxed</b> <input type="checkbox"/> <b>Emailed</b>					

**Special Instructions:** \_\_\_\_\_

Date: 3/18/2025  
 Time: 8:14 AM  
 Entered By: Shazia Hasan

# 2504807



## ASBESTOS CHAIN OF CUSTODY

### Turn Around Time

- 1 Hour
- 2 Hours
- 4 Hours
- 24 Hours
- 2 Days
- 3 Days
- 4 Days
- 5 Days
- 10 Days

Please call for TAT less than 24 Hours

Company: Tetra Tech  
 Address: 400 112th Place NE  
Belluue WA. 98009  
 Phone: \_\_\_\_\_

Project Manager: DAVID Braungardt  
 Cell: 206 510 8305  
 Email: david.braungardt@tetratech.com  
 Fax: \_\_\_\_\_

Project Name/Number: 117-171188-25003 Project Location: Bldg. 950

- PCM Air (NIOSH 7400)
- PLM (EPA 600/R-93-116)
- PLM Gravimetry (600/R-93-116)
- Asbestos Friable/Non-Friable (EPA 600/R-93/116)
- TEM (NIOSH 7402)
- EPA 400 Points (600/R-93-116)
- Asbestos in Vermiculite (EPA 600/R-04/004)
- Other \_\_\_\_\_
- TEM (AHERA)
- EPA 1000 Points (600/R-93-116)
- Asbestos in Sediment (EPA 1900 Points)

Reporting Instructions: email -  
 Call ( )  Fax ( )  Email \_\_\_\_\_

Total Number of Samples 4

Sample ID	Description	A/R
1	<u>317-POT-053</u>	
2	<u>317-POT-054</u>	
3	<u>317-POT-055</u>	
4	<u>317-POT-056</u>	
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

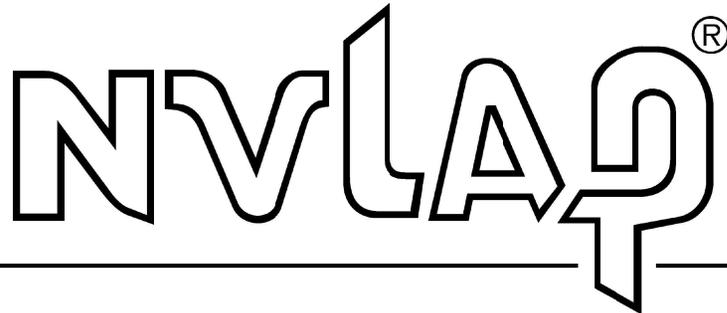
Print Name: DAVID Braungardt Signature: [Signature] Company: Tetratech Date: 3/17 Time: 1:30  
 Sampled by: \_\_\_\_\_ Relinquish by: \_\_\_\_\_

### Office Use Only

Print Name: [Signature] Signature: [Signature] Company: [Signature] Date: 3/17/25 Time: 1:30  
 Received by: \_\_\_\_\_ Analyzed by: \_\_\_\_\_  
 Called by: \_\_\_\_\_ Faxed/Email by: \_\_\_\_\_

**APPENDIX C:  
Laboratory Certifications**

United States Department of Commerce  
National Institute of Standards and Technology



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**Certificate of Accreditation to ISO/IEC 17025:2017**

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NVLAP LAB CODE: 102063-0

**NVL Laboratories, Inc.**  
Seattle, WA

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:*

**Asbestos Fiber Analysis**

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communiqué on ISO/IEC 17025).*

---

2024-10-01 through 2025-09-30

*Effective Dates*



A handwritten signature in blue ink, which appears to read "Dana S. Gorman".

---

*For the National Voluntary Laboratory Accreditation Program*

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017**

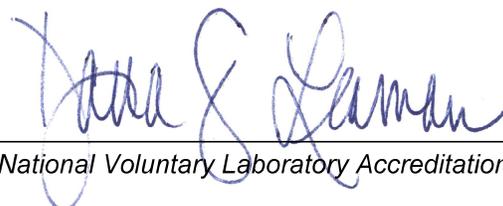
**NVL Laboratories, Inc.**  
4708 Aurora Avenue N.  
Seattle, WA 98103  
Mr. Nghiep Vi Ly  
Phone: 206-547-0100 Fax: 206-634-1936  
Email: [nick.l@nvllabs.com](mailto:nick.l@nvllabs.com)  
<http://www.nvllabs.com>

**ASBESTOS FIBER ANALYSIS**

**NVLAP LAB CODE 102063-0**

**Bulk Asbestos Analysis**

<u><i>Code</i></u>	<u><i>Description</i></u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials



