

PROJECT MANUAL

PROJECT NAME AND LOCATION:

**Siding & Exterior Trim Replacement
Carriage House Apartments – Building E**

Contract Number: AW2601831

TABLE OF CONTENTS

02	Invitation to Bid (1 Page)
03	Specifications (28 Pages)
04	Plans (24 Pages)
05	Instructions to Bidders (7 Pages)
06	General Conditions (16 Pages)
07	Bid Form & Bidder Information (5 Pages) – <i>Return with Bid</i>
08	Sample Contract Form (1 Page)
09	Sample Certificate of Insurance (2 Pages)
10	Hazardous Material Report dated November 10, 2016 (171 Pages)

INVITATION TO BID

King County Housing Authority (KCHA) will accept bids from qualified general contractors to furnish labor, materials and necessary equipment to perform the following:

SCOPE OF WORK: Work includes, but is not limited to, the removal and disposal of existing siding and trim, and other work described in project manual.

PROJECT MANUAL DISTRIBUTION:

Address: King County Housing Authority, **600** Andover Park, Tukwila, WA 98188

Distribution: * **Documents are available for download on KCHA's website at**
<http://www.kcha.org/business/construction/open/>

PRE-BID CONFERENCE:

Date and Time: July 29, 2026 at 11:00 A.M.

Jobsite Address: Carriage House Apartments, 3602 South 180th Street, SeaTac, WA 98188.

In Addition: Contractors are strongly encouraged to attend the Pre-Bid Conference. Failure to attend the Conference will not relieve the Contractor of any responsibility for information provided at that time. Bidders must have a current certificate of registration as a contractor for the last three years under the same name and have completed the required L&I training.

For Questions: Questions pertaining to the bid are to be sent via email to MichelleJ@kcha.org no later than seven (7) calendar days prior to bid due date. All responses shall be in the form of Addenda.

Posting: Addenda notifications will be emailed to all members of the Plan Holders List and will be posted on KCHA's website.

BIDS ARE DUE:

Time: **11:00 A.M.**

Date: **August 19, 2026**

Address: King County Housing Authority
600 Andover Park West, Tukwila, WA 98188

Submittal Process: * Sealed Envelope marked as **"Bid Documents: Carriage House Siding & Trim. Attn: Michelle J."**
(Mailing / Shipping Package or Wrapping must also be marked with this information).

Process: All Bids must be received and time and date stamped at KCHA no later than the above due date and time. No Bids will be accepted after that date and time. No Fax or Email Bids will be accepted.

BID GUARANTEE:

Amount: Five (5%) Percent of the Total bid must accompany Each Bid

Payable to: King County Housing Authority

PERFORMANCE AND PAYMENT BONDS: As a condition of award payment and performance bonds for 100% of the Contract Award Amount shall be furnished for the Work.

KCHA is an Equal Employment Opportunity Employer and strongly encourages minority-owned and women-owned businesses, socially and economically disadvantaged businesses, and small businesses to submit bids or to participate as subcontractors and suppliers on KCHA Contracts.

KCHA reserves the right to reject any or all bids or to waive any informality in the bidding. No bid shall be withdrawn for a period of 60 calendar days subsequent to the opening of the bids without the written consent of KCHA.

CONTACT PERSON: Michelle Jackson at MichelleJ@kcha.org

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 1 of 28

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Siding & Exterior Trim Replacement

1. Project Location: Carriage House Apartments, 3602 South 180th Street, SeaTac, WA 98188

a. Building E

B. The Work consists of, but is not limited to, the removal and disposal of existing siding and trim; select removal and replacement of existing windows and sliding glass doors; reseal of specific windows; supply and installation of fiber cement board siding panels and trim; removal and reinstallation of downspouts; repair and/or replacement of exterior decks and railings; various deck membrane repair/installation; removal of existing elevated walkway and construction of new walkway, exterior painting of all siding and trim.

C. Good faith asbestos inspection(s) testing to comply with RCW 49.26.013 as required to achieve scope of work Removal and disposal of existing siding, trim, windows and doors.

D. All elevated decks are to be repaired, reference Keynotes 17, 18, 19, 20, and 28 on the plans. The decay repairs will depend on the extent of decay observed after the soffits are removed.

E. Where the pass-through corridor has gypsum sheathing incorporate the base of wall flashing shown in Detail 9/5.0. Where the pass-through corridor has siding the siding will need to be removed and replaced to incorporate the base of wall flashing shown in detail 6/5.8. Also reference Keynote 11.

F. All second-floor elevated walkways to be removed. Construct New walkway per sheet s3 and slope ¼" per foot away from building. Install new flashings, waterproof membrane and guardrail. Ref Sheet S1.0 and Details 3/5.8, 6/5.8 & 5/5.8. Reference Keynote 21.

G. The existing vinyl membrane shall be removed the entire length of each corridor. The underlying substrate shall be prepared as required to install a new waterproof membrane. Preparation will likely include removal of the existing adhesive or removal and replacement of the existing plywood sheathing to accept the new waterproof membrane. Reference Keynote 22.

H. At the upper and lower floor inside courtyard areas it is necessary to incorporate the base of wall flashing as shown in Detail 10/5.0 and 6/5.8 and the siding and trim will need to be removed and replaced.

I. All soffits at the roof eaves/rakes and decks are to be removed and replaced. Reference Keynotes 17 and 23. Soffits in the corridor stairways can be either removed and replaced or patched as long as patching does not show additional seams and the exterior paint can be applied according to manufacturer recommendations. Courtyard walkway soffits (1st floor looking up underneath the

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E

Contract Number: AW2601831
Page 2 of 28

elevated walkway) are to be removed and replaced due to decay and damage and construction of new elevated walkways. Ref Keynote 21

- J. The duration is 150 days. Painting may be delayed if weather conditions and temperature are not acceptable for painting.
- K. Ceiling light fixtures are to be removed and replaced. Reference Keynote 12. The wall light fixtures are to be temporarily removed and reinstalled. Reference Keynote 15.
- L. The weather-restive barrier (WRB) shall be Henry Fortifiber Weathersmart Drainable with all edges sealed in accordance with manufacturer recommendations. No Rainscreen system is specified to be installed. Tyvek is not an acceptable substitute.
- M. Guardrails shall be a typical face mounted prefabricated picket style guardrail similar to the courtyard guardrails with one continuous top rail and one continuous bottom rail. Reference Sheet 6.0 for additional information.
- N. Unit Cost Item #7 includes replacing all the windows and sliding glass doors with new on the south side of the building. Reference the plans and South Elevation on Sheet 3.1 for locations and window types. This is an Add/Alternate Unit Cost Item and is not included in the base bid but may be added to the contract before signatures.
- O. See separate BEHR PRO Exterior Paint Specification for details on the Exterior Paint Requirements.
- P. See 04-Carriage House Bldg. E' BID SET PLANS for detailed directions and envelope installation measures.
- Q. Project will be constructed under a general construction contract.

1.2 WORK SEQUENCE

- A. The Work shall be completed in 150 calendar days from the date of Notice to Proceed.
- B. Contractor will submit written schedule outlining dates and duration of job including:
 - 1. Construction start date
 - 2. Schedule for work in each building
 - 3. Anticipated final completion date

1.3 LIQUIDATED DAMAGES

- A. Liquidated damages will be assessed for each calendar day that the Contractor exceeds the time for completion in the amount of \$500.

1.4 USE OF THE PREMISES

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E

Contract Number: AW2601831
Page 3 of 28

- A. Use of Site: Limit use of premises to work areas. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for resident occupancy of site. Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate resident usage.
 - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to residents and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - 3. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect property, the buildings and occupants during construction period.

1.5 PERMITS

- A. Owner has secured the Building Permit. Contractor is responsible for obtaining and paying for all other necessary permits and for the coordination of all required inspections.

1.6 CONTRACT MODIFICATION PROCEDURES

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change.
- C. Construction Change Directive: Owner may issue a Construction Change Directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- D. Documentation: Maintain detailed records required for a change order to be approved and provide evidence of the following:
 - 1. Wage Rates
 - 2. Hours worked for each trade
 - 3. Materials
 - 4. Equipment
- E. Do not perform change order Work without approval of the Owner. Work performed without approval will not be compensated.

1.7 UNIT PRICES

- A. Unit price is an amount, stated by bidders on the Form of Proposal, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum if the estimated quantities of Work required by the Contract Documents are increased or decreased. Unit prices will be used to determine the amounts due to the Contractor from the Owner.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 4 of 28
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- B. Unit prices include necessary material, plus cost for delivery, preparations required for installation, demolition, disposal, installation, insurance, and direct and indirect costs associated with the Unit Price item.
- C. The Owner reserves the right to accept or reject any Unit Prices during the term of the Contract. If the Owner rejects a Unit Price, then the Contractor shall be required to submit to the Owner a breakdown of costs for the activity covered by the Unit Price. The Owner then shall make a determination as to what costs are allowable.

1.8 UNIT PRICE LIST

- A. Unit Price No. 1 – Gypsum Sheathing, 5/8” Type X Densglass Gold
 - 1. Unit of measure – 1 square foot.
 - 2. The base bid includes replacement 300 sheets of existing 4’x8’ Gypsum sheathing including removal and disposal of existing and installation of new where siding is to be removed. See Bid Set Plans for details.
 - 3. If, on inspection, the number of square feet required is reduced by the Owner, the Unit Price will be used as a deductive.
 - 4. In the event that further replacement of sheathing is required the Unit Price will be used as an additive.
- B. Unit Price No. 2 – Batt Insulation (R-15)
 - 1. Unit of measure – 1 square foot.
 - 2. The base bid includes replacement of 100% (Approximately 9,600 SF) of existing batt insulation where wall sheathing is removed and wall cavity is exposed to replace damaged, damp or discolored insulation. Includes removal, disposal and installation of new batt insulation. See Bid Set Plans for details.
 - 3. If, on inspection, the number of square feet required is reduced by the Owner, the Unit Price will be used as a deductive.
 - 4. In the event that further replacement of batt insulation is required the Unit Price will be used as an additive.
 - 5. Invoices for Unit Price materials shall be submitted with pay applications to verify quantities.
- C. Unit Price No. 3 – Provide Temporary Shoring & Perform Deck Framing Repairs
 - 1. Unit of measure – 1 lineal foot of deck joists.
 - 2. The base bid includes replacement of 50% of existing deck framing to repair damaged and decayed cantilevered deck joists, including costs to perform interior repairs necessary to repair or replace cantilevered joists. (Note: Assume 100% of double outer rim joists are to be removed and replaced.) See Bid Set Plans for details.
 - 3. If, on inspection, the number of square feet required is reduced by the Owner, the Unit Price will be used as a deductive.
 - 4. In the event that further replacement of deck framing is required the Unit Price will be used as an additive.
- D. Unit Price No. 4 – Provide Treatment of Framing and Sheathing with Bora-Care with Mold Care or an approved Equivalent
 - 1. Unit of measure – 1 square foot.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 5 of 28
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2. The base bid includes treatment of 50% of the wall framing and 25% of the deck framing. See Bid Set Plans for tails.
 3. If, on inspection, the number of square feet required to be treated is reduced by the Owner, the Unit Price will be used as a deductive.
 4. In the event that further treatment is required the Unit Price will be used as an additive.
- E. Unit Price No. 5 – Provide Unit Cost to Repair, Texture and Paint Interior Gypsum Wallboard Liners at Head, Jamb and Sills
1. Unit of measure – 1 hour.
 2. The base bid includes 100% of window or sliding door locations for repair of interior finishes as a result of removal and installation of windows and sliding doors. See Bid Set Plans for details.
 3. If, on inspection, the number of hours to repair the interior finishes is reduced by the Owner, the Unit Price will be used as a deductive.
 4. In the event that additional hours are required the Unit Price will be used as an additive.
- F. Unit Price No. 6 – For each window to be removed and reinstalled, provide a Unit Cost for rough opening modifications, including materials and labor, to accommodate installation of windows and doors and to accept new flashing. For allowance, assume 1 hour per window/ sliding glass door.
1. Unit of measure – 1 hour.
 2. The base bid includes (1) hour of modifications for 100% of window or sliding door locations to accommodate and installation of windows and sliding doors to accept new flashing. See Bid Set Plans for details.
 3. If, on inspection, the number of locations requiring repairs to interior finishes is reduced by the Owner, the Unit Price will be used as a deductive.
 4. In the event that additional hours are required the Unit Price will be used as an additive.
- G. Unit Price No. 7 – Provide cost to remove and replace on (1) hot water heater in an electrical/mechanical room. The new hot water heater shall be of equal or better capacity and efficiency.
1. Unit of measure – 1 HW Heater
 2. The base bid includes (1) Hot Water Heater to be replaced.
 3. If, on inspection, the number of Hot Water Heaters requiring replacement is reduced by the Owner, the Unit Price will be used as a deductive.
 4. In the event that additional Hot Water Heaters are required to be replaced, the Unit Price will be used as an additive.
- H. Unit Price No. 8 – Provide a cost to provide a performance bond for 100% of the construction contract.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 6 of 28

1.9 ALLOWANCES

- A. An allowance is a designated unit cost sum to be included in the bidder's estimate to cover specified conditions that cannot be verified/quantified prior to start of construction.
- B. All claims against an allowance will require photo documentation, quantity verification, material receipts, proof of wage and labor hours, and all invoices related to the scope.
- C. If the total quantity (per unit of measure) for the allowance is less than allocated, the Unit Price will be used as a deductive.
- D. If it is determined that the quantity (per unit of measure) must increase to complete the work, the Unit Price will be used as an additive.
- E. Each allowance will require its own separate line item in the bid and SOV for billing.

1.10 ALLOWANCE LIST

- A. Allowance No. 1 - Provide a \$60,000 allowance to repair interior unit nail pops, including texturing and painting the interior gypsum wallboard to match the existing.
 - 1. The base bid does not include any cost for repairs to interior unit due to nail pops or cracking from construction.
 - 2. All hours spent on repairing interior unit nail pops will be charged against the allowance. Billing against allowance will require verification of labor hours and wages, material receipts and any invoicing associated with work.
- B. Allowance No. 2 - Provide a \$20,000 allowance for temporary shoring & performing wall framing repairs
 - 1. The base bid does not include any replacement of existing wall framing or repair of damaged and decayed wall framing found to be unacceptable for new siding installation.
 - 2. All hours spent on repairing wall framing will be charged against this allowance. Billing against allowance will require verification of labor hours and wages, material receipts and any invoicing associated with work.

NOTE: Invoices for Unit Price materials shall be submitted with pay applications to verify quantities. Obtain approval from the Owner prior to performing added Work. Work performed without approval will not be compensated.

1.11 PAYMENT PROCEDURES

- A. Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
- B. Each Application for Payment shall be consistent with previous applications and payments.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 7 of 28
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- C. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
- D. Waivers of Lien: With each Application for Payment, submit conditional waivers lien from every entity who is lawfully entitled to file a lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - a. Submit final Application for Payment with or proceeded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- E. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.

1.12 PROJECT MEETINGS

- A. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, but no later than 7 days after execution of the Agreement.
- B. Progress Meetings: Conduct progress meetings at weekly intervals.

1.13 SUBMITTALS

- A. Subcontract list. Prepare written information that demonstrates capabilities and experience of firm or persons.
- B. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall submit a site-specific Accident Prevention Program (APP) to the Owner's representative prior to the initial scheduled construction meeting.

1.14 TEMPORARY FACILITIES

- A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- B. Use of Owner's existing electric power service will not be permitted.
- C. Four parking spaces and an additional lay down area shall be available to the contractor for storage containers and parking. Do not park in marked tenant spaces.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 8 of 28

1.15 SUBSTITUTIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitution requests may be submitted and shall include:
 - 1. Shop drawings showing dimensions
 - 2. Product Data, including descriptions of products and fabrication and installation procedures
 - 3. Data showing how product meets the specifications

1.16 CONSTRUCTION WASTE MANAGEMENT

- A. Regulatory Requirements: Conduct construction waste management activities in accordance with State of Washington RCW 39.04.13, and all other applicable laws and ordinances.
- B. Performance Requirements
 - 1. General: Where possible divert CDL waste from the landfill by one, or a combination of the following activities: Salvage, Reuse, Source-Separated CDL Recycling, Co-mingled CDL Recycling.
- C. Removal of Construction Waste Management
 - 1. Remove CDL waste materials from project site on a regular basis. Do not allow CDL waste to accumulate on-site.
 - 2. Transport CDL waste materials off Owner's property and legally dispose of them.
 - 3. Burning of CDL waste is not permitted.

1.17 EXECUTION REQUIREMENTS

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1.18 CUTTING AND PATCHING

- A. Quality Assurance
 - 1. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 - 2. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Owner's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Performance

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E

Contract Number: AW2601831
Page 9 of 28

1. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
2. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - a. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - b. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

1.19 ALTERNATES

- A. Alternate 1 -- Provide a bid for replacement of all windows and SGDs on the south elevation of Bldg. E Carriage House Apartments. Windows Shall meet the following specifications.
 1. U-Factor = 0.22 MAX
 2. SHGC = 0.38 MAX
 3. PLY-Gem Pro Series 200 windows
 4. PLY-Gem Builder Series 460 SGD
 5. Provide Nail Flanges
 6. Provide Insect Screens
 7. White Frames
- B. Alternate 2 -- Provide a cost to perform the repairs shown on sheet S2A at one (1) electrical/mechanical room. The cost shall include all labor, materials, general conditions, etc. to perform the work Refer to Keynote 20a on sheet 2.0 for additional information. The intent of these repairs is to stabilize the existing conditions. No leveling is included in the scope.
 1. Unit of measure – 1 room.
 2. The base bid does not include any repairs for mechanical room shown on sheet S2A.
 3. If, on inspection, it is determined that the mechanical room requires these repairs the amount will be used as a change order additive. Change order will require proper backup documentation for labor hours and wages, material receipts and invoices.
- C. Alternate 3 – Provide a cost to perform the repairs shown on sheet S2B at one (1) electrical/mechanical room. The cost shall include all labor, materials, general conditions, etc. to perform the work. Refer to Keynote 20A on sheet 2.0 for additional information. The intent of these repairs is to stabilize the existing conditions. No leveling is included in the scope.
 1. Unit of measure – 1 room.
 2. The base bid does not include any repairs for mechanical room shown on sheet S2B.
 3. If, on inspection, it is determined that the mechanical room requires these repairs the amount will be used as a change order additive. Change order will require proper backup documentation for labor hours and wages, material receipts and invoices.

1.20 CLOSEOUT PROCEDURES

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 10 of 28

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Prior to acceptance of the work at each building, clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- B. Prior to final acceptance and final payment, Contractor shall submit a written warranty covering labor and materials for a period of two (2) years from final completion.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION 01100

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 11 of 28

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes demolition, and removal and replacement.
 - 1. Selected portions of a building or structure to be demolished include but are not limited to:
 - a. Siding, trim and bellyband
 - b. Barge Boards
 - c. Fascia
 - d. Corner boards
 - e. All horizontal and vertical trim
 - f. All surface run conduit is to be retained and remain active
 - g. Remove downspouts to side behind and reinstall.
 - h. Remove all soil around building to leave minimum 6" clearance from siding, finish-grade soils to direct water away from the building.
 - i. All other items necessary to perform the specified work.
 - 2. Selected portions of a building or structure to be removed and reinstalled include but are not limited to:
 - a. Windows & sliding glass doors
 - b. Signage.
 - c. Exterior lights.
 - d. Cable and phone equipment.
 - e. Downspouts
 - f. All other items necessary to perform the specified work.

1.2 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 72-hours' notice to Owner of activities that will affect Owner's operations.
- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 12 of 28
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1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Owner assumes no responsibility for condition of areas to be selectively demolished.
 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials: A Limited Hazardous Materials Report dated November 10, 2016 is included in the Bid Documents. Comply with all applicable laws regarding removal and disposal of hazardous materials.
 1. If materials not listed in the report are suspected of containing hazardous materials are encountered, do not disturb and immediately notify Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site will not be permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 13 of 28

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.
- B. Removed and Reinstalled Items: Remove and re install items as soon as possible to prevent unsafe conditions.
 - 1. Entry lights shall be functional at all times.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

END OF SECTION 01732

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 14 of 28

SECTION 07462 - FIBER CEMENT SIDING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Fiber Cement Siding including Panels, Trim, Flashing, Accessories.
- B. Trim: Vertical, Horizontal, Window/Door, Soffits, Fascia, Barge and Accessories.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods, including nailing patterns.
- B. Siding manufacturer's requirements for vapor retarders, primer, paint, etc.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Provide installer with not less than three years of experience with products similar to those specified.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturers' instructions to avoid damage to products.
- B. Store products off the ground, on a flat surface, and under a roof or separate waterproof covering.
 - 1. Stacking materials may result in damage to product or finish.

1.5 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturers for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.6 WARRANTY

- A. Provide manufacturer's 50-year limited siding warranty.
- B. Register manufacturer's warranty, made out in Owner's name, with copy to Owner.
- C. Workmanship Warranty: Application warranty for 2 years.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 15 of 28

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. JamesHardie HardiePanel HZ10 Multi-Family Fiber Cement Panel Siding & Trim.

2.2 FIBER CEMENT PANEL SIDING

- A. HardiePanel Siding, smooth surface, factory primed for field finishing. Reveals formed with Fry Reglet "T-piece" and ½" gap to adjacent panel. Corners using Fry Reglet "Outside Corner" shapes. Straight edge panels 48" long by 96" high and 5/16" thick. See drawings for locations. Exposed screws, as approved by manufacturers. Provide mock-up of panel installation. Align screws horizontally and vertically as approved by Owner/Architect after mock-up review.
- B. ACCESSORIES
- C. Fasteners: Double dipped galvanized steel or stainless steel; length as required to penetrate minimum 1-1/4 inch. Fasteners as recommended by Manufacturer for wind speed and exposure category based on ICC Evaluation Service, Inc. (ICC-ES) Report HB.
 - 1) Screws: Exposed fasteners, SFS Torx, 1.5", #10 or 12 self-tapping, stainless steel with a 0.472" dia. head.
 - 2) Galvanized Nails: James Hardie proprietary unobtrusive finishing nail, of size (depth of penetration) and strength to securely and rigidly retain the work and as required by the siding manufacturer in printed instructions.
- D. Building Paper: DuPont Tyvek DrainWrap.
- E. Seam Tape (Flashing tape): 3- inch wide, DuPont Tyvek Tape as distributed by DuPont Building Innovations.

2.3 FINISHES

- A. Factory Primer: Provide factory applied universal primer.
 - 1. Primer: Factory applied.
- B. Topcoat: - Refer to Section 09911. Finish Paint: As specified in Section 09911.

PART 3 - EXECUTION

3.1 DEMOLITION

- A. General: Demolish and dispose off site existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 16 of 28
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- B. Removed, store and reinstalled all items not identified for replacement.

3.2 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.

3.3 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Install moisture barrier with penetration and junction flashing and sealed.
 - 1. Use self-adhesive flashing tape to secure joints and laps.
 - 2. Lap barrier over flashing and tape securely.
 - 3. Tape all penetrations.

3.4 INSTALLATION – PANEL SIDING

- A. Install materials in strict accordance with manufacturer's installation instructions and recommendations.
- B. Follow manufacturer recommended installations. See 03-HZ10 Hardie Panel Installation and 04-Carriage House BID SET 230419 for details on weatherization measures and siding installation details.
- C. Maintain clearance between siding and adjacent finished grade.
- D. Remove soils and organic debris to provide minimum 6” clearance to bottom of siding.
- E. Locate all vertical joints at stud locations and with solid backing.

3.5 INSTALLATION - TRIM

- A. Install all trim true and straight with no distortions. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- B. Install trim in longest lengths possible.
- C. Corner boards shall be in one single piece.
- D. Clean trim on exposed and semi exposed surfaces and leave ready for paint.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 17 of 28

3.6 ACCESSORIES

- A. Install moisture barrier and lap over flashing and tape.
 - 1. Tape all joints and seal around penetrations.
- B. Install trim materials as indicated.
- C. Set all nails in trim boards and siding as per manufacturer's instructions.
- D. Caulk siding joints in strict accordance with manufacturer's installation instructions.

3.7 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 07462

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 18 of 28

SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Formed roof drainage system.
 - 2. Sheet metal flashing.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.

1.3 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

PART 2 - PRODUCTS

2.1 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Hanging Gutters: Gutter to remain
- B. Downspouts: Standard 2" x 4" rectangular downspouts complete with front and side elbows.
- C. Remove downspouts to install siding and reinstall. Repair and/or replace any damaged parts.
 - 1. Fabricate downspouts from: 0.027-inch-thick aluminum with baked on finish (Owner to select color from standard range).
- D. Sealant: Geocel 2000 or approved equal.

2.2 FLASHING

- A. 26-gauge min. zinc galvanized complying with ASTM A-93 coating not less than 1.50-ounce zinc coating per sq. ft. (total for both sides), with pre-painted finishes on both sides. ("Kynar" bronze color each side).

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 19 of 28

- B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item.
 - 1. Minimum pre-primed 26 gauge hot-dipped galvanized steel sheet, or aluminum.
 - a. Include folded hem on all exposed flashing.
 - 2. Window and door flashing.
 - 3. Bellyband and blocking flashing.
 - 4. Joint flashing plate.
 - 5. Fasteners: Hot-dipped galvanized or stainless steel as required to penetrate minimum 1-1/4 inch into solid backing.

PART 3 - EXECUTION

3.1 ROOF DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system. Install downspouts and plumb.
- B. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide hex head screws to securely strap to building and downspouts; locate fasteners at top and bottom and at approximately 60-inches o.c. in between.
 - 1. Provide elbows at base of downspout to direct water away from building if no site drainage is present.
 - 2. Connect downspouts to underground drainage system if available.

3.2 FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.

END OF SECTION 07620

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 20 of 28

SECTION 09911 - EXTERIOR PAINTS AND COATINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Surface preparation and field painting of exposed exterior items and surfaces.

1. Wood

- a. Siding
- b. Wood Paneling
- c. Horizontal and vertical trim
- d. Door and window trim
- e. Fascia
- f. Eaves Soffits
- g. Handrails and deck rims
- h. All previously painted exterior surfaces
- i. Entry Unit Doors
- j. All previously painted metal

2. Excluded

- a. Vinyl Windows
- b. Unpainted Foundations

1.2 REFERENCES

- A. ASTM D 16 - Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
- B. ASTM D 3359 - Standard Test Methods for Measuring Adhesion by Tape Test.
- C. ASTM D 1653 - Standard Test Methods for Water Vapor Transmission of Organic Coating Films.
- D. ASTM E-96 - Standard Test Methods for Water Vapor Transmission of Materials.
- E. SSPC, The Society for Protective Coatings - Web Site <http://www.sspc.org>:
 - 1. SSPC-SP1 Solvent Cleaning.
 - 2. SSPC-SP2 Hand Tool Cleaning.
 - 3. SSPC-SP3 Power Tool Cleaning.
 - 4. SSPC-SP7 Brush-Off Blast Cleaning.
- F. PDCA Paint and Decorating Contractors of America - Web Site <http://www.pdca.org>:
 - 1. PDCA Standards P1 through P15

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 21 of 28

1.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Finish Schedule: Submit finish schedule including color information, gloss and model number for each type and color of finish specified.
- C. Verification Samples: For each finished product specified, two samples, minimum size 6 inches square, representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years' experience.
- B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing finishes and coatings of the same type and scope as specified.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques, color, sheen and application workmanship.
 - 1. Finish areas designated by Owner.
 - 2. Finish two exterior doors for adhesion test purposes.
 - 3. Do not proceed with remaining work until workmanship, color, and sheen are approved by Owner.
 - 4. Refinish mock-up area as required to produce acceptable work.
 - 5. Provide up to three color change mockups.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Take special safety precautions against hazards from toxic and flammable materials.
- D. Place paint and solvent contaminated cloths and materials, subject to spontaneous combustion, in containers and remove from job site each day.
- E. Keep open flame, electrical and static spark, and other ignition sources from flammable vapors and materials at all times.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 22 of 28

1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturers for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
- B. Post "WET PAINT" signs during application and curing of all coatings that may be accessed by other trades or the public.
- C. Post "NO SMOKING" signs during application and curing of solvent-based materials.

1.7 COORDINATION

- A. Coordinate Work with other operations and installation of finish materials to avoid damage to installed materials.
- B. Do not apply coating materials until moisture or dust-producing work or other appearance or performance impairing construction activities have been completed.

1.8 WARRANTY

- A. At project closeout, provide to Owner an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.
 - 1. Include final written approval from paint manufacturer's representative that the product has been applied in accordance with the manufacturer's instructions as required to obtain manufacturer's standard limited warranty.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials selected for coating systems for each type surface shall be the product of a single manufacturer.
- B. Do not thin finish coats without the manufacturer's approval.
- C. Unsuitability of specified products: Claims concerning unsuitability of any material specified or inability to satisfactorily produce the work will not be entertained, unless such claim is made in writing to Owner before work is started.
- D. Number of coats scheduled is minimum. Apply additional coats at no additional cost if necessary to completely hide base materials, produce uniform color, and provide satisfactory finish result.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 23 of 28

2.2 MANUFACTURERS

- A. Acceptable Manufacturer: Behr Paint Company, Santa Ana, California 92705.
 - 1. Regional Accounts Manager: Jill Marlatt, 425.761.9077, jmarlatt@behr.com

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into acceptable condition through preparatory work as included in Article 3.2 "Preparation ". Notify Owner in writing of any defects or conditions which will prevent a satisfactory installation.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may effect proper application.
- C. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows;
 - 1. Concrete: 12 percent
 - 2. Portland Cement Plaster and Stucco: 12 percent
 - 3. Masonry (Clay and CMU): 12 percent
 - 4. Wood: 15 percent
 - 5. Gypsum Board: 12 percent
- D. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
- E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- F. Proceed with surface preparation and coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating is construed as acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to coating application.
- B. Masking: All masking over windows in occupied units shall be removed at the end of each workday.
- C. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E

Contract Number: AW2601831
Page 24 of 28

- D. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.
- E. Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturer.
- F. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.
- G. Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, fabric canopies, and other items not indicated to receive coatings.
- H. Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.
- I. Protect adjacent surfaces not indicated to receive coatings.
- J. Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer.

3.3 SURFACE PREPARATION

- A. All surfaces to be painted shall be pressure washed.
- B. Mildew
 - 1. A solution of 1-part Jomax house cleaner and mildew killer concentrate and 1 part water will be applied by a low pressure system such as:
 - a. Gallon pressure sprayer
 - b. Juice box
 - c. Very low-pressure airless sprayer with little or no "bounce back".
 - 2. All surfaces will be wetted with this mildewcide solution, not just the most easily accessible. Do not allow this solution to dry before rinsing thoroughly with clean water.
- C. Metal: Pressure wash and then sand, wire brush, or scrape as necessary to remove excess rust scale and loose/peeling paint not removed initial cleaning. Prime all bare metal as soon as possible after preparation.
- D. All other surfaces: Pressure wash and scrape to remove dirt contaminants, dust, and loose/peeling paint to provide a smooth surface for paint application. Hammer all protruding nail heads flush with surface before painting. Prime all bare wood areas before applying finish coat. Caulk any open miters or cracks in surface.
- E. Any debris or chemical residue on windows due to power wash operation will be removed by thoroughly rinsing the windows and surrounding trim. Due care is to be exercised around window seals to prevent damage. Protect all vehicles, other surfaces or plants which will not be receiving

SPECIFICATIONS

Carriage House Apartments Exterior Renovations - Building E	Contract Number: AW2601831 Page 25 of 28
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paint, but which might be harmed by chemical exposure. Temporary coverings are normally the preferred method.

- F. All washed surfaces will have at least two days of continuous drying time (no rain). Surfaces to be painted must have no more than 13% moisture content before priming and painting commences. Washing one day and painting the next is not acceptable.
- G. The Owner's Representative and paint manufacturer's representative shall inspect preparation prior to the application of paint finishes. Contractor will rework surfaces not properly prepared to receive paint finishes to the satisfaction of the either.

3.4 APPLICATION - GENERAL

- A. Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.
- B. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat.
- C. Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet.
- D. Do not apply succeeding coat until Owner and paint manufacturer's representative has approved previous coat; only approved coats will be considered in determining number of coats applied.
- E. Remove dust and other foreign materials from substrate immediately prior to applying each coat.
- F. Where coating application abuts other materials or other coating colors, terminate coating with a clean sharp termination line without coating overlap.
- G. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside top corner nearest to face of closed door.
- H. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.
- I. Disconnect downspouts from building during application to ensure adequate coverage of trim or siding. Re attach immediately after application.
- J. Exterior Doors
 - 1. Exterior doors shall be painted in groups that allow a single Owner provided staff member to monitor for security.
 - 2. Doors shall be painted open and shall include painting of the hinge side (do not paint hinges or labels).
 - 3. Remove weatherstripping prior to painting doors to ensure that doors may be secure immediately after painting.
 - 4. Replace weatherstripping when dry.

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 26 of 28

3.5 CLEANING

- A. Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow to dry.
- B. Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items that have been removed to protect from contact with coatings.
- C. Reconnect equipment adjacent to surfaces indicated to receive coatings.
- D. Relocate to original position equipment and fixtures that have been moved to allow application of coatings.
- E. Remove protective materials.

3.6 PROTECTION

- A. Protect completed coating applications from damage by subsequent construction activities.
- B. Repair to Owner's acceptance coatings damaged by subsequent construction activities. Where repairs cannot be made to Owner's acceptance, re-apply finish coating to nearest adjacent change of surface plane, in both horizontal and vertical directions.

3.7 PAINT SCHEDULE

- A. Finish surfaces in accordance with schedule. Catalog names and numbers refer to products as manufactured or distributed by the Behr Paint Company, Santa Ana, California 92705, except as otherwise specified by Architect.
- B. Provide paint finishes of even, uniform color, free from cloudy or mottled appearance. Properly correct non-complying work to satisfaction of Owner's representative and representative of the Behr Paint Company.
- C. Some colors, especially accent colors, may require multiple finish coats for adequate coverage and opacity.
- D. The specified number of primer and finish coats is minimum acceptable. If full coverage and opacity is not obtained with specified number of coats, apply additional coats as necessary to produce required finish.

3.8 EXTERIOR PAINT SCHEDULE:

- A. Exterior Substrates
 - 1. Lap Siding, Paneling, Horizontal and Vertical trim, Window and Door Trim/Casing, Fascia, Eaves, Soffits, and Handrails.
 - a. Primer: Spot prime as needed - Behr Premium Plus Exterior Primer & Sealer (436)

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831

Page 27 of 28

- b. Finish: Coat to Cover 2 coat minimum - Behr Premium Plus Ext Satin (9050)
- 2. Metal and miscellaneous previously painted metal
 - a. Primer: Spot prime as needed - Behr Premium Plus Multi-Surface Primer & Sealer (436)
 - b. Finish: Coat to Cover - Behr Premium plus Ext Satin (9050)
- 3. Entry Doors
 - a. Primer: Behr Bonding Primer (432)
 - b. Finish: Two coats - Behr Alkyd Semi-Gloss Enamel (3900)

3.9 COLORS

- A. Colors shall be selected from mockups and shall consist of a field color, trim color and door color.

END OF SECTION 09911

SPECIFICATIONS

**Carriage House Apartments
Exterior Renovations - Building E**

Contract Number: AW2601831
Page 28 of 28

SECTION 16520 - LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes exterior lights.

1.2 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 ACCESSORIES

- A. Materials as necessary to remove and reinstall exterior light fixtures.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Remove and reinstall exterior light fixtures and extend to accommodate new siding dimensions.
 - 1. Due to life/safety concerns lighting must be available and function at the end of each work day.

END OF SECTION 16521

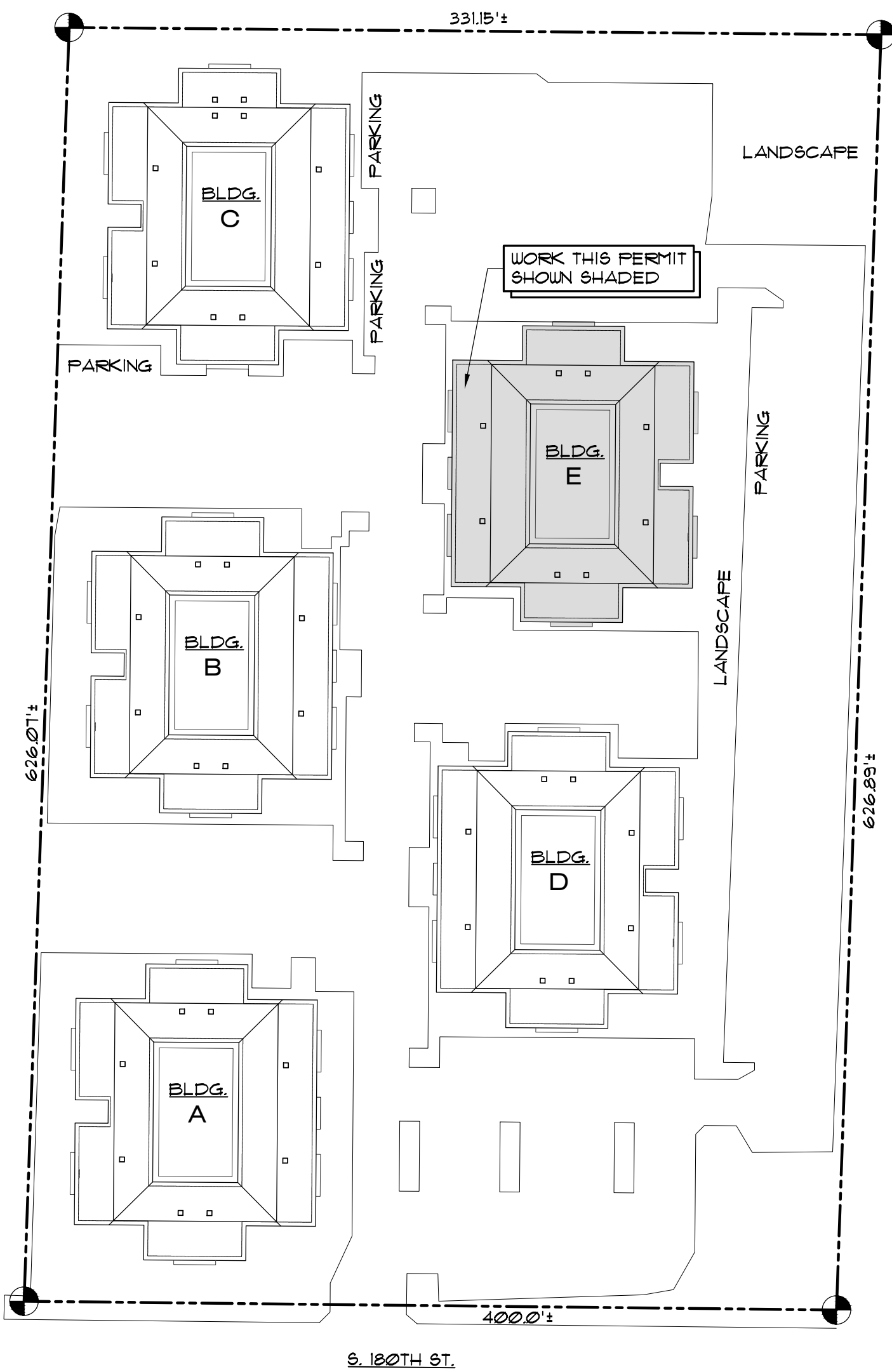
GENERAL NOTES:

- GENERAL CONDITIONS:
- DO NOT SCALE DRAWINGS.
 - REPETITIVE FEATURES MAY BE DRAWN OR CALLED OUT ONCE, BUT SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
 - ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND SHALL BE IN ACCORDANCE WITH ALL MANUFACTURERS' SPECIFICATIONS, DIRECTIONS AND RECOMMENDATIONS. THE WORK SHALL ALSO BE IN STRICT CONFORMANCE WITH INDUSTRY STANDARDS AND COMPLY WITH SOUND ENGINEERING AND CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL REPLACE PORTIONS OF THE INSTALLED WORK THAT DOES NOT MEET THESE REQUIREMENTS AT THEIR EXPENSE.
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, AND IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS.
 - THE CONTRACTOR SHALL COORDINATE ALL REQUIRED LOCAL JURISDICTION INSPECTIONS AND SPECIAL INSPECTIONS. THE CONTRACTOR SHALL PROVIDE COPIES OF THE INSPECTION REPORTS TO PACIFIC ENGINEERING TECHNOLOGIES, INC. AND THE OWNER'S REPRESENTATIVE.
 - ALL NEW AND/OR REPLACEMENT MATERIALS SHALL BE EQUAL OR BETTER IN KIND AS EXISTING MATERIALS.
 - THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE BY OWNER.
 - PLUMBING, MECHANICAL AND ELECTRICAL WORK (AS REQUIRED FOR REPAIR WORK) TO BE FILED UNDER SEPARATE PERMITS AND SHALL BE BIDDER DESIGNED. PLUMBING, MECHANICAL AND ELECTRICAL REPAIR DESIGN TO BE PERFORMED BY LICENSED AND QUALIFIED PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS. ALL NEW MECHANICAL AND LIGHTING WORK SHALL CONFORM TO THE REQUIREMENTS OF THE WASHINGTON STATE ENERGY CODE.
 - CONTACT THIS OFFICE AT (206) 281-7500 IF ANY ADDITIONAL DAMAGE IS FOUND OUTSIDE THIS SCOPE OF WORK DURING DEMOLITION OR ANY VARIATIONS TO THE SITE OR EXISTING BUILDING(S) ARE FOUND DURING THE CONSTRUCTION WORK.

- SITE CONDITIONS, SAFETY AND DEMOLITION:
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS AT THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AT THE JOB SITE DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 - THE CONTRACTOR SHALL PROVIDE ACCEPTABLE SAFETY AND SECURITY MEASURES AND SHALL MAINTAIN SAFETY AND SECURITY AT THE JOB SITE DURING THE ENTIRE COURSE OF THE PROJECT.
 - THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION TO PROTECT THE PUBLIC FROM INJURY DUE TO DEMOLITION AND REPAIR WORK. BARRICADES ARE TO REMAIN IN PLACE AFTER DEMOLITION WORK HAS BEEN COMPLETED AND THROUGHOUT THE DURATION OF THE WORK.
 - THE CONTRACTOR SHALL REASONABLY SECURE SCAFFOLDING, WORK AREAS, BUILDING MATERIALS AND TOOLS FROM ACCESS TO THE PUBLIC AT ALL TIMES.
 - THE REQUIRED AND/OR IMPLIED DUTY OF PACIFIC ENGINEERING TECHNOLOGIES, INC., TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE DOES NOT, AND IS NOT INTENDED TO, INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
 - THE CONTRACTOR AND THE SUB-CONTRACTORS SHALL VISIT THE SITE TO REVIEW THE EXISTING SITE, BUILDING CONDITIONS, AND FEATURES, INCLUDING, BUT NOT LIMITED TO: GRADES, DIMENSIONS, ACCESS TO THE WORK, POWER ACCESS, STAGING, REFUSE DISPOSAL, MATERIAL STORAGE, ETC.
 - A PRECONSTRUCTION MEETING WILL BE HELD PRIOR TO THE START OF THE PROJECT TO REVIEW GENERAL CONDITIONS, STAGING, SEQUENCING, ETC.
 - ALL WORK SHALL BE PERFORMED DURING NORMAL BUSINESS HOURS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL REQUIREMENTS.
 - THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS' REPRESENTATIVE FOR A DESIGNATED AREA WITHIN THE SITE TO BE USED FOR THE STORAGE OF MATERIALS, EQUIPMENT AND TEMPORARY CONSTRUCTION OFFICE BEFORE COMMENCING WITH THE WORK. THE SECURITY OF THE MATERIALS, EQUIPMENT AND TEMPORARY CONSTRUCTION OFFICE STORED ON-SITE IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS' REPRESENTATIVE FOR SCHEDULING ACCESS INTO UNITS. IN UNITS THE CONTRACTOR ENTERS TO PERFORM REPAIRS, THE CONTRACTOR SHALL PHOTOGRAPH THE EXISTING CONDITIONS PRIOR TO REPAIRS SO AS TO AID IN RESOLVING ANY POSSIBLE CLAIMS THE OWNER'S REPRESENTATIVE MAY HAVE ABOUT DAMAGE TO INTERIORS FROM THE REPAIR WORK.
 - IT IS INTENDED TO KEEP THE BUILDINGS OCCUPIED DURING THE PERFORMANCE OF THE WORK. MAINTAIN OR PROVIDE ACCESS TO ENTRY DOORS AND A CLEAR PATH TO DRIVEWAYS, SIDEWALKS AND ENTRY WALKWAYS TO NOT ADVERSELY IMPACT THE TENANTS AND GUESTS ENTERING AND LEAVING THE BUILDING(S) AND PREMISES AT ALL TIMES EXCEPT AS PRE-ARRANGED WITH OWNERS' REPRESENTATIVE. MAINTAIN ALL BUILDING EXITS.
 - THE WORK SHALL NOT BLOCK INGRESS OR EGRESS FROM THE SITE AT ANY TIME. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL NOT BLOCK THE MARKED FIRE LANES OR DRIVEWAYS AND NOT UTILIZE ANY RESERVED PARKING SPALLS WITHOUT OWNERS' REPRESENTATIVE'S PERMISSION.
 - THE CONTRACTOR SHALL PROVIDE PORTABLE RESTROOM FACILITIES FOR WORKERS.
 - THE CONTRACTOR SHALL PROVIDE ITS OWN DUMPSTER FOR CONSTRUCTION DEBRIS.
 - THE CONTRACTOR SHALL PROVIDE HEAT AS NECESSARY TO COMPLETE THE WORK.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION, TEMPORARY BRACING, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES IN CONNECTION WITH THE WORK.
 - THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING OR SUPPORT TO PREVENT MOVEMENT OR SETTLEMENT OF STRUCTURE AS NEEDED IN AREAS BEING REPAIRED.
 - PROVIDE SCAFFOLDING AND TEMPORARY WEATHER PROTECTION FOR AREAS OF THE BUILDING EXPOSED DURING CONSTRUCTION AS NECESSARY TO ACCOMPLISH THE REPAIR WORK SUFFICIENTLY AND TO PREVENT WATER DAMAGE FROM OCCURRING AS THE WORK PROGRESSES. ANY WATER DAMAGE TO THESE AREAS RESULTING DURING REPAIRS IS TO BE REPAIRED AT NO COST TO OWNER.
 - PROTECT LANDSCAPING, DRAINAGE AND IRRIGATION SYSTEMS AS REQUIRED TO ACCOMPLISH THE WORK OR REMOVE AND REPLACE LANDSCAPING, DRAINAGE AND IRRIGATION SYSTEMS, WHICHEVER IS MORE COST EFFECTIVE. FOLLOWING THE WORK, THE IRRIGATION AND DRAINAGE SYSTEMS SHALL BE TESTED TO VERIFY THAT THEY ARE FUNCTIONING PROPERLY. ALL DAMAGED ITEMS SHALL BE REPLACED AT NO COST TO THE OWNER.
 - PROPERLY PROTECT OR CAP ALL UTILITIES THAT MIGHT BE DISTURBED DUE TO DEMOLITION ACTIVITY.
 - PROTECT EXISTING FINISHES, FIXTURES, EQUIPMENT, ETC. THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
 - THE CONTRACTOR IS TO LAY DOWN TEMPORARY PROTECTION OF FINISHED (E.G., FLOOR TILE, CARPETS, FINISHES, ETC.) FOR ANY WORK TO BE COMPLETED WITHIN THE UNITS.
 - AT UNITS WHERE WORK COULD AFFECT BLINDS AND/OR DRAPERIES AT WINDOWS, REMOVE THE BLINDS AND DRAPERIES TO PERFORM THE WORK AND RE-INSTALL THEM AFTER THE WORK IS COMPLETE.