For the National Voluntary Laboratory Accreditation Program

APPENDIX D:  
Photo Log

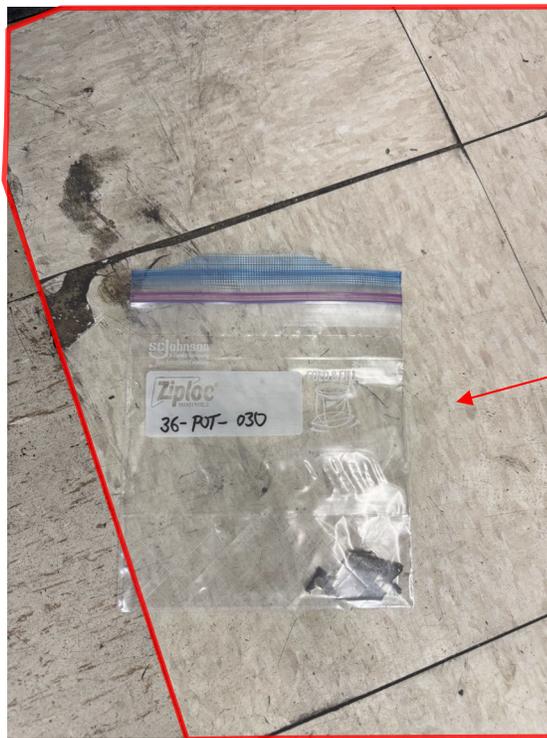


**West Sitcum Building 950**

**West Sitcum Building 950 Sewer and Bathroom  
Upgrades Project  
Port of Tacoma  
Project No. 201189.01  
Limited Hazardous Materials Survey**

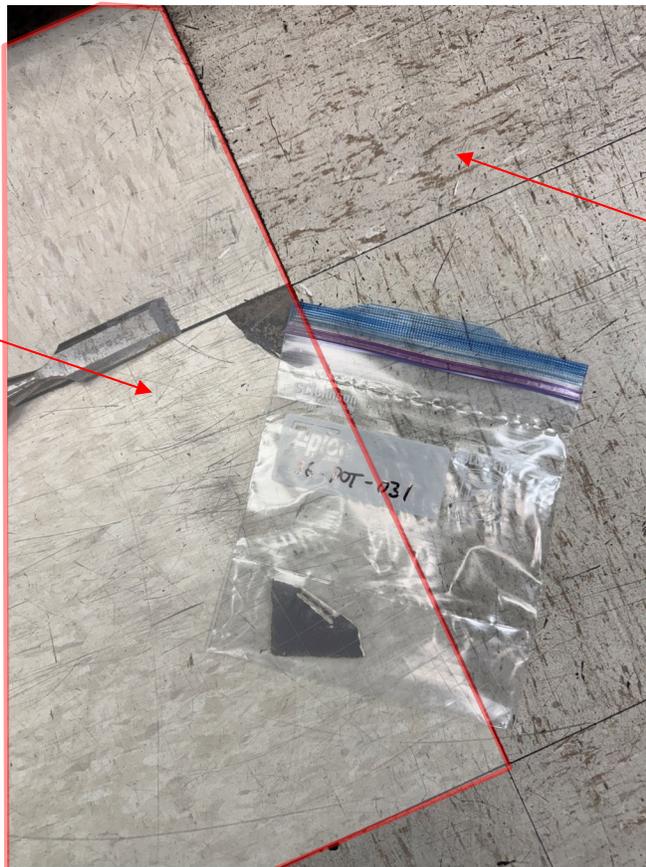
**PHOTOLOG**

Page 1



ACM black mastic ("Repair" floor tile is assumed contaminated with mastic on bottom side)

Photo 1 – 36-POT-031 (ACM Black mastic, under non-ACM 12" x 12" floor tile) ACM mastic appears to be a patch mastic used. Sample collected in Breakroom 103.



ACM black mastic ("Repair" floor tile is assumed contaminated with mastic on bottom side)

Non-ACM floor tile and non-ACM mastic. See samples 36-POT-001, 002, collected in Breakroom 119.

Photo 2 – 36-POT-031 (ACM Black mastic, under non-ACM 12" x 12" floor tile) ACM mastic appears to be a patch mastic used. Sample collected in Breakroom 103.