GENERAL NOTES (CONT.):

- PRIOR TO GENERAL/SELECTIVE DEMOLITION, THE GENERAL CONTRACTOR SHALL OBTAIN THE PERMISSION OF THE OWNERS' REPRESENTATIVE TO TEST WHETHER HAZARDOUS WASTES OR ASBESTOS IS PRESENT IN DEMOLITION DEBRIS. SHOULD HAZARDOUS MATERIALS OR ASBESTOS BE FOUND IN DEMOLITION DEBRIS, THE CONTRACTOR SHALL LEGALLY CONTAIN SUCH MATERIAL AND DISPOSE OF OFF SITE AT AN APPROVED DUMP SITE AFTER OBTAINING THE OWNERS' REPRESENTATIVE PERMISSION TO DO SO. THE COST OF RETAINING A QUALIFIED TESTING FIRM TO OBTAIN SAMPLES AND TEST FOR HAZARDOUS MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - COORDINATE ALL DEMOLITION ACTIVITIES WITH THE OWNERS' REPRESENTATIVE.
 - THE CONTRACTOR SHALL TRANSPORT AND DISCARD IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS AND REMOVED ITEMS NOT INTENDED FOR REUSE.
 - INSPECT CONCEALED SPACES UNCOVERED DURING THE DEMOLITION PHASE FOR ADDITIONAL DAMAGE.
 - REMOVE AND REPLACE ALL MOISTURE DAMAGED FINISHES INCLUDING DAMAGED THERMAL AND SOUND INSULATION.
 - THE CONTRACTOR IS TO LEAVE THE SITE BROOM CLEAN FROM CONSTRUCTION RELATED DEBRIS AFTER DEMOLITION WORK IS COMPLETE, AT THE END OF EACH DAY AND AT THE END OF THE PROJECT.
- CONSTRUCTION:
- SUBCONTRACTORS SHALL HAVE A MINIMUM OF THREE YEARS OF EXPERIENCE INSTALLING THEIR RESPECTIVE PRODUCTS AND SHALL BE MANUFACTURER APPROVED INSTALLERS OF THOSE PRODUCTS.
 - ALL SUCH PRODUCTS AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS, INDUSTRY STANDARDS AND CODE REQUIREMENTS. THE CONTRACTOR SHALL SUBMIT TO PACIFIC ENGINEERING TECHNOLOGIES, INC., A COPY OF THE INSTALLATION INSTRUCTIONS AND RELATED INSTALLATION STANDARDS AND REQUIREMENTS FOR REVIEW AND APPROVAL AND THE CONTRACTOR SHALL KEEP A SET OF THESE INSTRUCTIONS ON THE SITE DURING REPAIRS RELATING TO THAT WORK.
 - PROVIDE WEATHER-RESISTIVE / AIR BARRIER BEHIND WALL CLADDING IN ACCORDANCE WITH USBC 1402.2 AND 1402.5 AND THE WASHINGTON STATE RESIDENTIAL ENERGY CODE R402.4 AND TABLE R402.4.1.1. WEATHER-RESISTIVE / AIR BARRIER SHALL BE CONTINUOUS AND ALL JOINTS SHALL BE TAPED OR SEALED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE FLASHINGS FOR EXTERIOR BUILDING COMPONENTS IN ACCORDANCE WITH USBC CHAPTER 1404.4.
 - INSTALL ROOFING COMPONENTS IN ACCORDANCE WITH USBC CHAPTER 15.
 - THE CONTRACTOR SHALL VERIFY THAT ALL WATERPROOFING COMPONENTS ARE COMPATIBLE WITH EACH OTHER, I.E. SEALANTS AND BACKER ROD, SEALANTS, AND SELF ADHESIVE (FEEL 'N' STICK) MEMBRANE, ETC.
 - THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S PRODUCT DATA, MOCK-UP SAMPLES, SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS FOR ALL PRODUCTS (SUCH AS: WINDOWS, SEALANTS, SHEET METAL FLASHINGS, SELF ADHESIVE MEMBRANES AND WATERPROOF MEMBRANES, ETC.) TO PACIFIC ENGINEERING TECHNOLOGIES, INC. FOR REVIEW AND APPROVAL PRIOR TO PRODUCT PURCHASE AND INSTALLATION.
 - THE CONTRACTOR IS TO PROVIDE PACIFIC ENGINEERING TECHNOLOGIES, INC. WITH ACCESS TO REVIEW THE INSTALLATION OF THE NEW WEATHER-RESISTIVE BARRIER AND FLASHINGS PRIOR TO BEING COVERED BY THE NEW SIDING SYSTEM. THE CONTRACTOR IS TO PROVIDE A MINIMUM OF 12 HOURS NOTICE (EXCLUDING WEEKENDS) PRIOR TO WHEN THE CONTRACTOR WANTS REVIEWS PERFORMED. THE CONTRACTOR'S ACCESS TO THE CONDITIONS WITHIN THE BUILDING(S) AND PREMISES FOR THE WEATHER-RESISTIVE BARRIER, MEMBRANE AND FLASHING SYSTEM AS DIRECTED BY PACIFIC ENGINEERING TECHNOLOGIES, INC. THAT DOES NOT COMPLY WITH THE REPAIR DRAWINGS. PACIFIC ENGINEERING TECHNOLOGIES, INC. MAY REQUIRE THAT THE SIDING BE REMOVED AND REPLACED AT NO COST TO THE OWNER IF PACIFIC ENGINEERING TECHNOLOGIES, INC. IS NOT ALLOWED TO REVIEW THE INSTALLATION OF THE WORK DUE TO INSUFFICIENT NOTIFICATION.
 - ALL NEW WINDOWS, SKYLIGHTS AND EXTERIOR DOORS SHALL COMPLY WITH THE CURRENT EDITION OF THE WASHINGTON STATE ENERGY CODE.
 - PROVIDE SAFETY GLAZING IN ACCORDANCE WITH USBC SECTION 2406.
 - WINDOWS, SLIDING GLASS DOORS AND DOORS SHALL BE INSTALLED WITH PENETRATION FLASHINGS AND IN ACCORDANCE WITH USBC SECTION 1402.2, 1403.2 AND 1404.4 AND WITH ASTM E 212.
 - NEW THERMAL INSULATION MUST COMPLY WITH THE CURRENT EDITION OF THE WASHINGTON STATE ENERGY CODE.
 - PROVIDE MINIMUM R-3 PER INCH FOR EXISTING EXPOSED CEILING, WALL, OR FLOOR CAVITIES WASHINGTON STATE ENERGY CODE R503.1.1 EXCEPTION 2.
 - WHERE WINDOWS ARE REPLACED, REPAIR THE INTERIOR FINISHES AND MODIFY OR REPLACE THE INTERIOR LINERS, AS REQUIRED.
 - ALL VENTILATION OPENINGS SHALL BE SCREENED EXCEPT DRYER VENTS. ALL VENT OPENINGS SHALL HAVE LOUVERS.
 - WHERE WINDOWS, DOORS OR SLIDING GLASS DOORS ARE TEMPORARILY REMOVED OR DISCARDED, THEY SHALL BE RE-INSTALLED OR INSTALLED BY THE END OF EACH DAY.
 - THE CONTRACTOR SHALL REPAIR INTERIOR DISTRESS, SUCH AS, BUT NOT LIMITED TO NAIL POPS RESULTING FROM THE CONSTRUCTION WORK AND REPAINT THE INSIDE OF THE UNITS IF REQUIRED. ALL REPAIRS SHALL MATCH EXISTING AS CLOSE AS POSSIBLE. PROVIDE AN ALLOWANCE FOR EACH UNIT IN THE BID.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL TESTING AND RECERTIFICATION OF THE EXISTING FIRE SPRINKLER AND FIRE ALARM SYSTEMS IF REQUIRED BY THE FIRE MARSHAL OR BUILDING DEPARTMENT.
 - MECHANICAL EXHAUST DUCTS WHICH PENETRATE FIRE RESISTIVE WALL, FLOOR/CEILING OR ROOF/CEILING ASSEMBLIES SHALL BE FIRE DAMPERED OR LOCATED WITHIN FIRE RESISTIVE SHAFTS IN ACCORDANCE WITH USBC SECTION 711.
 - PROVIDE FIREBLOCKING AND DRAFTSTOPPING AT INTERCONNECTIONS BETWEEN CONCEALED SPACES (SUCH AS SOFFITS, DROPPED CEILINGS, ATTICS, WALL CAVITIES, ETC.) AT THE CEILING, FLOOR AND HORIZONTALLY AT 10' INTERVALS IN ACCORDANCE WITH USBC SECTION 718.
 - HOLES FOR WIRING AND PLUMBING PENETRATIONS THAT PASS THROUGH FIRE-RESISTANCE RATED ASSEMBLIES ARE TO BE SEALED WITH A FIRE RATED EXPANDING FOAM OR SEALANT. THE FOAM OR SEALANT SHALL BE IN ACCORDANCE WITH ASTM E 814 OR UL 1415 WITH AN F AND T RATING NOT LESS THAN THE ASSEMBLY RATING IN ACCORDANCE WITH USBC SECTION 714.4 AND 714.5.
 - ALL NEW WOOD PLATES, NAILING STRIPS, AND LEDGERS IN CONTACT WITH CONCRETE OR EXPOSED TO THE WEATHER SHALL BE PRESSURE PRESERVATIVE TREATED. CUT ENDS, ETC. SHALL BE PAINTED WITH (2) COATS OF WOOD PRESERVATIVE PAINT.
 - PROVIDE DIFFERENTIAL METAL PROTECTION TO PREVENT GALVANIC ACTION WHERE OCCURS.
 - THE CONTRACTOR SHALL CLEAN THE EXTERIOR OF ALL GLAZING, DOORS, DECKS, AND WALKWAYS AT THE END OF THE PROJECT.
 - UPON COMPLETION OF ALL REPAIR WORK, THE OWNERS' REPRESENTATIVE, PACIFIC ENGINEERING TECHNOLOGIES, INC. AND CONTRACTOR WILL DEVELOP A 'PUNCH LIST' OF WORK ITEMS TO BE COMPLETED AS PART OF THE PROJECT CLOSE-OUT. ALL ITEMS ON THE PUNCH LIST SHALL BE CORRECTED/REPAIRED BEFORE THE OWNER'S ASSOCIATION FINAL ACCEPTANCE OF THE WORK.
 - UPON FINAL ACCEPTANCE OF THE WORK, CONTRACTOR SHALL SUBMIT AN OPERATION AND MAINTENANCE MANUAL AND ALL WARRANTIES TO THE HOMEOWNER'S ASSOCIATION.



SITE PLAN
SCALE: 1" = 60'-0"

NOTE:
THE INFORMATION ON THIS SITE PLAN IS SCHEMATIC AND HAS BEEN DERIVED FROM THE SITE PLAN INFORMATION ON RECORD WITH KING COUNTY, AERIAL PHOTOGRAPHS, AND SITE VISITS.

MAINTENANCE:

NOTE TO BUILDING OWNER:
THE SEVERE WEATHER CONDITIONS THAT ARE ENCOUNTERED DURING WINTER MONTHS IN THE PACIFIC NORTHWEST REQUIRE A DILIGENT ON-GOING MAINTENANCE PROGRAM FOR THE EXTERIOR DECKS AND ROOFS.

DECKS AND ROOFS MUST BE CLEANED ON A REGULAR BASIS SO THAT MOSS AND FUNGUS DOES NOT START TO GROW. FAILURE TO PROPERLY MAINTAIN DECKS AND ROOFS WILL LEAD TO PREMATURE FAILURE OF THE WATERPROOF MEMBRANE OR ROOFING SURFACE.

BUILDING SEALANTS SHOULD ALSO BE EXAMINED ON AN ANNUAL BASIS. ANY SEALANTS THAT ARE FOUND NOT TO BE ADHERING PROPERLY SHOULD BE REPAIRED IMMEDIATELY.

EXTERIOR WOOD SHOULD BE EXAMINED ON A REGULAR BASIS TO MAINTAIN WATER RESISTANCE AND TO ENSURE MOSS AND FUNGUS DOES NOT START TO GROW.

RCW STATEMENTS:

IN ACCORDANCE WITH RCW CHAPTER 64.55 - RCW 64.55.010(6)(X)(VI) AND 64.55.010(10) - THE OWNER DOES NOT INTEND TO SELL THE RESIDENTIAL UNITS AS CONDOMINIUMS WITHIN THE NEXT FIVE YEARS. IN LIEU OF SUBMITTING BUILDING ENCLOSURE DETAILS AND STATEMENTS, THE OWNER HAS COMPLETED AND SIGNED THE "CONDOMINIUM SALE PROHIBITION COVENANT". THE COVENANT HAS BEEN RECORDED WITH THE KING COUNTY ASSESSOR'S OFFICE, AND A COPY OF THE RECORDED COVENANT HAS BEEN SUBMITTED TO THE BUILDING DEPARTMENT.

SCOPE OF WORK SUMMARY

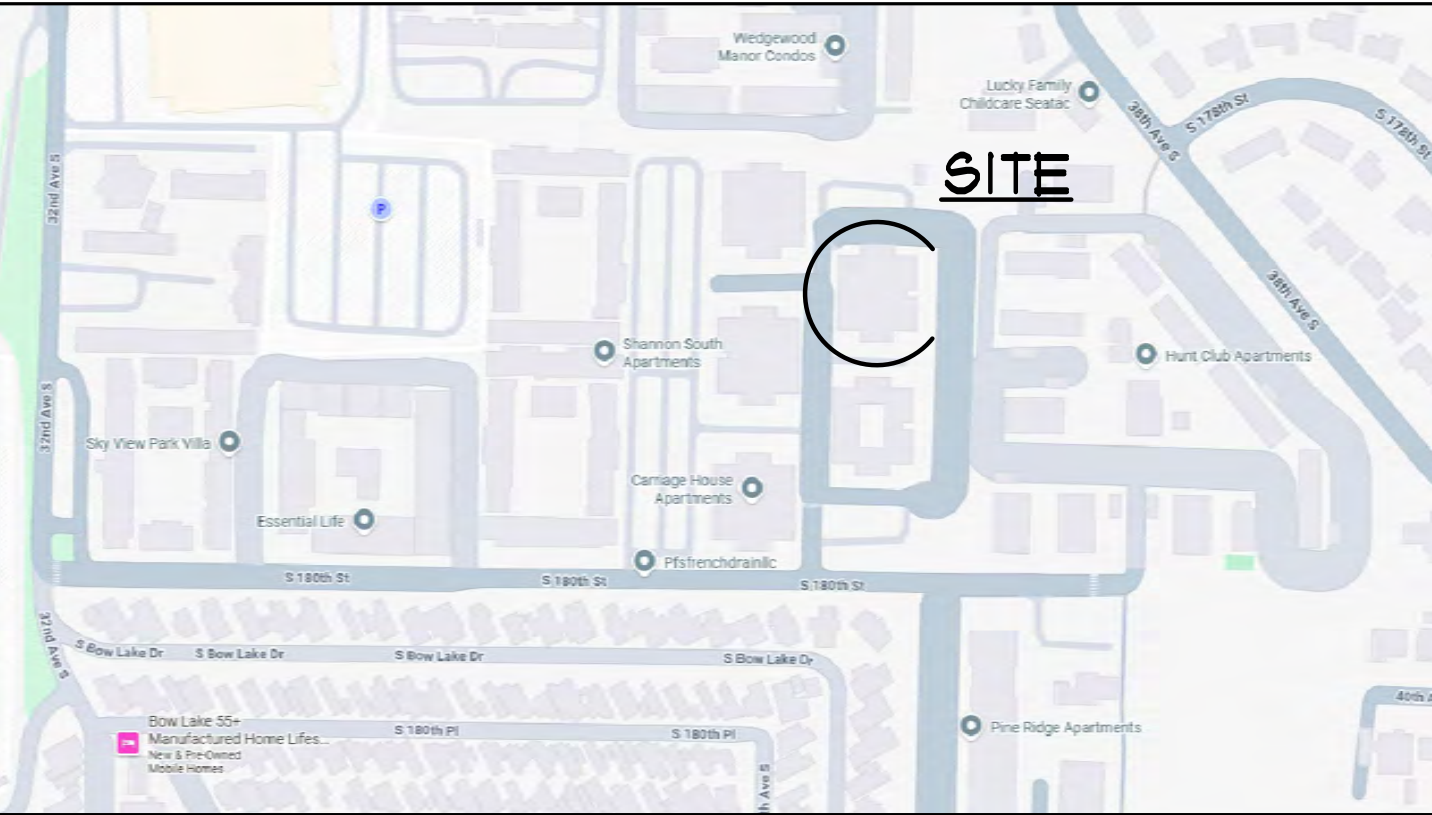
TYPE: SELECT EXTERIOR IMPROVEMENTS

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE DETAILS NECESSARY TO IMPROVE SELECTED EXTERIOR BUILDING COMPONENTS AT THE CARRIAGE HOUSE APARTMENTS, BUILDING 'E' LOCATED IN SEATAC, WASHINGTON.

- THE REPAIRS AND ALTERATIONS ARE IN ACCORDANCE WITH:
- USBC CHAPTER 3 PROVISIONS FOR ALL COMPLIANCE METHODS.
 - USBC CHAPTER 4 PROVISIONS FOR REPAIRS.
- THE REPAIRS/IMPROVEMENTS INCLUDE THE FOLLOWING:
- REPLACEMENT OF WATER DAMAGED GYPSUM SHEATHING AND FRAMING.
 - REMOVAL AND REPLACEMENT OF THE EXTERIOR SIDING, TRIM, SOFFITS, WEATHER-RESISTIVE BARRIER AND FLASHINGS.
 - REMOVAL AND REPLACEMENT OF EXISTING DECK GUARDRAILS WITH NEW PRE-FABRICATED GUARDRAILS.
 - SELECT REMOVAL AND REPLACEMENT OF EXISTING WINDOWS AND SLIDING GLASS DOORS.
 - REMOVAL AND REPLACEMENT OF EXISTING DAMAGED COURTYARD ELEVATED WALKWAY.
 - INSTALLATION OF A NEW DECK AND WALKWAY WATERPROOF MEMBRANE.

NO REVIEW HAS BEEN MADE OF THE ADEQUACY OF THE EXISTING FRAMING MEMBERS.

FIRE, MECHANICAL, ELECTRICAL AND PLUMBING WORK IS NOT INCLUDED IN THIS SCOPE OF WORK AND IS TO BE BIDDER DESIGNED (BY OTHERS) AND SUBMITTED UNDER A SEPARATE PERMIT.



VICINITY MAP

SCALE: N.T.S.



ASSESSOR'S No.: 342304-9070

LEGAL DESCRIPTION:

E 1/2 OF SE 1/4 OF NW 1/4 OF NW 1/4 LESS CO RD TGW W 6.838 FT OF SW 1/4 OF NE 1/4 OF NW 1/4 LESS CO RDS TGW A POR OF VAC RDS ADJ

BUILDING DATA:

JURISDICTION:	CITY OF SEATAC
CODE	2021 WASHINGTON STATE EXISTING BUILDING CODE (USEBC)
	2021 WASHINGTON STATE BUILDING CODE (USBC)
ZONING:	UH-900
OCCUPANCY:	R-2 (APARTMENTS)
CONSTRUCTION TYPE:	VA
LOT SIZE:	250200 SQ.FT. (5.14 ACRES)
No. OF BUILDINGS:	5 (BUILDING A - E)
WORK THIS PERMIT:	BUILDING E
ADDRESS:	3610 S. 180TH ST.
BUILDING SIZE:	
FIRST FLOOR	11,456 SQ. FT.
SECOND FLOOR	14,036 SQ. FT. (INCLUDING LOFTS)
No. OF UNITS:	48
No. OF STORIES:	2
SPRINKLERS:	NO
MANUAL FIRE ALARMS:	YES

SHEET INDEX

SHEET 10	SITE PLAN, VICINITY MAP AND NOTES
SHEET 11	SPECIFICATIONS AND NOTES
SHEET 20	FIRST FLOOR PLAN
SHEET 21	SECOND FLOOR PLAN
SHEET 22	LOFT PLAN
SHEET 30	EAST AND NORTH ELEVATIONS
SHEET 31	WEST AND SOUTH ELEVATIONS
SHEET 40	BUILDING CROSS SECTION AND PARTIAL FIRST FLOOR UNIT CORRIDOR PROFILE
SHEET 50	DETAILS
SHEET 51	DETAILS
SHEET 52	DETAILS
SHEET 53	DETAILS
SHEET 54	DETAILS
SHEET 55	DETAILS
SHEET 56	DETAILS
SHEET 57	DETAILS
SHEET 58	DETAILS
SHEET 59	DETAILS
SHEET 60	GUARDRAIL DETAILS
SHEET 91	STRUCTURAL NOTES AND SECTIONS
SHEET 92A	OPTION A TYP. ELECTRICAL ROOM/DECK REPAIR PLAN AND SECTIONS
SHEET 92B	OPTION B TYP. ELECTRICAL ROOM/DECK REPAIR PLAN AND SECTIONS
SHEET 93	SECOND FLOOR/ELEVATED WALKWAY FRAMING PLAN
SHEET 94	SECTIONS

THE INFORMATION PRESENTED ON THESE DRAWINGS IS TO THE LEVEL OF DETAIL FOR CONSTRUCTION COST ESTIMATION ONLY, NOT FOR ACTUAL CONSTRUCTION

PRELIMINARY

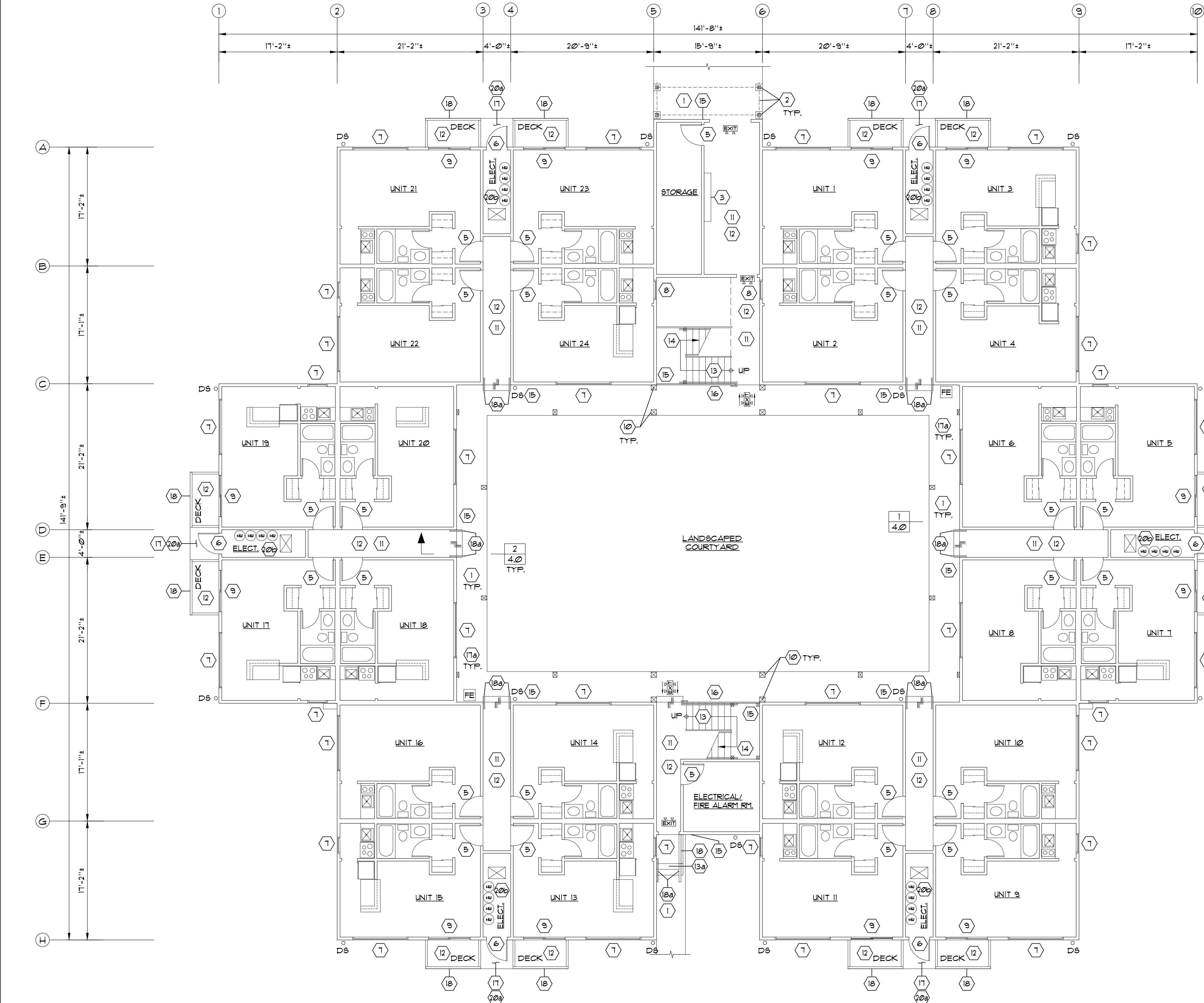
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Designed	N. FRITZ	No.	Revision
Drawn	RGP		BID SET
Checked	NLF		
Date	10 JUNE, 2026		
Approved			

4414 Woodland Park Ave N., Suite 100
Seattle, Washington 98103-7499

(7) (206) 281-7500

Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	SEATAC, WA
Contents	SITE PLAN, VICINITY MAP AND NOTES	
Sheet	10	
Job No.	26014.00	



LEGEND:

- EXIST. 2x WOOD FRAMED WALL TO REMAIN
- EXISTING DOOR
- PROVIDE NEW ILLUMINATED EXIT SIGN WITH EMERGENCY LIGHTING, REF. MATERIAL SPECIFICATIONS ON SHEET 11
- EXIST. WALL-MOUNTED FIRE EXTINGUISHER CABINET, TO BE TEMPORARILY DETACHED AND REINSTALLED AFTER WORK IS COMPLETE.
- DOWNSPOUT, REMOVE AND REPLACE, PREP AND PAINT AFTER WORK IS COMPLETE.
- EXIST. HOT WATER TANK, TEMP. DISCONNECT AS REQ'D TO PERFORM WORK
- EXIST. CRAWLSPACE ACCESS HATCH
- EXIST. STEPS, CLEAN AFTER WORK IS COMPLETE AND INSTALL STAIR NOSING TAPE

FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- REFERENCE FLOOR PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
- REMOVE AND DISCARD ALL EXISTING SIDING, TRIM, WEATHER-RESISTIVE BARRIER, FLASHINGS, EXHAUST VENTS, CEILING LIGHTING, DECK GUARDRAILS, DOWNSPOUTS, GUTTERS, AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS AROUND THE ENTIRE BUILDING AND IN THE COURTYARD AND STAIRWAYS. THE EXIST. GSB AT THE UNIT ENTRY/STAIR CORRIDORS SHALL REMAIN IN-PLACE.
- TEMPORARILY REMOVE AND STORE THE FOLLOWING FOR RE-INSTALLATION AFTER THE NEW FLASHINGS HAVE BEEN INSTALLED AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS:
 - a. WINDOWS
 - b. SLIDING GLASS DOORS
 - c. SWING DOORS
 - d. SIGNAGE
 - e. WALL LIGHTING - (SHALL BE USABLE DURING CONSTRUCTION)
- REVIEW AND IDENTIFY DAMAGED ROOF BARGE AND FASCIA TRIM, REMOVE AND REPLACE IN-KIND.
- AFTER THE SIDING, TRIM AND WEATHER-RESISTIVE BARRIER IS REMOVED, REVIEW THE EXISTING GYPSUM SHEATHING BOARD (GSB) FOR DAMAGE, REMOVE AND REPLACE IN-KIND.
- WHERE THE SHEATHING IS REMOVED, REVIEW THE FRAMING AND INSULATION FOR DAMAGE, REMOVE AND REPLACE IN-KIND.
- FOR TYPICAL SIDING INSTALLATION REF. DETAILS

1	2	3	4	5	6	7	10	11	12
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
- FOR TYPICAL WINDOW INSTALLATION REF. DETAILS

1	2	3	4	5	6	1	2
5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
- FOR TYPICAL SLIDING GLASS DOORS INSTALLATION REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- FOR TYPICAL VENT HOOD INSTALLATION REF. DETAILS

1	2	3	4
5.1	5.1	5.1	5.1
- FOR TYPICAL PIPE PENETRATIONS REF. DETAILS

1	3
5.2	5.2
- FOR TYPICAL OUTLETS AND LIGHT PENETRATIONS REF. DETAILS

2	4
5.2	5.2

KEYNOTES:

- EXIST. CONC. SLAB, REMOVE ADJACENT SIDING TO INSTALL FLASHINGS, REF.

10
5.0
- EXIST. TRELLIS, REMOVE AND REPLACE TRELLIS AND COLUMN TRIM IN-KIND, CLEAN, PREPARE AND STAIN AND/OR PAINT.
- EXIST. MAILBOXES TO REMAIN.
- NOT REFERENCED.
- EXIST. DOOR TO REMAIN IN PLACE, INSTALL SEALANT AROUND PERIMETER OF DOOR TRIM AND GYPSUM SHEATHING, PREP AND PAINT.
- EXIST. DOOR TO BE REMOVED AND RE-USED IF POSSIBLE, OR REPLACED IF DAMAGED TO INSTALL NEW FLASHINGS AND DOOR TRIM, REF. DETAILS

1	2	3	4
5.5	5.5	5.5	5.5
- EXIST. WINDOW, TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED, REF. DETAILS

1	2	3	4	6	1	2
5.3	5.3	5.3	5.3	5.3	5.4	5.4
- EXIST. WINDOW TO REMAIN IN PLACE, INSTALL NEW 6" WIDE SAF OVER NAIL FLANGES AFTER SIDING IS REMOVED.
- EXIST. SLIDING GLASS DOOR, TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED, REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- EXIST. COLUMN AND TRIM TO BE REMOVED AND REPLACED, PREP AND PAINT, REF. STRUCTURAL AND DETAILS

3	4
5.1	5.1
- EXIST. CORRIDOR, CLEAN AND PREPARE SURFACE TO INSTALL NEW WATERPROOF MEMBRANE, FLASHINGS, AND BASE TRIM AT WALL TRANSITIONS, REF. DETAILS

9	6
5.0	5.0

 SIM.
- WHERE GSB IS PRESENT, PATCH, SAND AND TEXTURE EXIST. WALL AND CEILING GYPSUM SHEATHING, SEAL DOORS, CLEAN AND PREPARE FOR PAINT. WHERE SIDING IS PRESENT, REMOVE AND REPLACE SIDING TO INSTALL URB AND FLASHINGS.
- REMOVE AND REPLACE CEILING LIGHTING FIXTURE, REF. MATERIAL SPECIFICATIONS ON SHEET 11.
- EXIST. STAIR TO REMAIN, CLEAN AFTER WORK IS COMPLETE, INSTALL STAIR NOSING TAPE.
- EXIST. WOOD STAIR AND LANDING, REMOVE AND REPLACE IN-KIND WITH NEW FLASHINGS, P.T. STRINGERS, TREADS, GUARDRAIL, HANDRAIL, COMPOSITE DECKING, AND NOSING TAPE.
- EXIST. STAIR LANDING, CLEAN, PREP AND INSTALL NEW WATERPROOF MEMBRANE OVER EXIST.
- EXIST. WALL LIGHT, TEMPORARILY REMOVE AND STORE FOR RE-USE, RE-INSTALL AFTER SIDING INSTALLATION IS COMPLETE.
- EXIST. STAIR GUARDRAIL AND HANDRAIL, TEMP. DETACH AS REQUIRED TO PERFORM WORK, IF TEMPORARILY REMOVED, PROVIDE NEW LAG SCREW FASTENERS, NOTIFY ENGINEER TO PROVIDE FASTENER SPECIFICATIONS FOR REATTACHMENT, CLEAN AFTER WORK IS COMPLETE.
- EXIST. DECK SOFFIT ABOVE, REMOVE SOFFIT TO REVIEW FRAMING FOR DECAY, REPAIR OR REPLACE DECAYED FRAMING AND INSTALL NEW GUARDRAIL BLOCKING, REF. SHEET 6.0 AND DETAIL

1
5.8
- EXIST. WALKWAY SOFFIT TO BE REMOVED, PROVIDE BATT INSULATION IN CAVITY AND SOLID BLOCKING AT ALL EXHAUST VENTS THROUGH FLOOR FRAMING, INSTALL 3M FIRE BARRIER SEALANT AROUND DUCT PENETRATIONS, ADJUST/EXTEND DUCT AS REQUIRED AND PROVIDE SOFFIT VENT HOOD WITH FLAPPER.
- EXIST. WOOD FRAMED GUARDRAIL, REMOVE GUARDRAIL AND INSTALL NEW PREFABRICATED FACE MOUNTED GUARDRAIL, REF. SHEET 6.0 AND DETAIL

1
5.8
- PROVIDE PREFABRICATED HANDRAIL, REF. HANDRAIL SPECS ON SHEET 11.
- NOT REFERENCED.
- NOT REFERENCED.

WHEN DIRECTED BY OWNER OR PACIFIC, PERFORM REPAIR PER SHEETS 82A AND/OR 82B.

- EXIST. ELECTRICAL/MECHANICAL ROOM, REVIEW FOR DAMAGE TO EXIST. CONC. TOPPING AND/OR FLOOR FRAMING, NOTIFY PACIFIC ENGINEERING TECHNOLOGIES, INC. IF ANY DAMAGE IS FOUND, WHEN DIRECTED BY OWNER OR PACIFIC, PERFORM REPAIRS PER SHEETS 82A AND/OR 82B. AFTER REPAIRS ARE COMPLETE, REPLACE CONCRETE TOPPING AND REINSTALL HOT WATER TANKS, IF REMOVED TO PERFORM WORK.

THE INFORMATION PRESENTED ON THESE DRAWINGS IS TO THE LEVEL OF DETAIL FOR CONSTRUCTION COST ESTIMATION ONLY, NOT FOR ACTUAL CONSTRUCTION

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Project: CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS

SEATTLE, WA

3610 S. 180TH ST.

2.0

Job No. 26014.00

Sheet

Contents

First Floor Plan

Revision

Drawn: N. FRITZ

Checked: RCP

Approved: NLF

Date: JUNE 2026

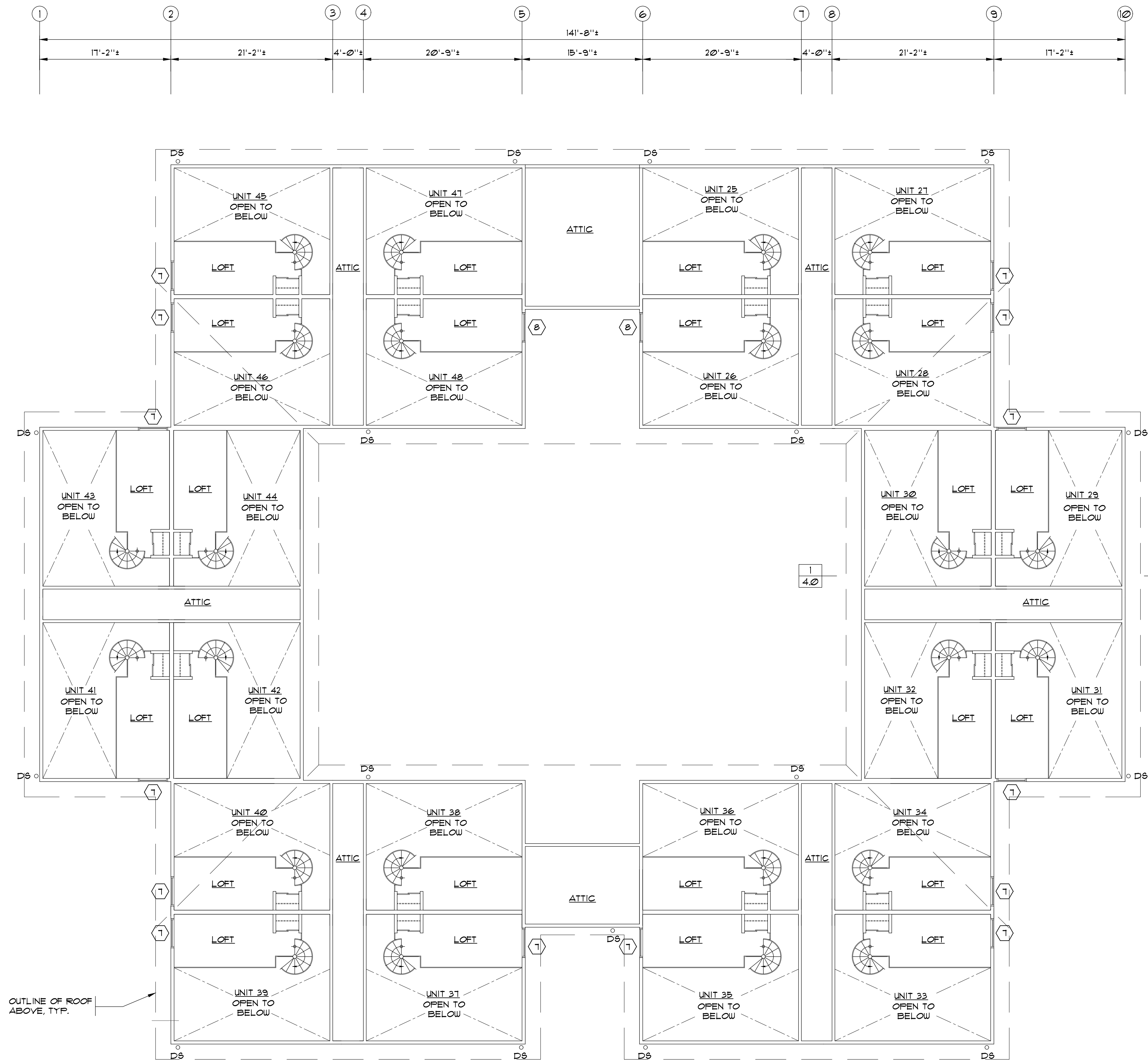
Approved: [Signature]

PACIFIC ENGINEERING TECHNOLOGIES, INC.

4444 Woodland Park Ave N., Suite 100
Seattle, Washington 98103-7499

(7) (206) 281-7500





GENERAL NOTES:

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- WHERE THE SHEATHING IS REMOVED, REVIEW THE FRAMING AND INSULATION FOR DAMAGE, REMOVE AND REPLACE IN-KIND.
- FOR TYPICAL SIDING INSTALLATION REF. DETAILS

1	2	3	4	5	6	7	10	11	12
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
- FOR TYPICAL WINDOW INSTALLATION REF. DETAILS

1	2	3	4	5	6	1	2
5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
- FOR TYPICAL SLIDING GLASS DOORS INSTALLATION REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- FOR TYPICAL VENT HOOD INSTALLATION REF. DETAILS

1	2	3	4
5.1	5.1	5.1	5.1
- FOR TYPICAL PIPE PENETRATIONS REF. DETAILS

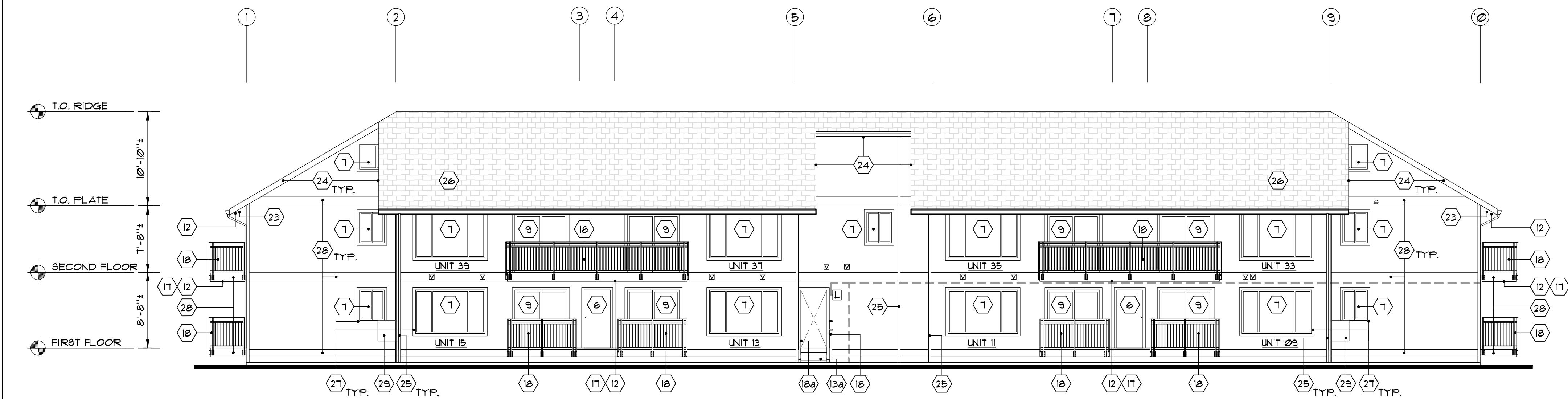
1	3
5.2	5.2
- FOR TYPICAL OUTLETS AND LIGHT PENETRATIONS REF. DETAILS

2	4
5.2	5.2

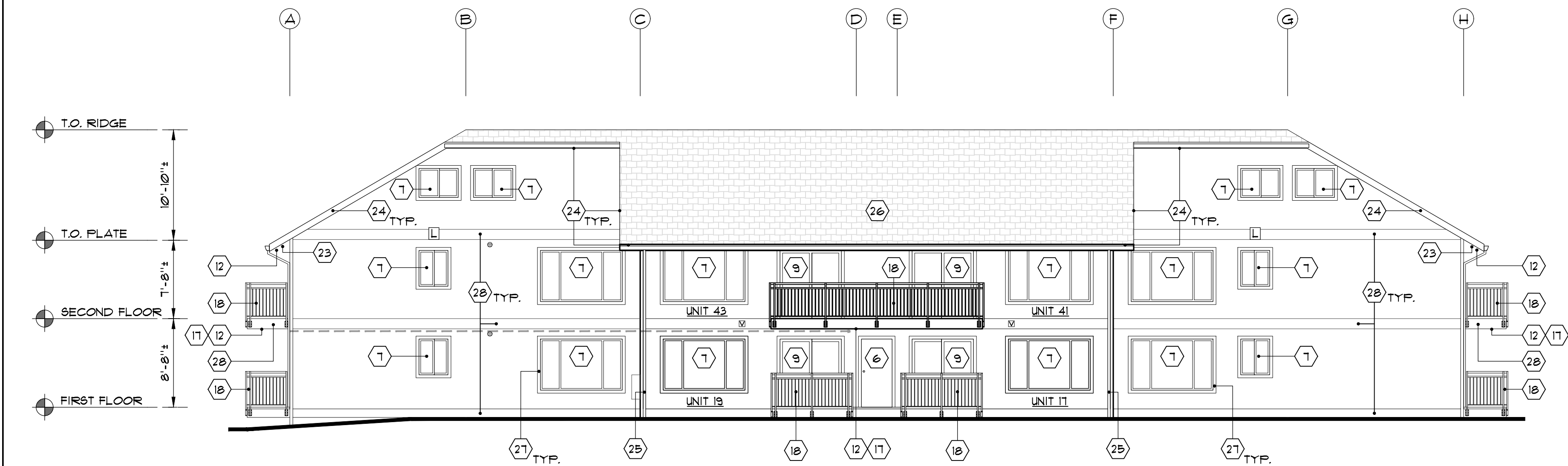
KEYNOTES:

- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. WINDOW, TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

1	2	3	4	6	1	2
5.3	5.3	5.3	5.3	5.3	5.4	5.4
- EXIST. WINDOW TO REMAIN IN PLACE. INSTALL NEW 6" WIDE SAF OVER NAIL FLANGES AFTER SIDING IS REMOVED.



EAST ELEVATION
SCALE: 1/8" = 1'-0"



NORTH ELEVATION
SCALE: 1/8" = 1'-0"

LEGEND:

- EXIST. WALL LIGHT. TEMPORARILY REMOVE AND STORE FOR RE-USE AS REQ'D TO PERFORM WORK. RE-INSTALL AFTER SIDING IS INSTALLED.
- EXIST. INTAKE VENT COVER. REMOVE AND REPLACE WITH A SCREENED VENT HOOD. REF.

1	2	3	4
5.1	5.1	5.1	5.1
- ⊠ EXIST. VENT HOOD. REMOVE AND REPLACE. REF.

1	2	3	4
5.1	5.1	5.1	5.1
- EXIST. SURFACE MOUNTED CONDUIT TO BE REMOVED. INSTALL NEW WIRING IN WALL CAVITY.

GENERAL NOTES:

- REFERENCE FLOOR PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
- REMOVE AND DISCARD ALL EXISTING SIDING, TRIM, WEATHER-RESISTIVE BARRIER, FLASHINGS, EXHAUST VENTS, CEILING LIGHTING, DECK GUARDRAILS, DOWNSPOUTS, GUTTERS, AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS AROUND THE ENTIRE BUILDING AND IN THE COURTYARD AND STAIRWAYS. THE EXIST. GSB AT THE UNIT ENTRY/STAIR CORRIDORS SHALL REMAIN IN-PLACE.
- TEMPORARILY REMOVE AND STORE THE FOLLOWING FOR RE-INSTALLATION AFTER THE NEW FLASHINGS HAVE BEEN INSTALLED AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS.
 - WINDOWS
 - SLIDING GLASS DOORS
 - SWING DOORS
 - SIGNAGE
 - WALL LIGHTING - (SHALL BE USABLE DURING CONSTRUCTION)
- REVIEW AND IDENTIFY DAMAGED ROOF BARGE AND FASCIA TRIM, REMOVE AND REPLACE IN-KIND.
- AFTER THE SIDING, TRIM AND WEATHER-RESISTIVE BARRIER IS REMOVED, REVIEW THE EXISTING GYPSUM SHEATHING BOARD (GSB) FOR DAMAGE. REMOVE AND REPLACE IN-KIND.
- WHERE THE SHEATHING IS REMOVED, REVIEW THE FRAMING AND INSULATION FOR DAMAGE. REMOVE AND REPLACE IN-KIND.
- FOR TYPICAL SIDING INSTALLATION REF. DETAILS

1	2	3	4	5	6	7	10	11	12
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
- FOR TYPICAL WINDOW INSTALLATION REF. DETAILS

1	2	3	4	5	6	1	2
5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
- FOR TYPICAL SLIDING GLASS DOORS INSTALLATION REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- FOR TYPICAL VENT HOOD INSTALLATION REF. DETAILS

1	2	3	4
5.1	5.1	5.1	5.1
- FOR TYPICAL PIPE PENETRATIONS REF. DETAILS

1	3
5.2	5.2
- FOR TYPICAL OUTLETS AND LIGHT PENETRATIONS REF. DETAILS

2	4
5.2	5.2

KEYNOTES:

- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. DOOR TO BE REMOVED AND RE-USED IF POSSIBLE, OR REPLACED IF DAMAGED TO INSTALL NEW FLASHINGS AND DOOR TRIM, REF. DETAILS

1	2	3	4
5.5	5.5	5.5	5.5
- EXIST. WINDOW. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

1	2	3	4	6	1	2
5.3	5.3	5.3	5.3	5.3	5.4	5.4
- NOT REFERENCED.
- EXIST. SLIDING GLASS DOOR. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- NOT REFERENCED.
- NOT REFERENCED.
- REMOVE AND REPLACE CEILING LIGHTING FIXTURE, REF. MATERIAL SPECIFICATIONS ON SHEET 11.
- NOT REFERENCED.
- EXIST. WOOD STAIR AND LANDING. REMOVE AND REPLACE IN-KIND WITH NEW FLASHINGS, F.T. STRINGERS, TREADS, GUARDRAIL, HANDRAIL, COMPOSITE DECKING, AND NOSING TAPE.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. DECK SOFFIT ABOVE. REMOVE SOFFIT TO REVIEW FRAMING FOR DECAY. REPAIR OR REPLACE DECAYED FRAMING AND INSTALL NEW GUARDRAIL BLOCKING, REF. SHEET 6.0 AND DETAIL

1
5.8

 INSTALL NEW GYPSUM AND HARDIEPANEL SOFFIT.
- NOT REFERENCED.
- EXIST. WOOD FRAMED GUARDRAIL. REMOVE GUARDRAIL AND INSTALL NEW PREFABRICATED FACE MOUNTED GUARDRAIL, REF. SHEET 6.0 AND DETAIL

1
5.8
- PROVIDE PREFABRICATED HANDRAIL, REF. HANDRAIL SPECS ON SHEET 11.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. ROOF SOFFIT ABOVE. REMOVE EXIST. SOFFIT AND REVIEW CAVITY OF EVIDENCE OF WATER DAMAGE. NOTIFY PACIFIC ENGINEERING TECHNOLOGIES IF DAMAGE IS PRESENT. REPLACE SOFFIT WITH 5/8" GYPSUM SOFFIT SHEATHING AND REF. DETAILS

1	2
5.1	5.1
- EXIST. CEILING SOFFIT ABOVE. REPAIR OR REPLACE EXIST. GYPSUM CEILING, TAPE, MUD, SAND ALL JOINTS TO PROVIDE SMOOTH SURFACE. PREPARE AND PAINT.
- EXIST. FASCIA AND BARGE BOARD. REVIEW FOR DAMAGE AND REMOVE AND REPLACE IN-KIND AS REQUIRED. REMOVE AND REPLACE EXIST. GUTTER WHERE FASCIA AND BARGE BOARD IS REQUIRED. REF. DETAILS

1	2
5.1	5.1
- EXIST. DOWNSPOUT TO BE REMOVED AND REPLACED.
- EXISTING ROOFING TO REMAIN.
- 1x4 HARDIETRIM AROUND WINDOWS, SLIDING GLASS DOORS AND SWING DOORS. SHIM AS REQUIRED TO BE FLUSH WITH ADJACENT TRIM, TYP.