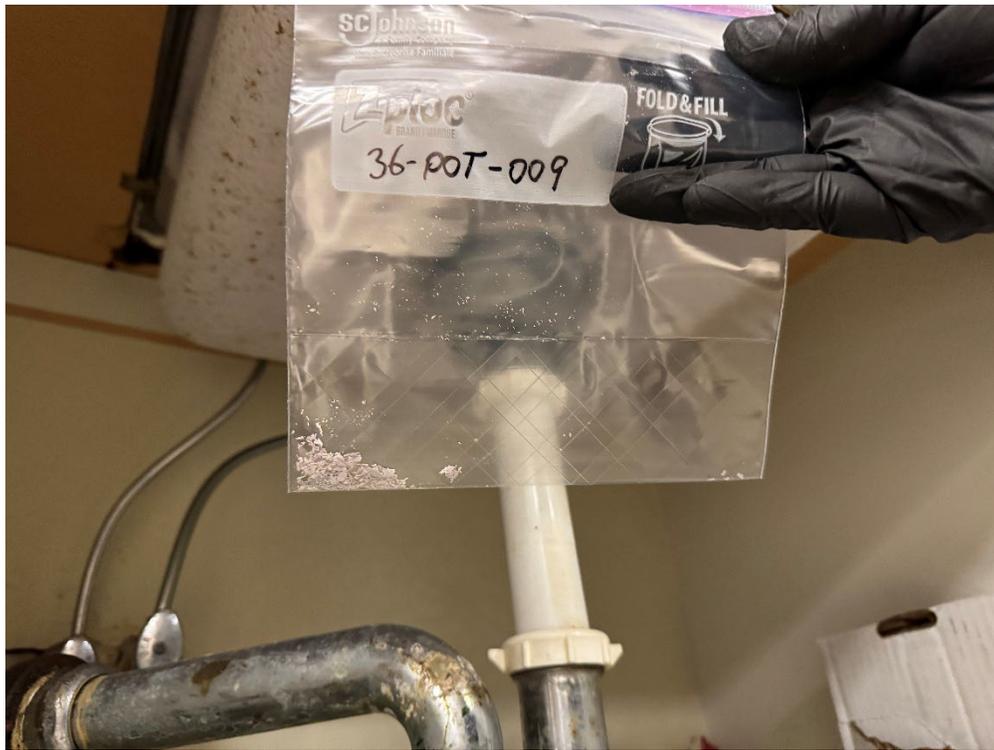
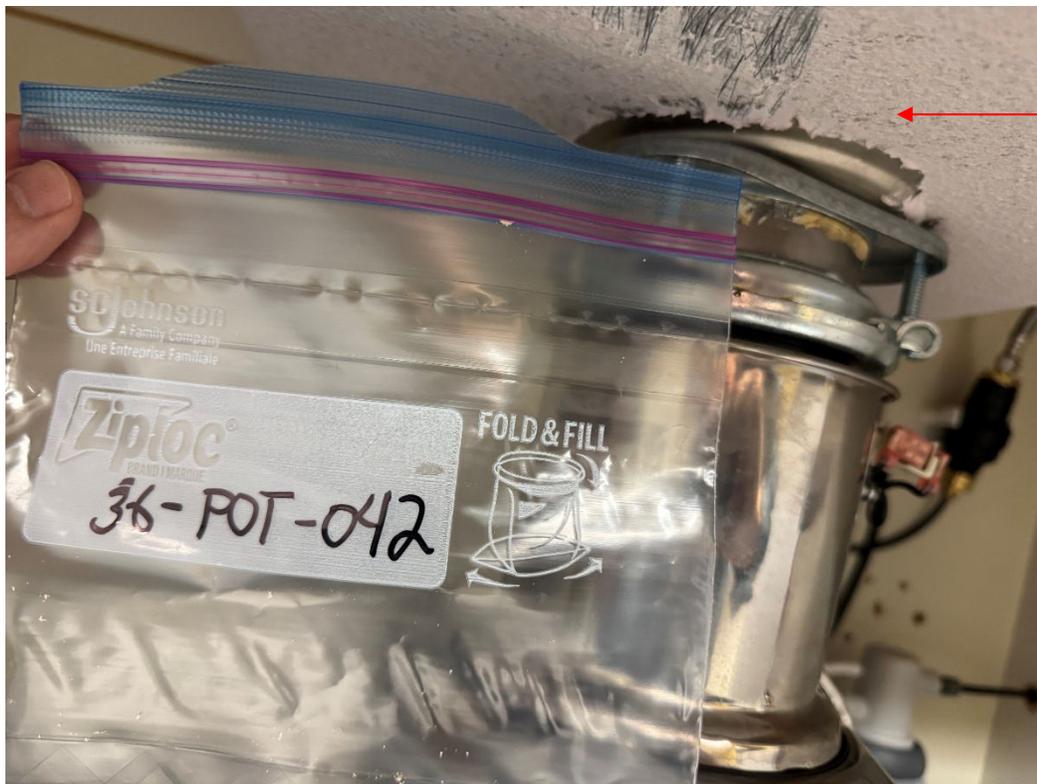


Photo 3 – 36-POT-009 (White ACM coating on underside of stainless-steel sink.) Sample collected in first floor breakroom 119.



White ACM  
sink  
undercoating

Photo 4 – 36-POT-041 (White ACM coating on underside of stainless-steel sink.) Sample collected in second floor breakroom 213. Note: sample bag in photo is for the brown caulk associated with the drain, but the white sink undercoating is visible in this photo.



Area of asbestos mastic under what appears to be “repair tiles” that do not match surrounding tiles.



Area of “repair” tile with asbestos mastic, extends under the vending machines into the corner of the room. Approximately 30 SF.