8	1
5.0	5.8
- 1x12 HARDIETRIM BELLY BANDS AND DECK FASCIA, TYP. REF.

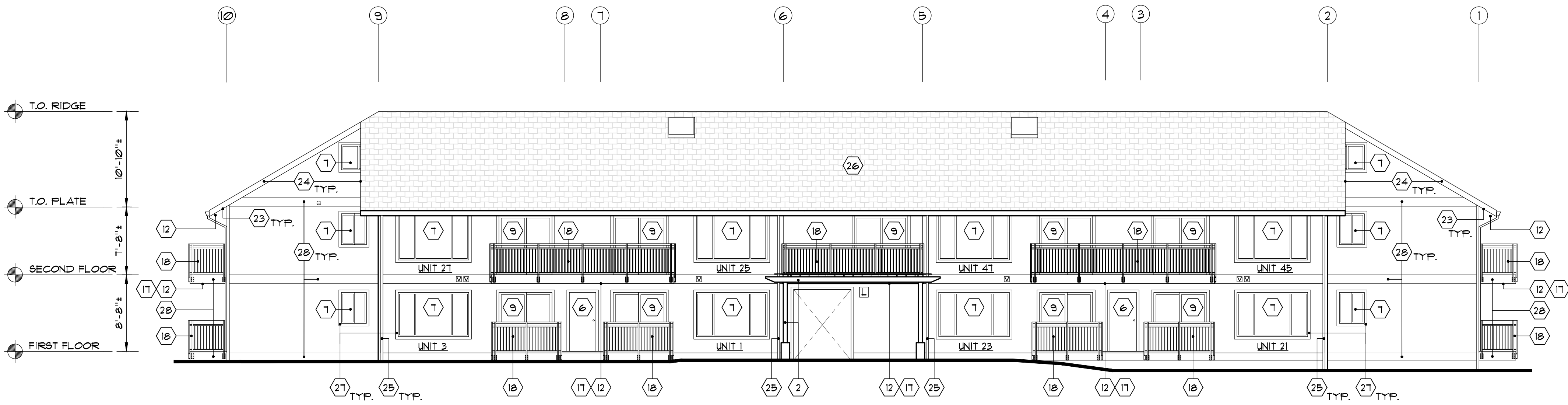
8	1
5.0	5.8
- EXIST. CABLE BOX. REF. DETAILS

5	6	7	8
5.1	5.1	5.1	5.1

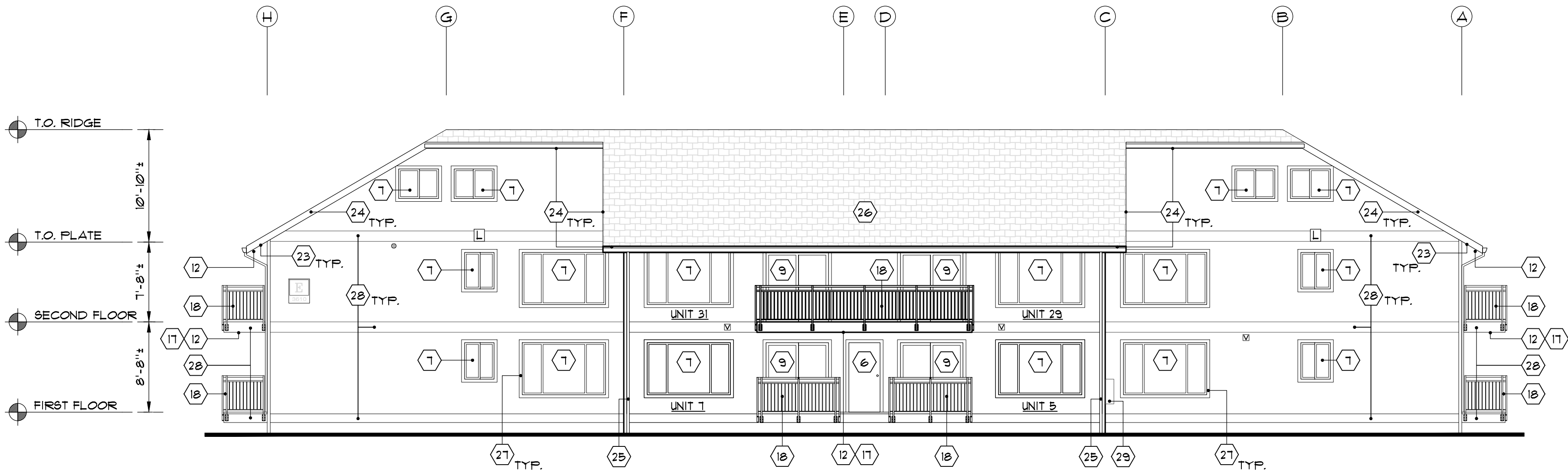
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WEST ELEVATION
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

LEGEND:

- EXIST. WALL LIGHT. TEMPORARILY REMOVE AND STORE FOR RE-USE AS REQ'D TO PERFORM WORK. RE-INSTALL AFTER SIDING IS INSTALLED.
- ⊗ EXIST. INTAKE VENT COVER. REMOVE AND REPLACE WITH A SCREENED VENT HOOD. REF.

1	2	3	4
5.1	5.1	5.1	5.1
- ⊗ EXIST. VENT HOOD. REMOVE AND REPLACE. REF.

1	2	3	4
5.1	5.1	5.1	5.1

GENERAL NOTES:

- REFERENCE FLOOR PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
- REMOVE AND DISCARD ALL EXISTING SIDING, TRIM, WEATHER-RESISTIVE BARRIER, FLASHINGS, EXHAUST VENTS, CEILING LIGHTING, DECK GUARDRAILS, DOWNSPOUTS, GUTTERS, AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS AROUND THE ENTIRE BUILDING AND IN THE COURTYARD AND STAIRWAYS. THE EXIST. GSB AT THE UNIT ENTRY/STAIR CORRIDORS SHALL REMAIN IN-PLACE.
- TEMPORARILY REMOVE AND STORE THE FOLLOWING FOR RE-INSTALLATION AFTER THE NEW FLASHINGS HAVE BEEN INSTALLED AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS.
 - WINDOWS
 - SLIDING GLASS DOORS
 - SWING DOORS
 - SIGNAGE
 - WALL LIGHTING - (SHALL BE USABLE DURING CONSTRUCTION)
- REVIEW AND IDENTIFY DAMAGED ROOF BARGE AND FASCIA TRIM, REMOVE AND REPLACE IN-KIND.
- AFTER THE SIDING, TRIM AND WEATHER-RESISTIVE BARRIER IS REMOVED, REVIEW THE EXISTING GYPSUM SHEATHING BOARD (GSB) FOR DAMAGE. REMOVE AND REPLACE IN-KIND.
- WHERE THE SHEATHING IS REMOVED, REVIEW THE FRAMING AND INSULATION FOR DAMAGE. REMOVE AND REPLACE IN-KIND.
- FOR TYPICAL SIDING INSTALLATION REF. DETAILS

1	2	3	4	5	6	7	10	11	12
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
- FOR TYPICAL WINDOW INSTALLATION REF. DETAILS

1	2	3	4	5	6	1	2
5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
- FOR TYPICAL SLIDING GLASS DOORS INSTALLATION REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- FOR TYPICAL VENT HOOD INSTALLATION REF. DETAILS

1	2	3	4
5.1	5.1	5.1	5.1
- FOR TYPICAL PIPE PENETRATIONS REF. DETAILS

1	3
5.2	5.2
- FOR TYPICAL OUTLETS AND LIGHT PENETRATIONS REF. DETAILS

2	4
5.2	5.2

KEYNOTES:

- NOT REFERENCED.
- EXIST. TRELLIS. REMOVE AND REPLACE TRELLIS AND COLUMN TRIM IN-KIND. CLEAN, PREPARE AND STAIN AND/OR PAINT.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. DOOR TO BE REMOVED AND RE-USED IF POSSIBLE, OR REPLACED IF DAMAGED TO INSTALL NEW FLASHINGS AND DOOR TRIM. REF. DETAILS

1	2	3	4
5.5	5.5	5.5	5.5
- EXIST. WINDOW. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

1	2	3	4	6	1	2
5.3	5.3	5.3	5.3	5.3	5.4	5.4
- NOT REFERENCED.
- EXIST. SLIDING GLASS DOOR. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- NOT REFERENCED.
- NOT REFERENCED.
- REMOVE AND REPLACE CEILING LIGHTING FIXTURE, REF. MATERIAL SPECIFICATIONS ON SHEET 11.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. DECK SOFFIT ABOVE. REMOVE SOFFIT TO REVIEW FRAMING FOR DECAY. REPAIR OR REPLACE DECAYED FRAMING AND INSTALL NEW GUARDRAIL BLOCKING. REF. SHEET 6.0 AND DETAIL

1
5.8
- NOT REFERENCED.
- EXIST. WOOD FRAMED GUARDRAIL. REMOVE GUARDRAIL AND INSTALL NEW PREFABRICATED FACE MOUNTED GUARDRAIL. REF. SHEET 6.0 AND DETAIL

1
5.8
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. ROOF SOFFIT ABOVE. REMOVE EXIST. SOFFIT AND REVIEW CAVITY OF EVIDENCE OF WATER DAMAGE. NOTIFY PACIFIC ENGINEERING TECHNOLOGIES IF DAMAGE IS PRESENT. REPLACE SOFFIT WITH 5/8" GYPSUM SOFFIT SHEATHING AND REF. DETAILS

1	2
5.1	5.1
- NOT REFERENCED.
- EXIST. FASCIA AND BARGE BOARD. REVIEW FOR DAMAGE AND REMOVE AND REPLACE IN-KIND AS REQUIRED. REMOVE AND REPLACE EXIST. GUTTER WHERE FASCIA AND BARGE BOARD IS REQUIRED. REF. DETAILS

1	2
5.1	5.1
- EXIST. DOWNSPOUT TO BE REMOVED AND REPLACED.
- EXISTING ROOFING TO REMAIN.
- 1x4 HARDIETRIM AROUND WINDOWS, SLIDING GLASS DOORS AND SWING DOORS. SHIM AS REQUIRED TO BE FLUSH WITH ADJACENT TRIM, TYP.

8	1
5.0	5.0
- 1x12 HARDIETRIM BELLY BANDS AND DECK FASCIA, TYP., REF.

5.0	5.0
-----	-----
- EXIST. CABLE BOX. REF. DETAILS

5	6	7	8
5.1	5.1	5.1	5.1

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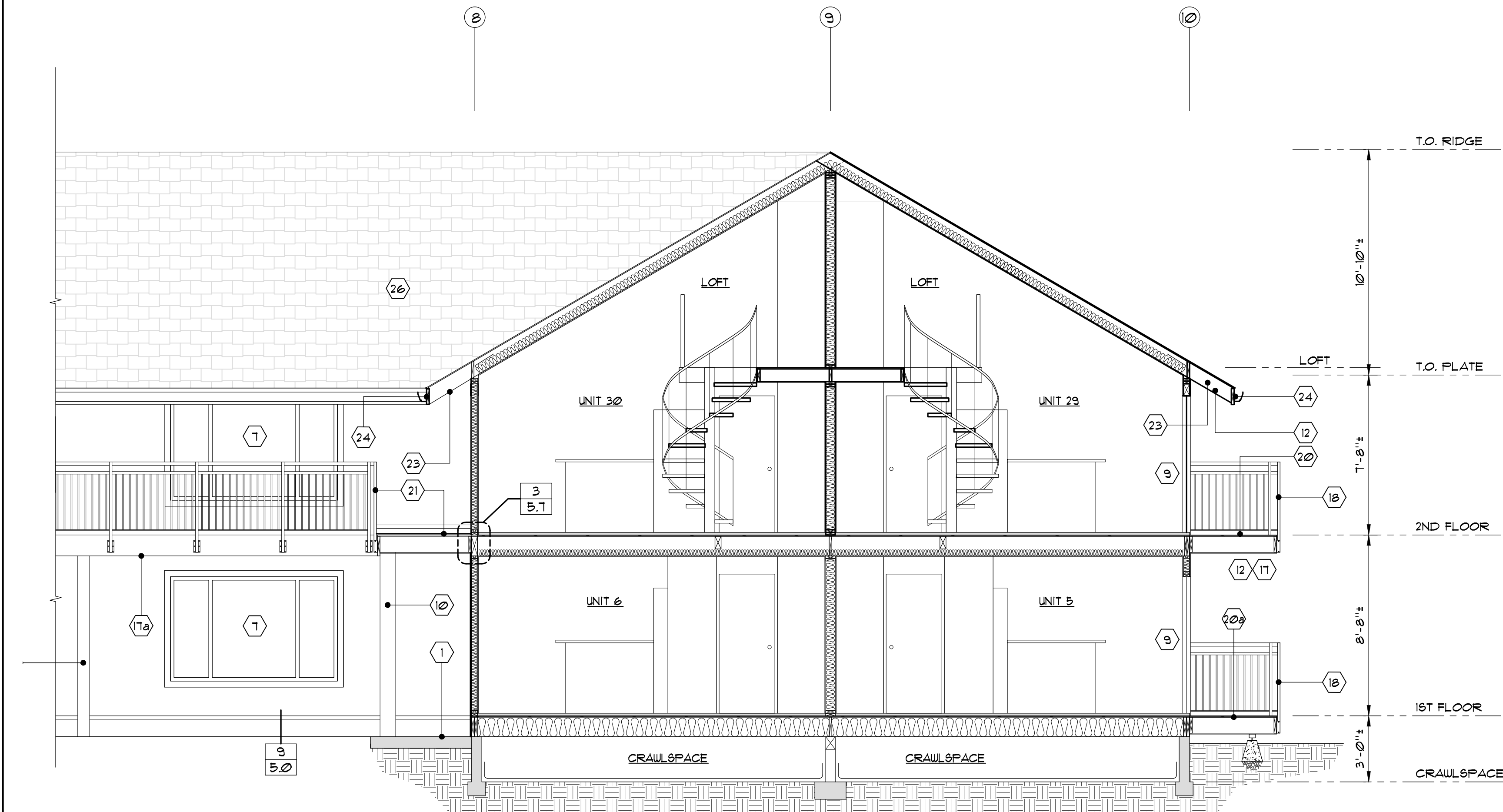
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Revision	No.	Designed	Drawn	Checked	Date	Approved
BID SET		N. FRITZ	RGP	NLF	JUNE 2026	

PACIFIC
ENGINEERING TECHNOLOGIES, INC.
4444 Woodland Park Ave N., Suite 100
Seattle, Washington 98103-7499
(206) 281-7500

Contents	Project	Sheet	Job No.
WEST AND SOUTH ELEVATIONS	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	3.1	26014.00

SEATTLE, WA



BUILDING CROSS SECTION 1
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- REFERENCE FLOOR PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
- REMOVE AND DISCARD ALL EXISTING SIDING, TRIM, WEATHER-RESISTIVE BARRIER, FLASHINGS, EXHAUST VENTS, CEILING LIGHTING, DECK GUARDRAILS, DOWNSPOUTS, GUTTERS, AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS AROUND THE ENTIRE BUILDING AND IN THE COURTYARD AND STAIRWAYS. THE EXIST. G&B AT THE UNIT ENTRY/STAIR CORRIDORS SHALL REMAIN IN-PLACE.
- TEMPORARILY REMOVE AND STORE THE FOLLOWING FOR RE-INSTALLATION AFTER THE NEW FLASHINGS HAVE BEEN INSTALLED AS INDICATED ON THE FLOOR PLANS AND ELEVATIONS.
 - WINDOWS
 - SLIDING GLASS DOORS
 - SLING DOORS
 - SIGNAGE
 - WALL LIGHTING - (SHALL BE USABLE DURING CONSTRUCTION)
- REVIEW AND IDENTIFY DAMAGED ROOF BARGE AND FASCIA TRIM, REMOVE AND REPLACE IN-KIND.
- AFTER THE SIDING, TRIM AND WEATHER-RESISTIVE BARRIER IS REMOVED, REVIEW THE EXISTING GYPSUM SHEATHING BOARD (G&B) FOR DAMAGE. REMOVE AND REPLACE IN-KIND.
- WHERE THE SHEATHING IS REMOVED, REVIEW THE FRAMING AND INSULATION FOR DAMAGE. REMOVE AND REPLACE IN-KIND.

- FOR TYPICAL SIDING INSTALLATION REF. DETAILS

1	2	3	4	5	6	7	10	11	12
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
- FOR TYPICAL WINDOW INSTALLATION REF. DETAILS

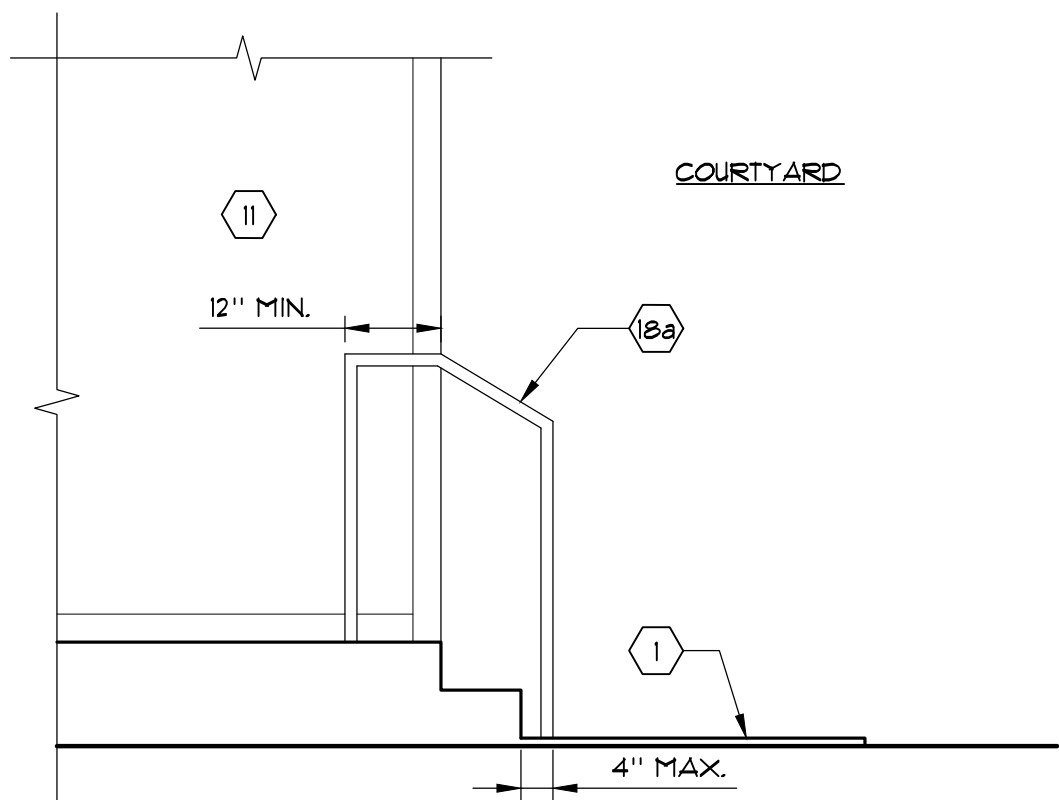
1	2	3	4	5	6	1	2
5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
- FOR TYPICAL SLIDING GLASS DOORS INSTALLATION REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- FOR TYPICAL VENT HOOD INSTALLATION REF. DETAILS

1	2	3	4
5.1	5.1	5.1	5.1
- FOR TYPICAL PIPE PENETRATIONS REF. DETAILS

1	3
5.2	5.2
- FOR TYPICAL OUTLETS AND LIGHT PENETRATIONS REF. DETAILS

2	4
5.2	5.2



**PARTIAL FIRST FLOOR
UNIT CORRIDOR PROFILE** 2
SCALE: 1/2" = 1'-0"

NOTE:
FOR ADDITIONAL HANDRAIL
INFORMATION, REF. HANDRAIL
SPECIFICATIONS ON SHEET 11

KEYNOTES:

- EXIST. CONC. SLAB. REMOVE ADJACENT SIDING TO INSTALL FLASHINGS. REF. DETAILS

1	10
5.0	5.0
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. WINDOW. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

1	2	3	4	6	1	2
5.3	5.3	5.3	5.3	5.3	5.4	5.4
- NOT REFERENCED.
- EXIST. SLIDING GLASS DOOR. TEMP. REMOVE TO INSTALL NEW FLASHINGS AND RE-INSTALL AFTER FLASHINGS ARE INSTALLED. REF. DETAILS

5	6	7	8	9	1
5.5	5.5	5.5	5.5	5.5	5.6
- EXIST. COLUMN AND TRIM TO BE REMOVED AND REPLACED. PREP AND PAINT, REF. STRUCTURAL AND DETAILS

3	4
5.1	5.1
- EXIST. CORRIDOR. CLEAN AND PREPARE SURFACE TO INSTALL NEW WATERPROOF MEMBRANE, FLASHINGS, AND BASE TRIM AT WALL TRANSITIONS. REF. DETAILS

5	6
5.0	5.0

 SIM.
- WHERE G&B IS PRESENT, PATCH, SAND AND TEXTURE EXIST. WALL AND CEILING GYPSUM SHEATHING, SEAL PENETRATIONS AND AROUND DOORS, CLEAN AND PREPARE FOR PAINT. WHERE SIDING IS PRESENT, REMOVE AND REPLACE SIDING TO INSTALL WRB AND FLASHINGS.
- REMOVE AND REPLACE CEILING LIGHTING FIXTURE, REF. MATERIAL SPECIFICATIONS ON SHEET 11.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- NOT REFERENCED.
- EXIST. DECK SOFFIT ABOVE. REMOVE SOFFIT TO REVIEW FRAMING FOR DECAY. REPAIR OR REPLACE DECAYED FRAMING AND INSTALL NEW GUARDRAIL BLOCKING, REF. SHEET 6.0 AND DETAIL

1
5.2
- EXIST. WALKWAY SOFFIT TO BE REMOVED, PROVIDE BATT INSULATION IN CAVITY AND SOLID BLOCKING AT ALL EXHAUST VENTS THROUGH FLOOR FRAMING. INSTALL 3M FIRE BARRIER SEALANT AROUND DUCT PENETRATIONS. ADJUST/EXTEND DUCT AS REQUIRED AND PROVIDE SOFFIT VENT HOOD WITH FLAPPER.
- EXIST. WOOD FRAMED GUARDRAIL. REMOVE GUARDRAIL AND INSTALL NEW PREFABRICATED FACE MOUNTED GUARDRAIL, REF. SHEET 6.0 AND DETAIL

1
5.2
- PROVIDE PREFABRICATED HANDRAIL, REF. HANDRAIL SPECS ON SHEET 11.
- NOT REFERENCED.
- EXIST. DECK. REMOVE EXIST. CONC. TOPPING (WHERE PRESENT) AND PLYWOOD SHEATHING. MODIFY FRAMING TO PROVIDE 1/4" PER FOOT SLOPE AWAY FROM BUILDING. INSTALL NEW PLYWOOD SHEATHING, FLASHINGS AND WATERPROOF MEMBRANE. REF. DETAILS

1	1	2	4	5	1
5.5	5.2	5.2	5.2	5.2	5.3
- EXIST. DECK. REMOVE EXIST. WATERPROOF MEMBRANE, CONC. TOPPING (WHERE PRESENT), AND PLYWOOD SHEATHING. MODIFY FRAMING TO PROVIDE 1/4" PER FOOT SLOPE AWAY FROM BUILDING. INSTALL NEW FLASHINGS, PLYWOOD SHEATHING, AND WATERPROOF MEMBRANE. REF. DETAILS

1	1	2	4	5	1
5.5	5.2	5.2	5.2	5.2	5.3
- WHEN DIRECTED BY OWNER OR PACIFIC, PERFORM REPAIR PER SHEETS 52A AND/OR 52B
- NOT REFERENCED.
- EXIST. ELEVATED WALKWAY AND GUARDRAIL TO BE REMOVED. CONSTRUCT NEW WALKWAY PER SHEET 53 AND SLOPE 1/4" PER FOOT AWAY FROM BUILDING. INSTALL NEW FLASHINGS, WATERPROOF MEMBRANE, AND GUARDRAIL, REF. SHEET 51.0, AND DETAILS

3	6	5
5.2	5.2	5.3
- NOT REFERENCED.
- EXIST. ROOF SOFFIT ABOVE. REMOVE EXIST. SOFFIT AND REVIEW CAVITY OF EVIDENCE OF WATER DAMAGE. NOTIFY PACIFIC ENGINEERING TECHNOLOGIES IF DAMAGE IS PRESENT. REPLACE SOFFIT WITH 5/8" GYPSUM SOFFIT SHEATHING AND REF. DETAILS

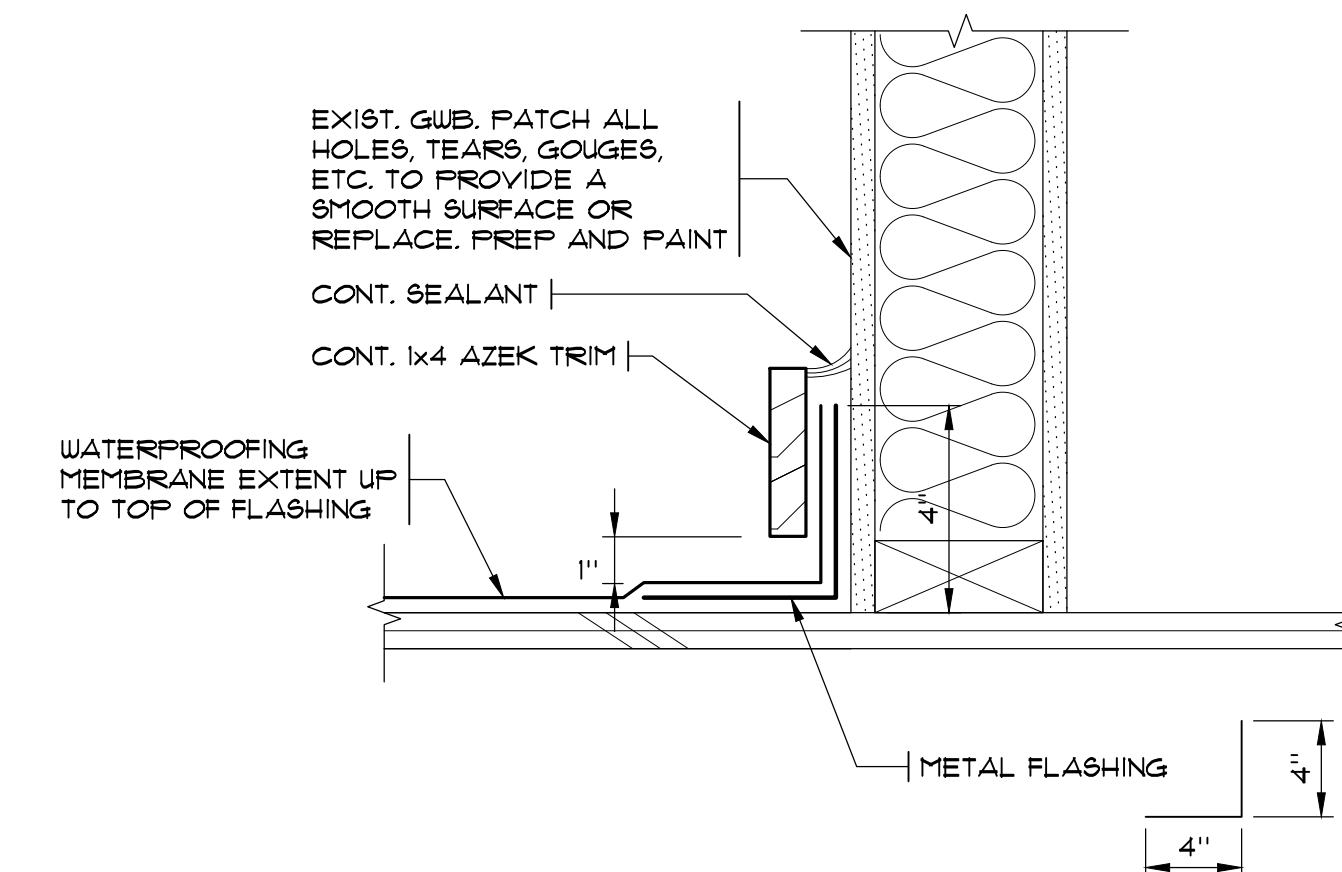
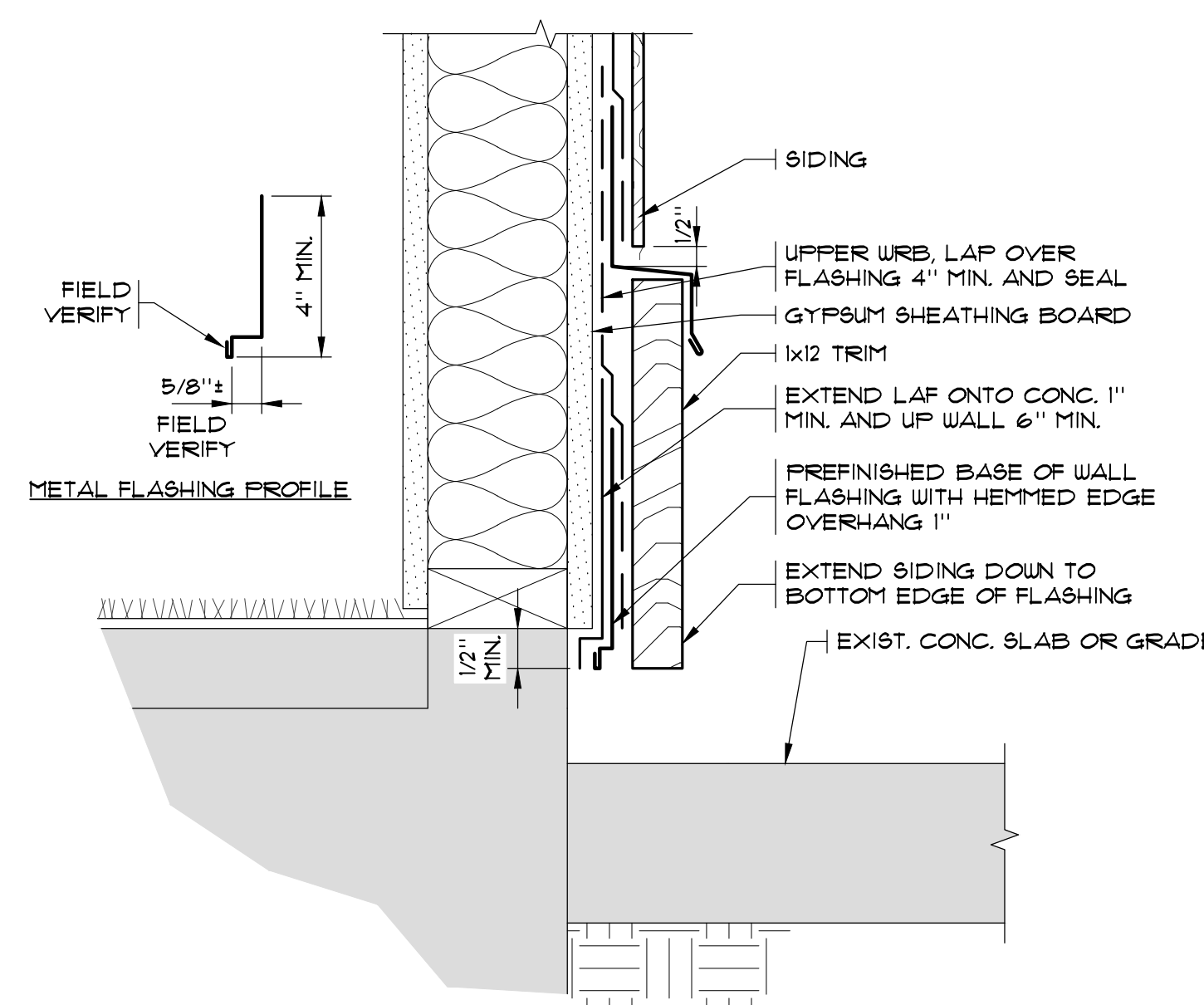
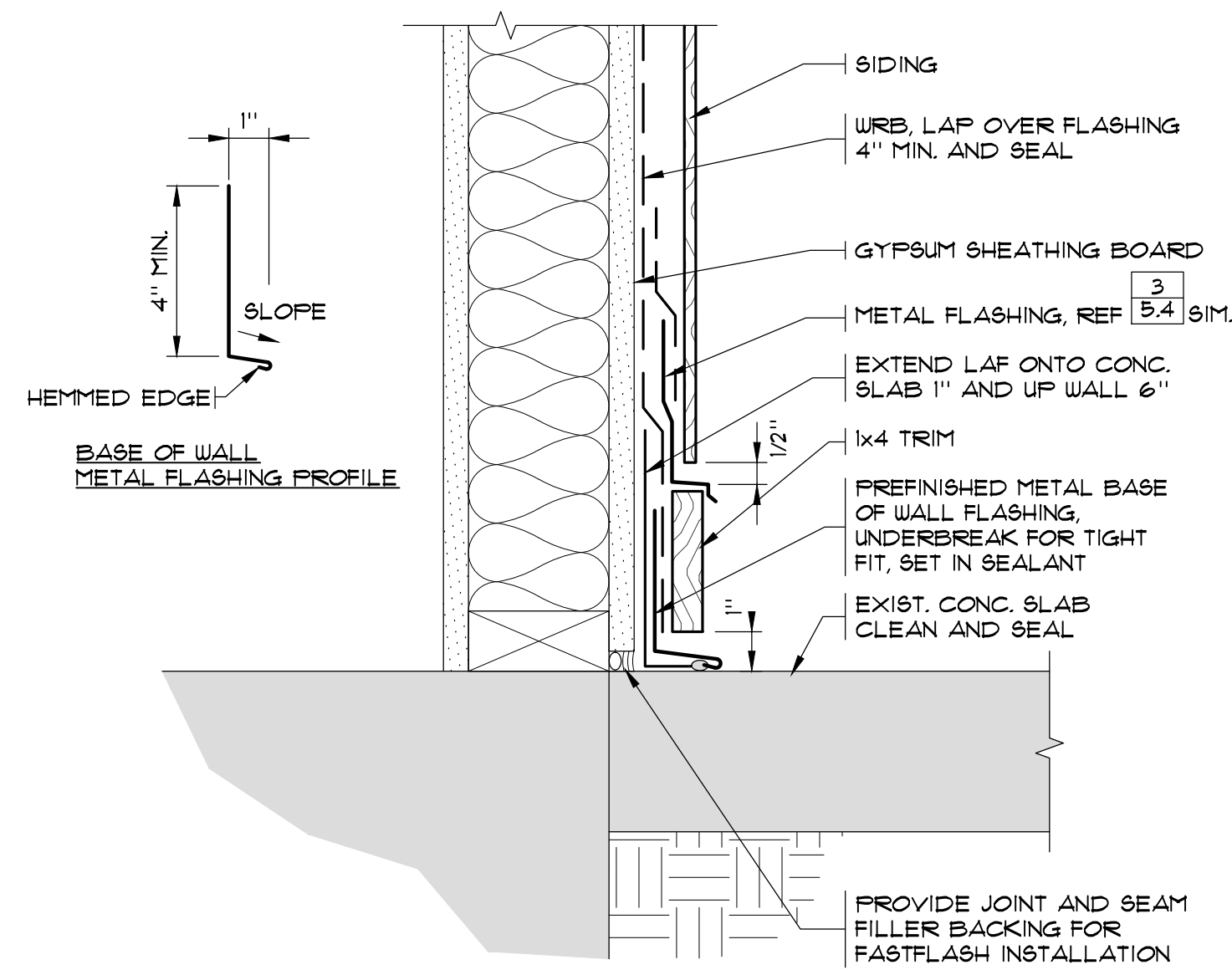
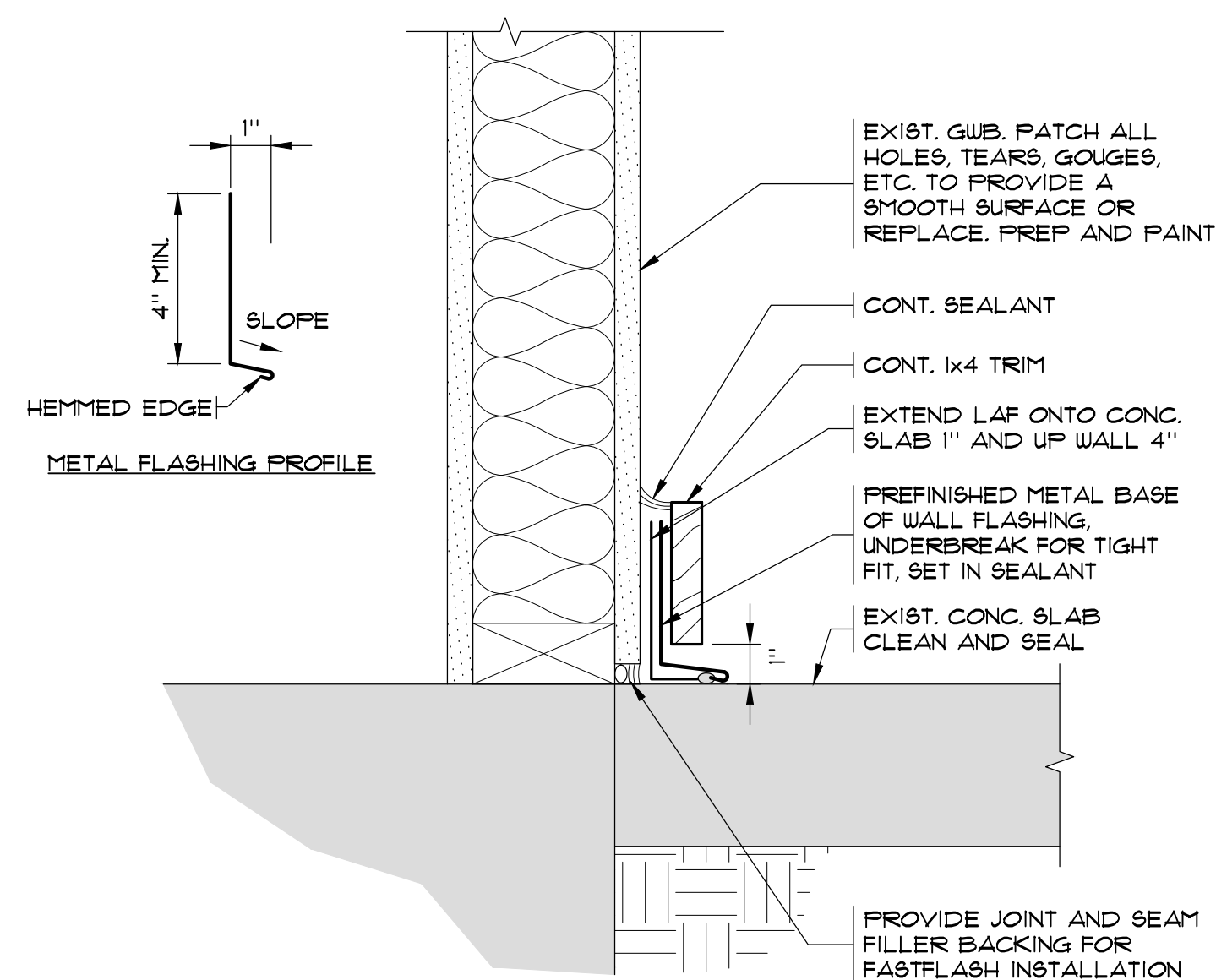
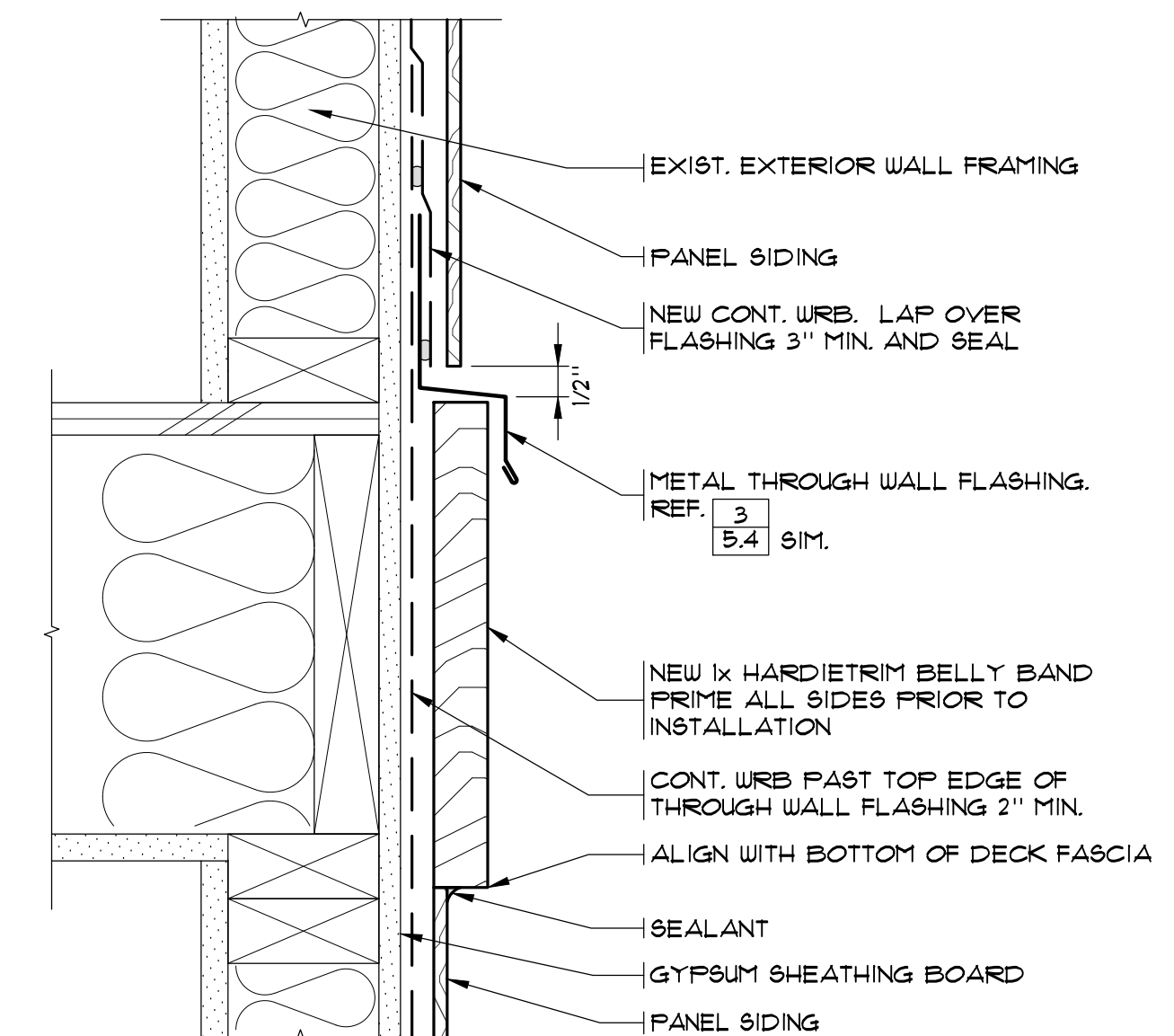
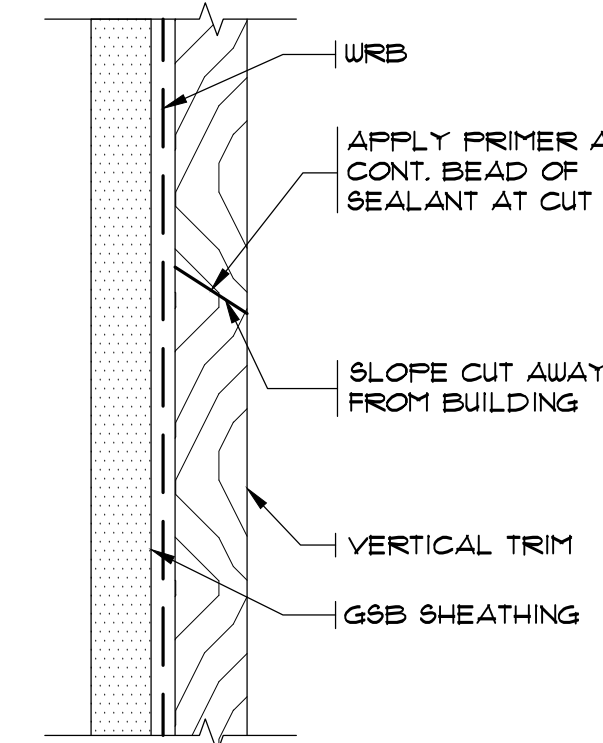
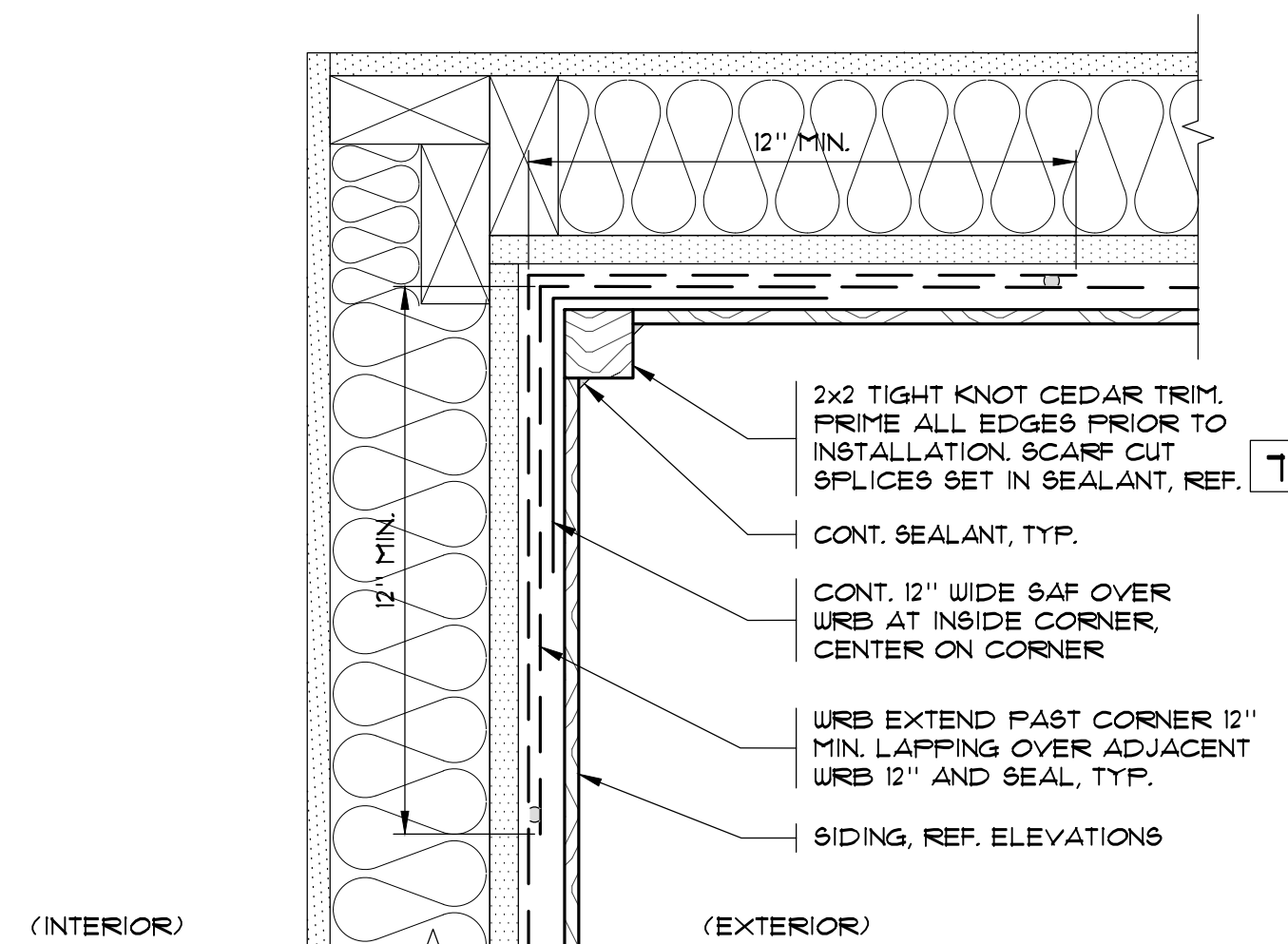
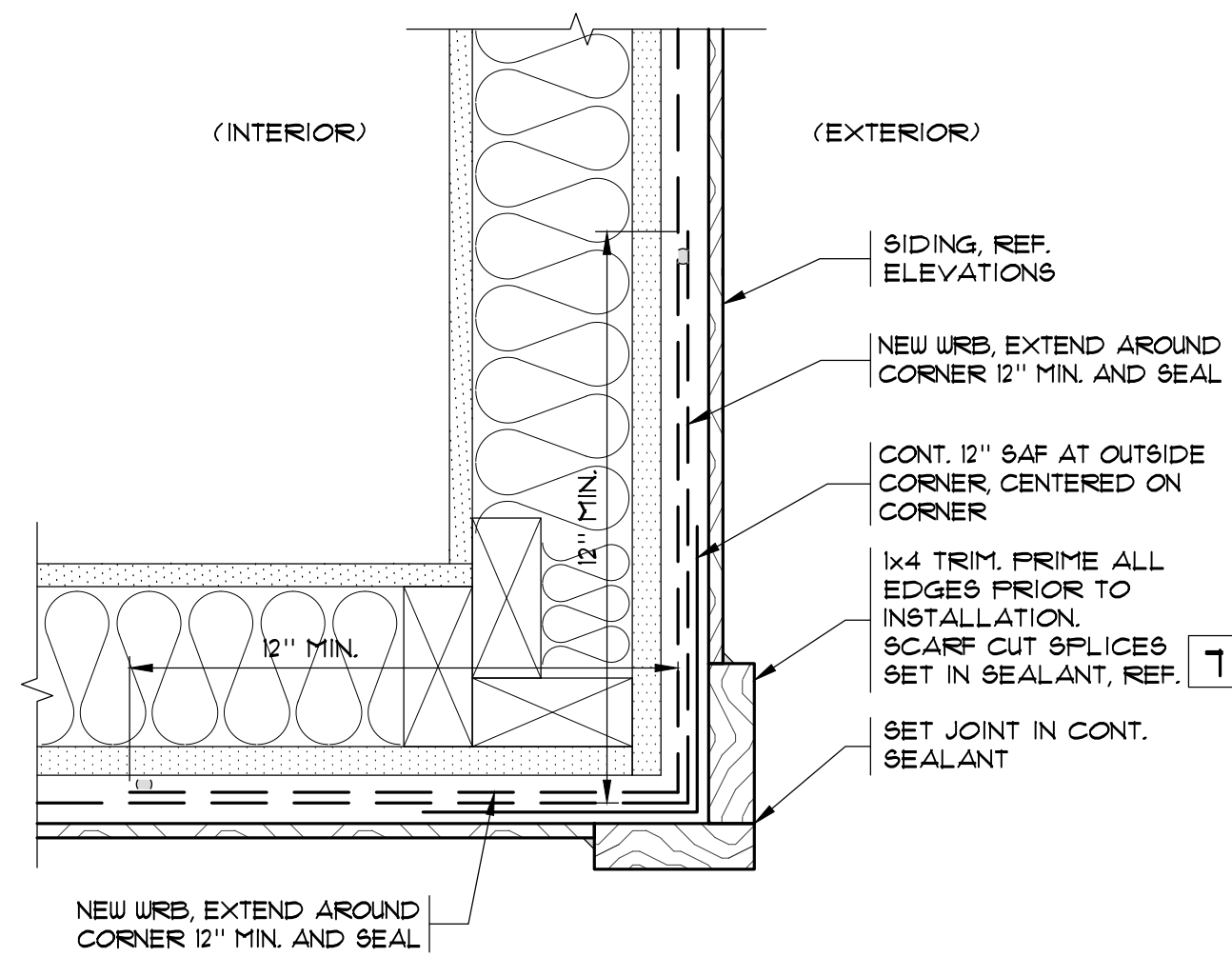
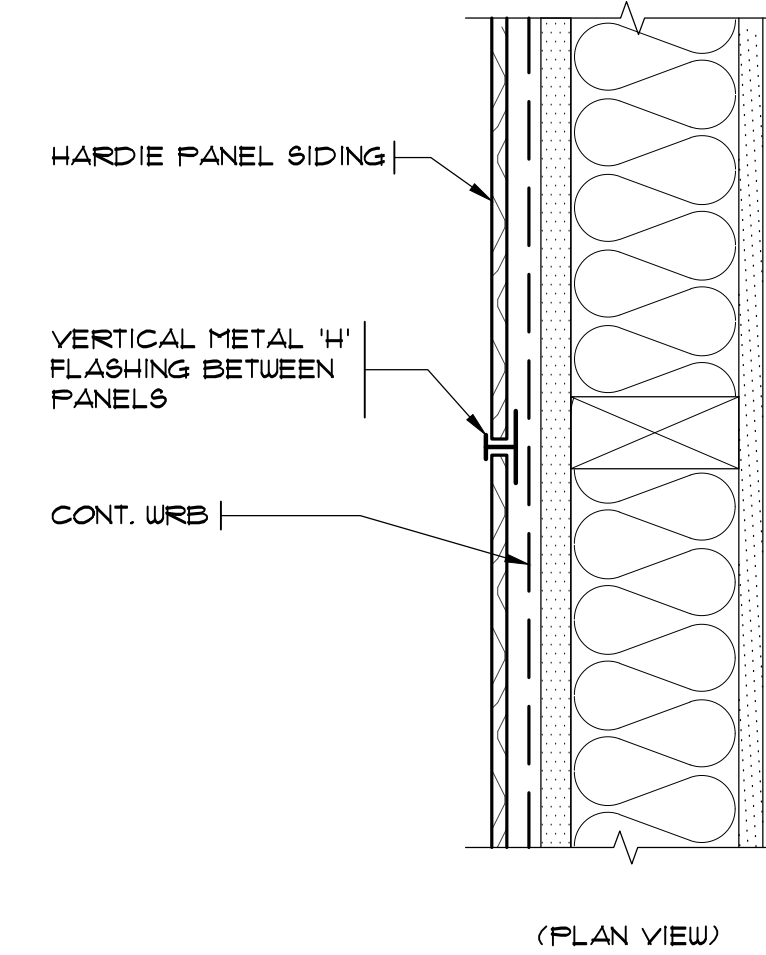
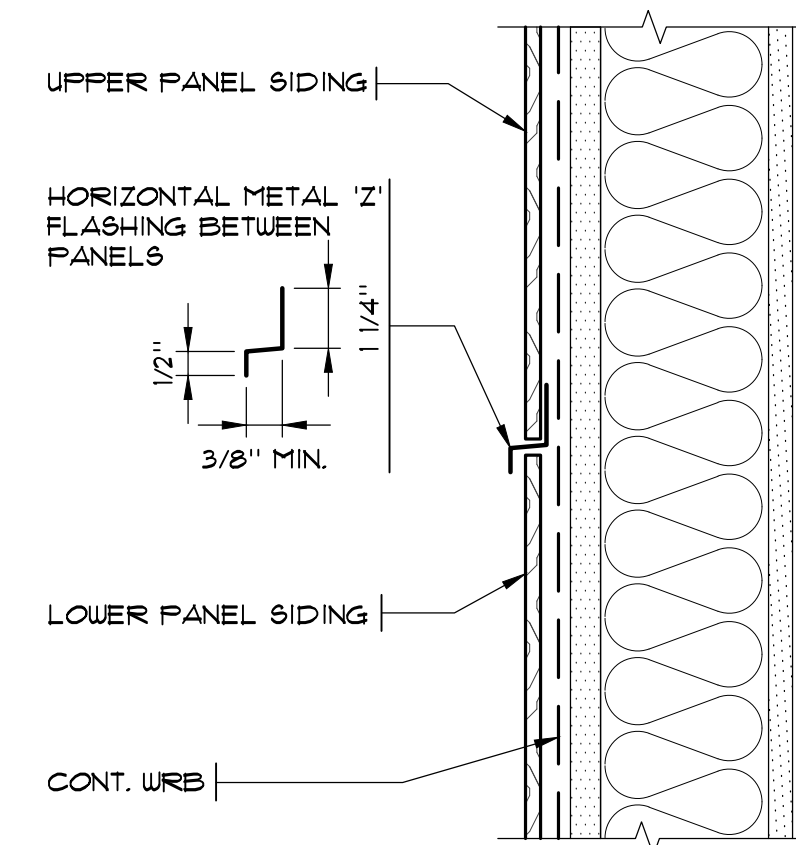
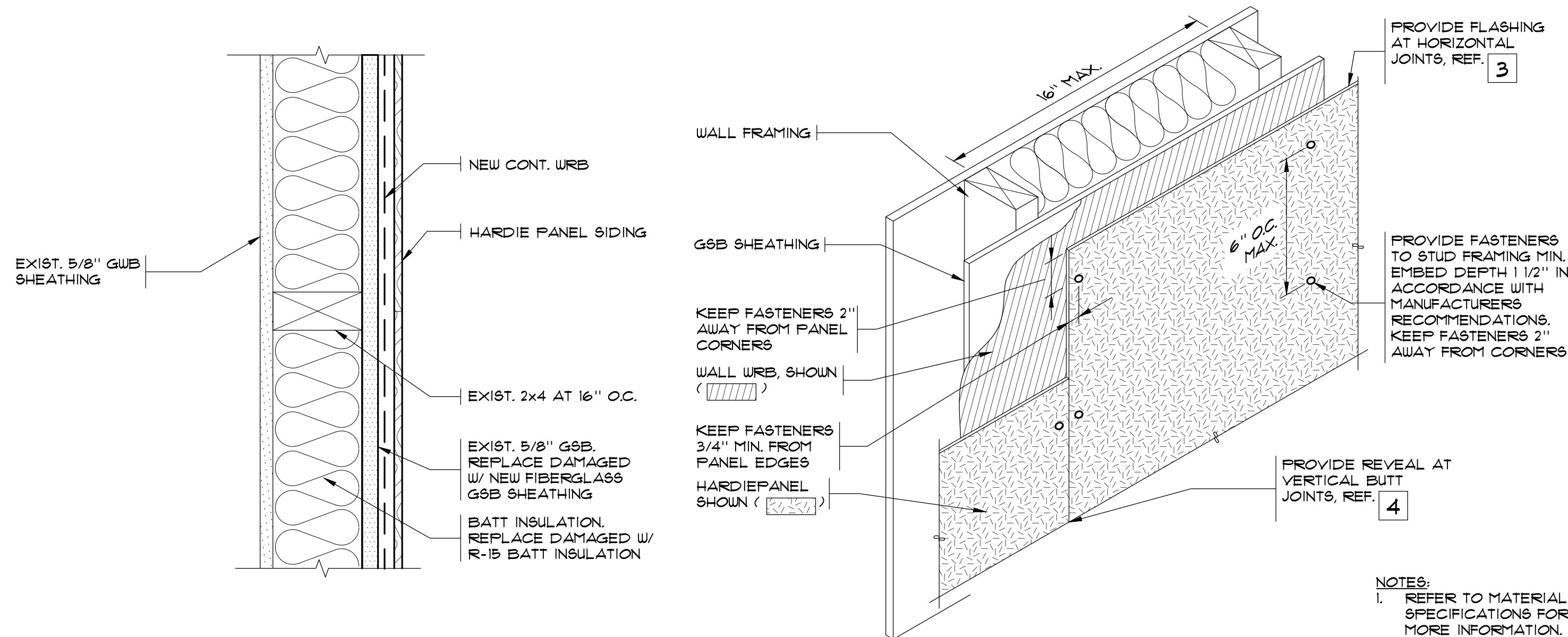
1	2
5.1	5.1
- NOT REFERENCED.
- EXIST. FASCIA AND BARGE BOARD. REVIEW FOR DAMAGE AND REMOVE AND REPLACE IN-KIND AS REQUIRED. REMOVE AND REPLACE EXIST. GUTTER WHERE FASCIA AND BARGE BOARD IS REQUIRED, REF. DETAILS

1	2
5.1	5.1
- NOT REFERENCED.
- EXISTING ROOFING TO REMAIN.

Date					
Revision	BID SET				
No.					
Designed	N. FRITZ	Drawn	RCP	Checked	NLF
Date	JUNE 2026	Date	JUNE 2026	Date	JUNE 2026
Approved		Approved		Approved	

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Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	SEATTLE, WA
Contents	BUILDING CROSS SECTION AND PARTIAL FIRST FLOOR UNIT CORRIDOR PROFILE	
Sheet	4.0	Job No. 26014.00



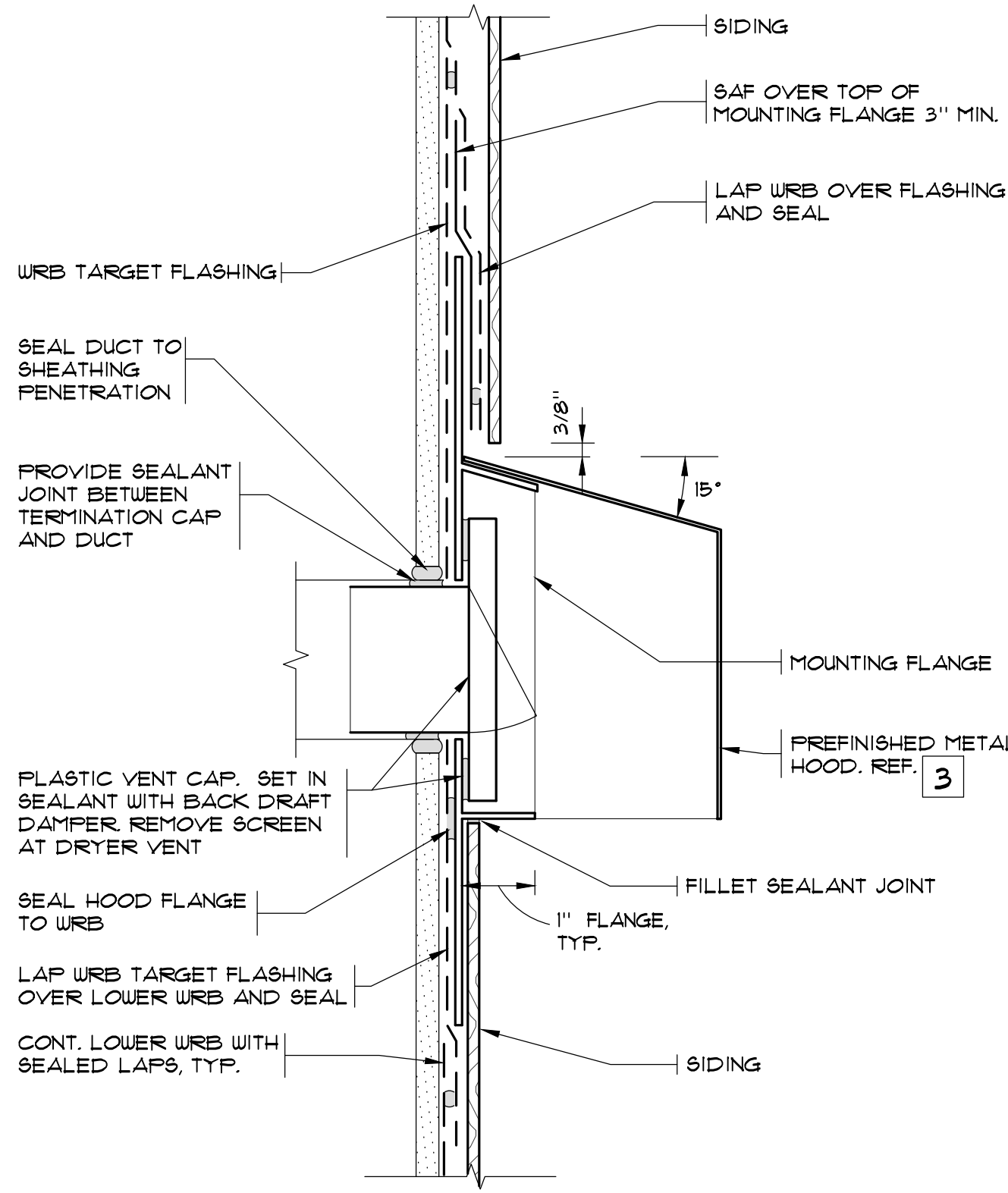
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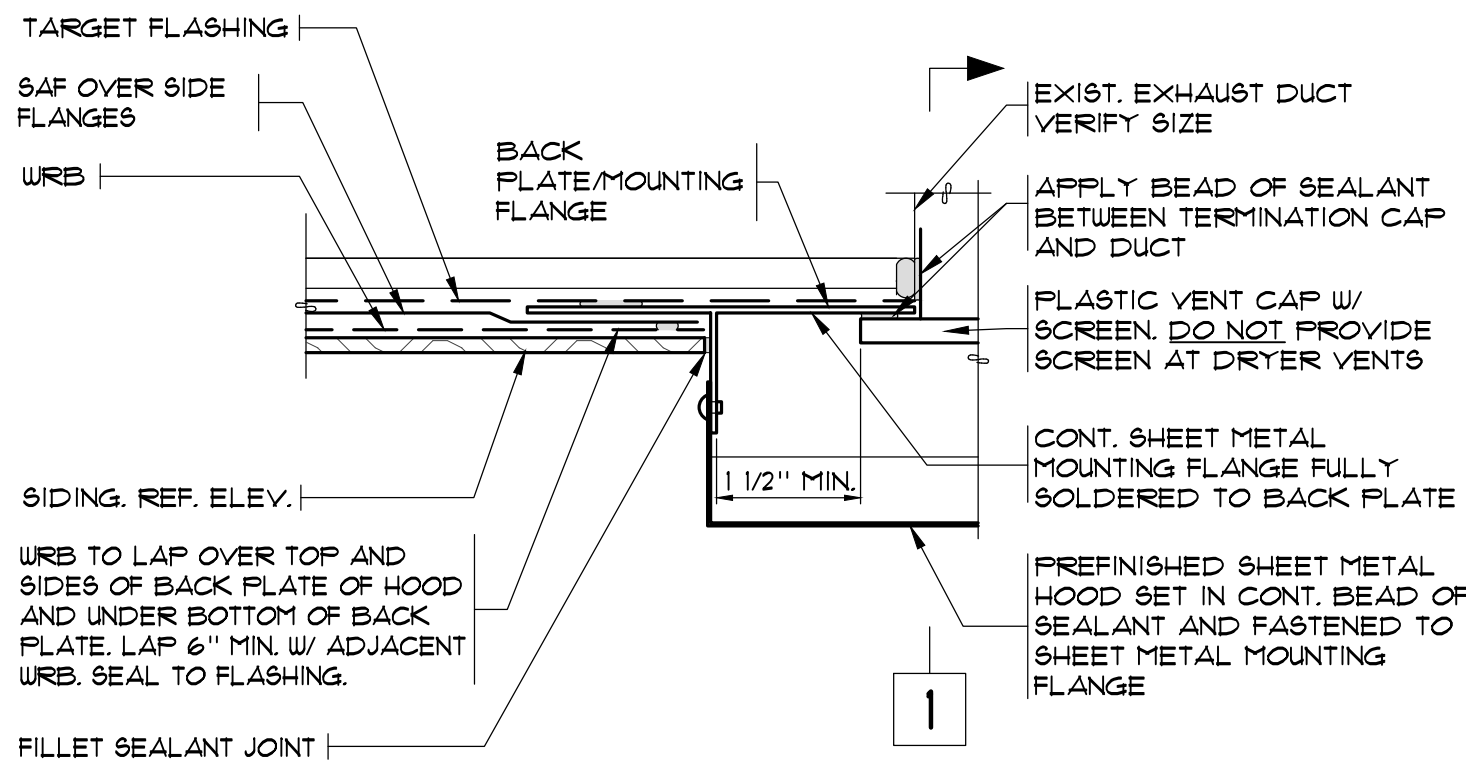
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CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	BID SET		N. FRITZ	RGP	NLF	JUNE 2026	
4444 Woodland Park Ave N., Suite 100 Seattle, Washington 98103-7499							

Project	Contents	Sheet
CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	DETAILS	5.0
3610 S. 180TH ST. SEATTLE, WA		Job No. 26014.00



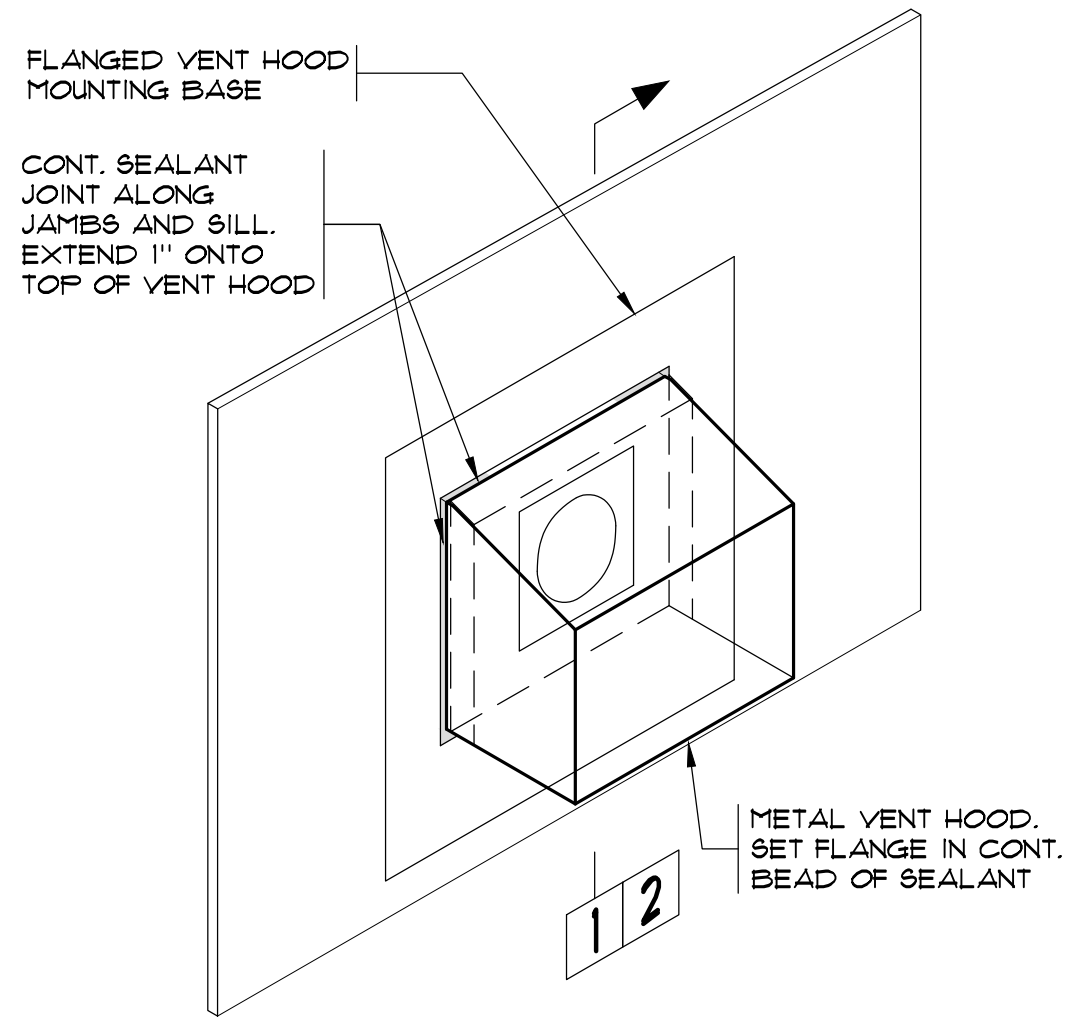
VENT HOOD - SECTION

NOTE:
FOR ADDITIONAL INFORMATION
REF. 2 3 4



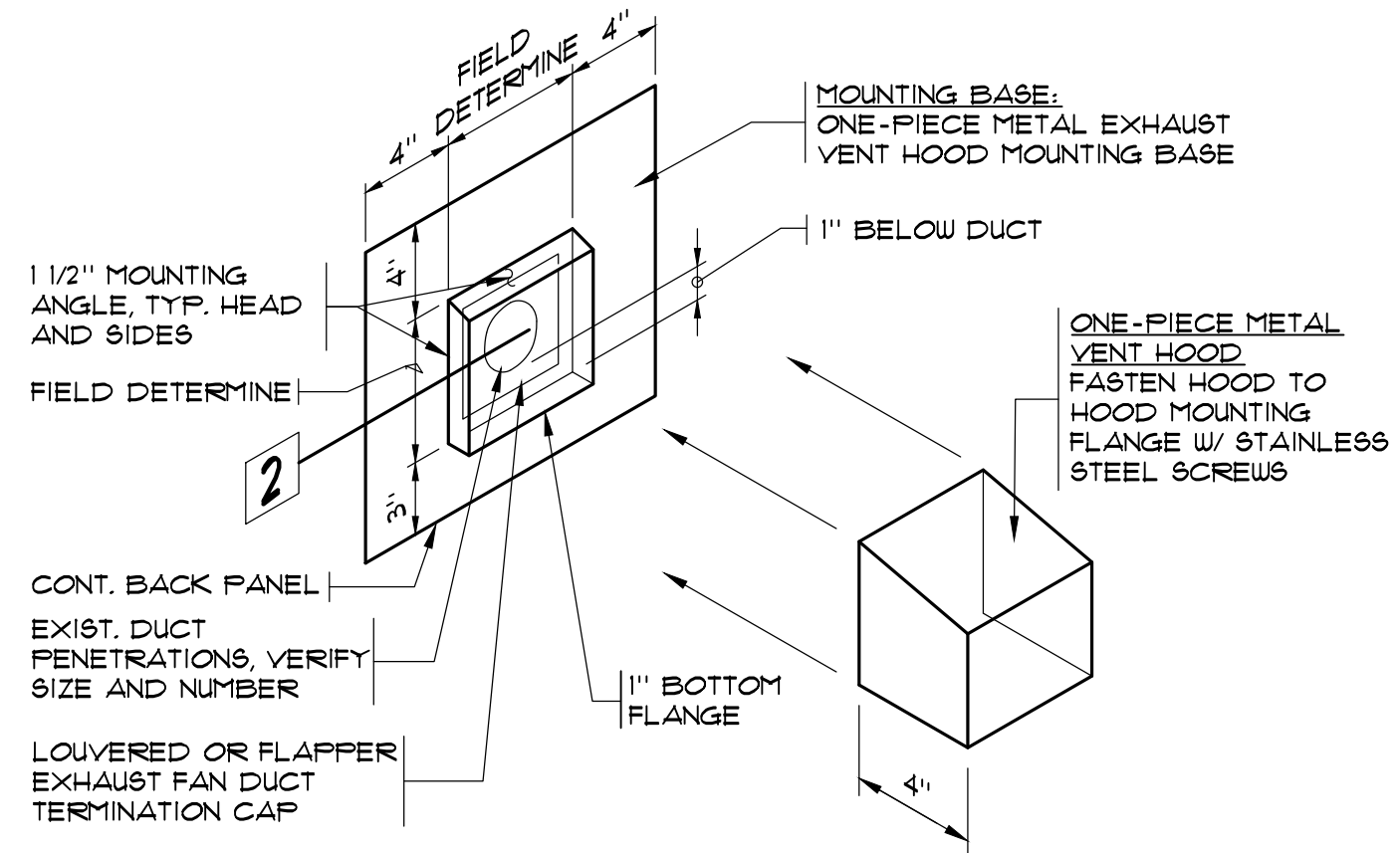
VENT HOOD - PLAN VIEW

NOTE:
FOR ADDITIONAL INFORMATION
REF. 1 3 4

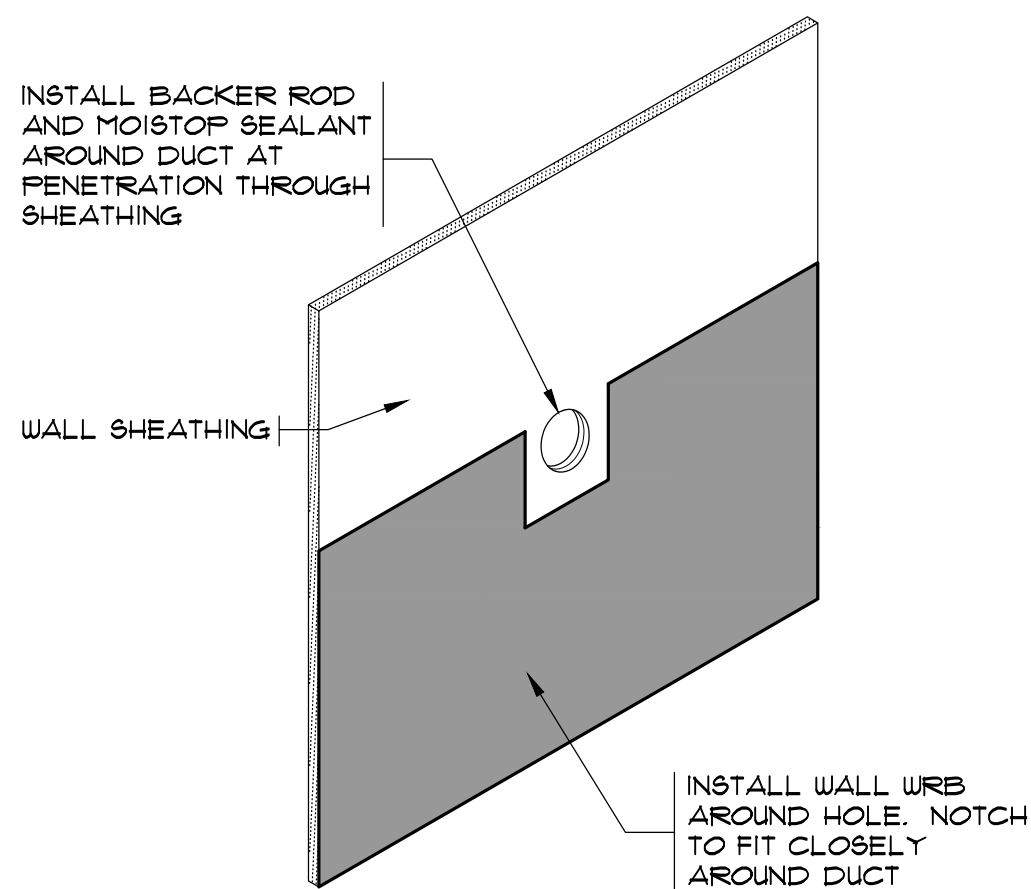


VENT HOOD - ISOMETRIC

SCALE: N.T.S.

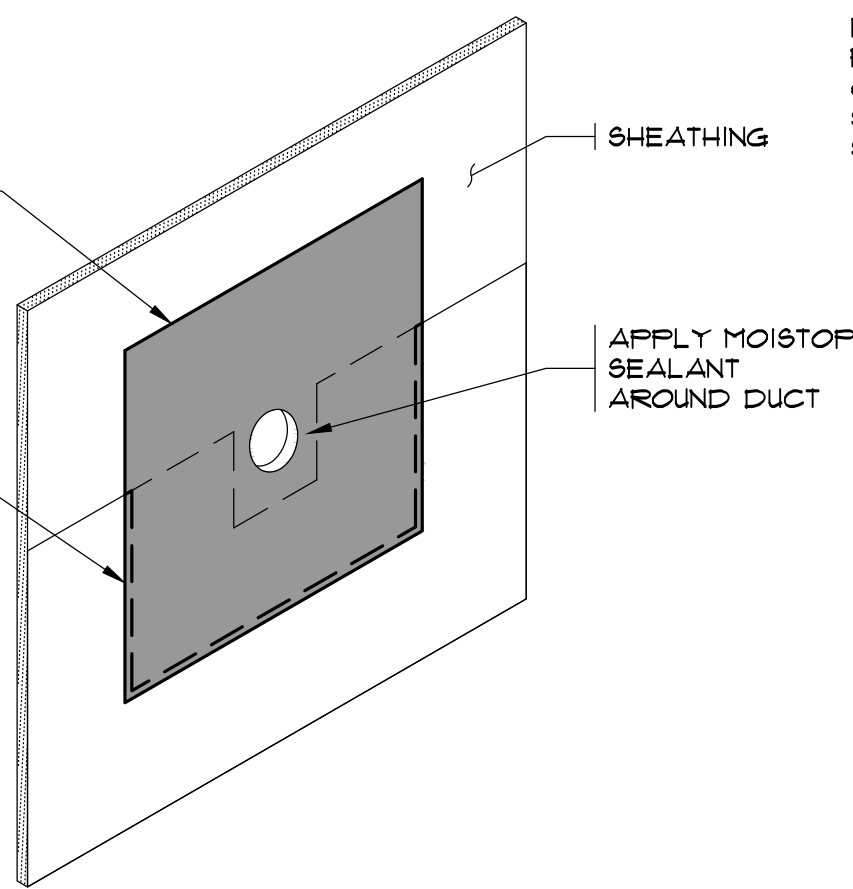


- NOTES:
1. EXTEND VENT HOOD AS REQUIRED FOR MULTIPLE EXHAUST VENTS. PROVIDE VERT. METAL SUPPORT BETWEEN EA. VENT (NOT SHOWN).
 2. FOR ADDITIONAL INFORMATION REF. 1 2 4
 3. AT INSIDE CORNER MODIFY JAMB FLANGES TO EXTEND ONTO ADJACENT WALL SURFACE 4\"/>
 4. SOLDER ALL SEAMS

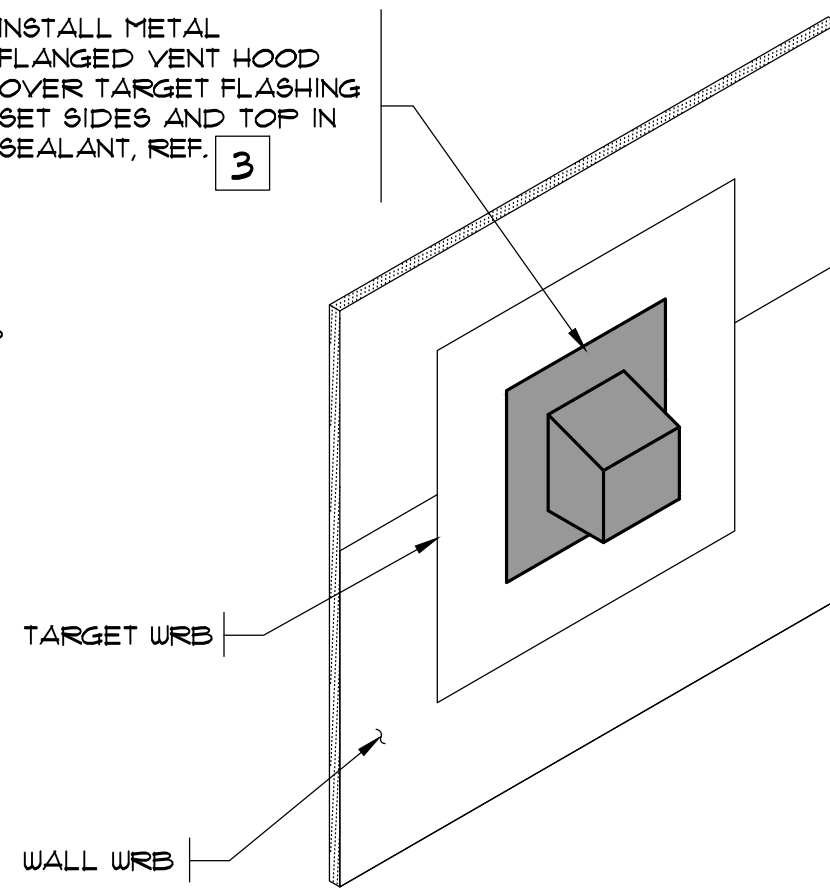


STEP #1

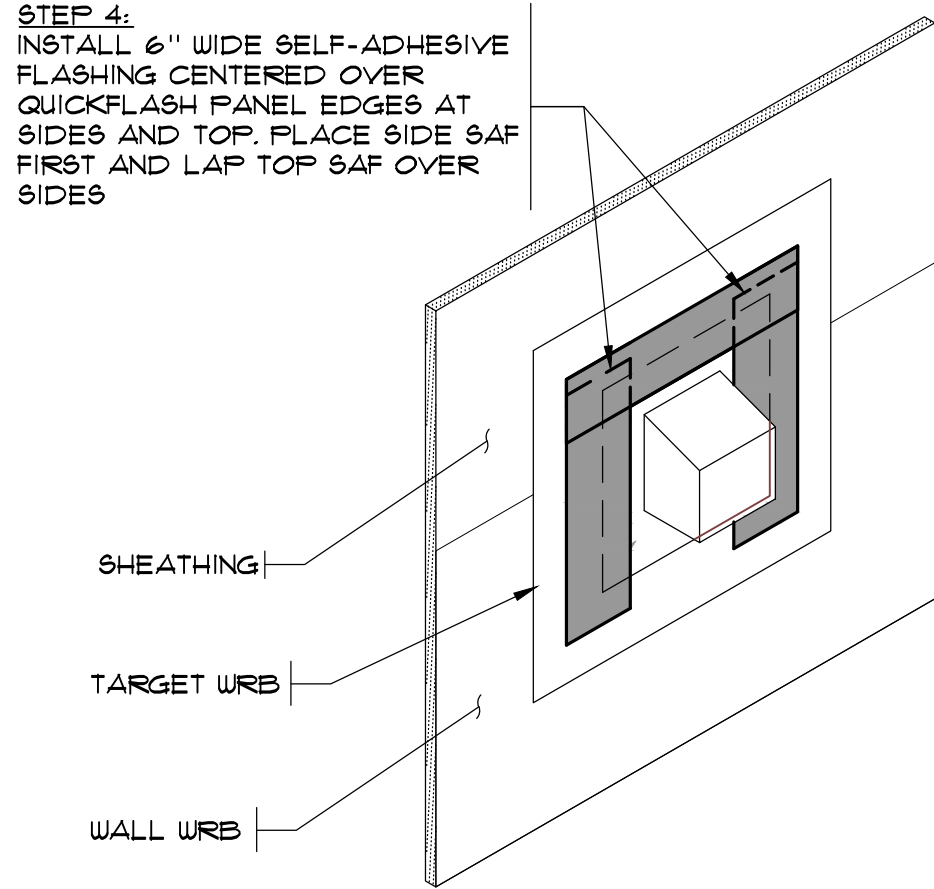
INSTALL URB TARGET FLASHING PIECE OVER HOLE. EXTEND 3\"/>



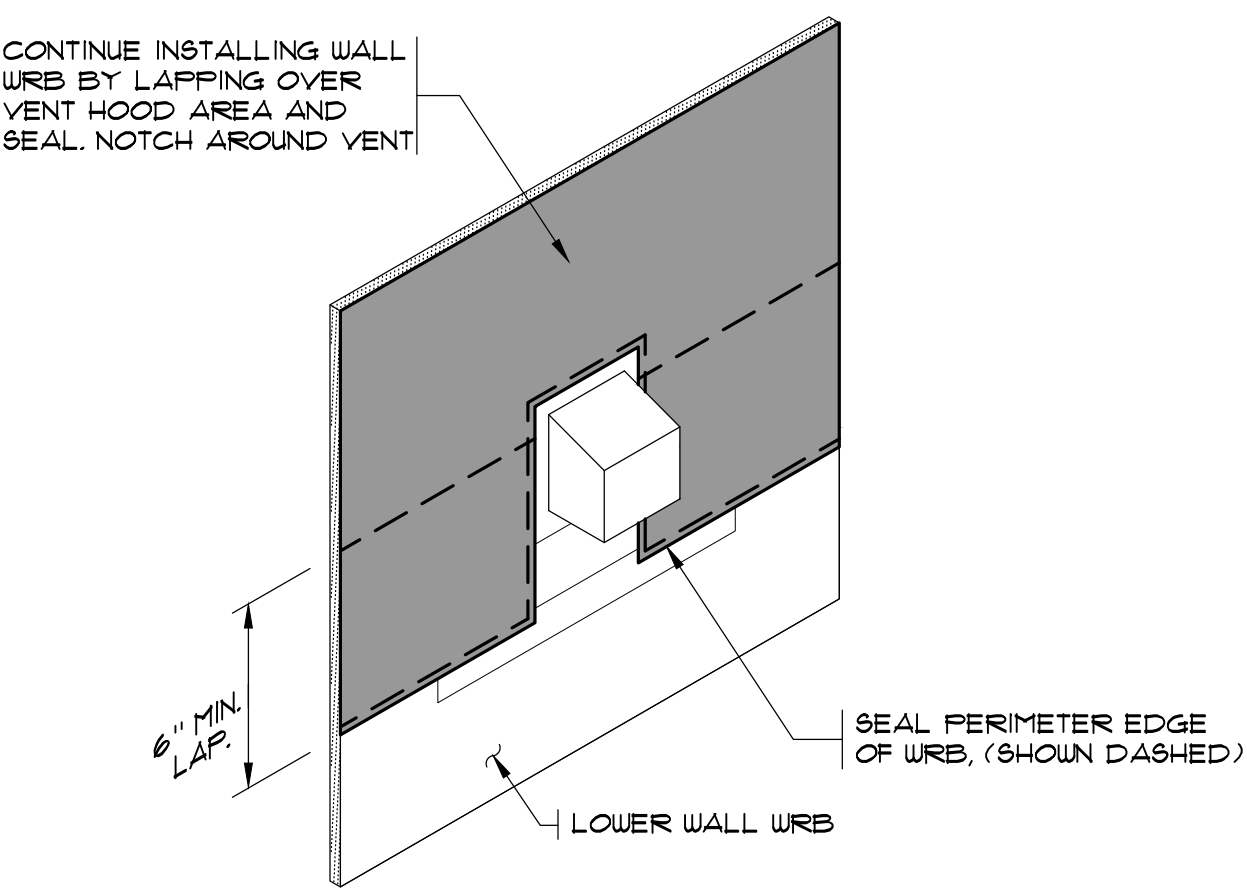
STEP #2



STEP #3



STEP #4



STEP #5

METAL VENT HOOD

N.T.S.

- METAL VENT HOOD NOTES:
1. MATERIAL TO BE 24 GA. GALV. PAINTED STEEL
 2. ALL SEAMS TO BE FULLY SOLDERED
 3. TOP OF HOOD TO BE ANGLED 15\"/>
 4. FLANGES TO BE 4\"/>
 5. EXTEND VENT HOOD AS NECESSARY FOR MULTIPLE VENTS
 6. CONTRACTOR TO SUPPLY MOCK-UP FOR APPROVAL
 7. SEAL ALL GAPS BETWEEN ROUGH OPENING AND URB LINER WITH SPRAY FOAM OR BACKER ROD AND SEALANT
 8. FOR ADDITIONAL INFORMATION, REF. 1 2 3

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Project
CARRIAGE HOUSE APTS.
BUILDING 'E'
SELECT EXTERIOR
IMPROVEMENTS
SEATTLE, WA
3610 S. 180TH ST.

Sheet

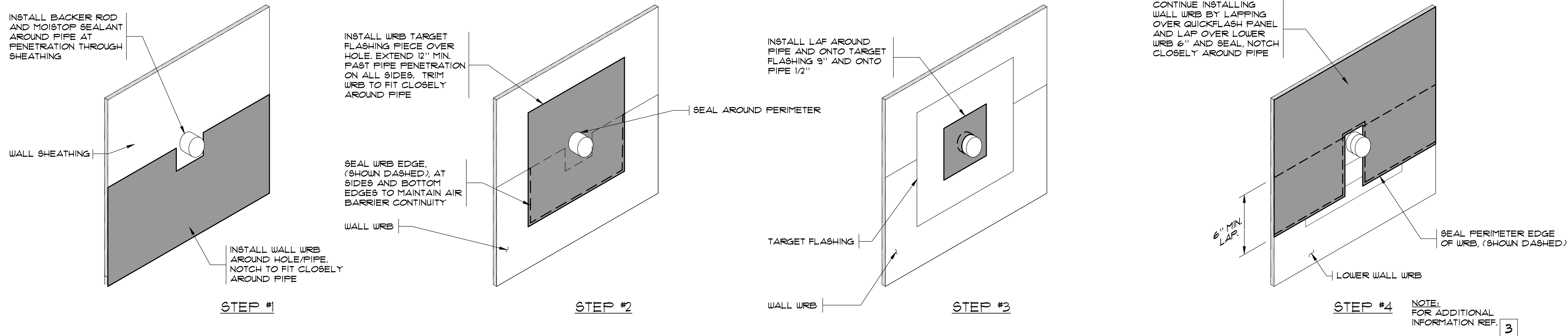
Job No. 26014.00

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DETAILS

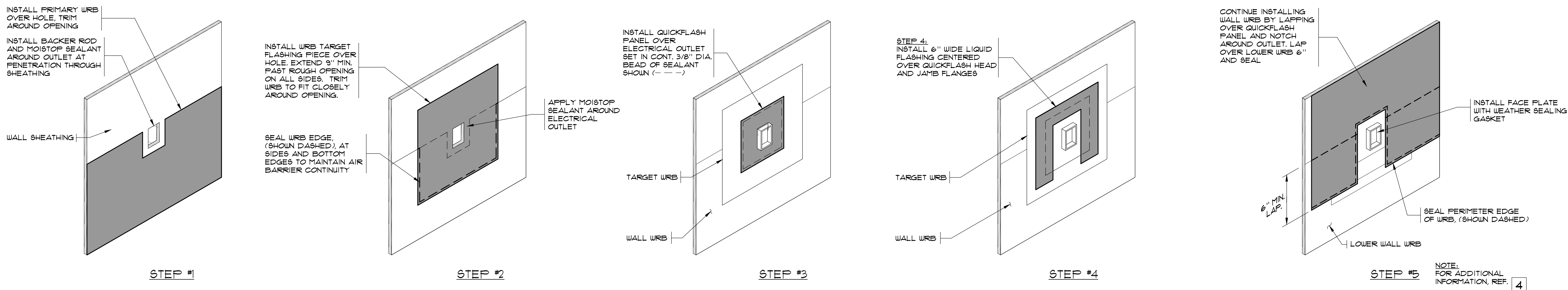
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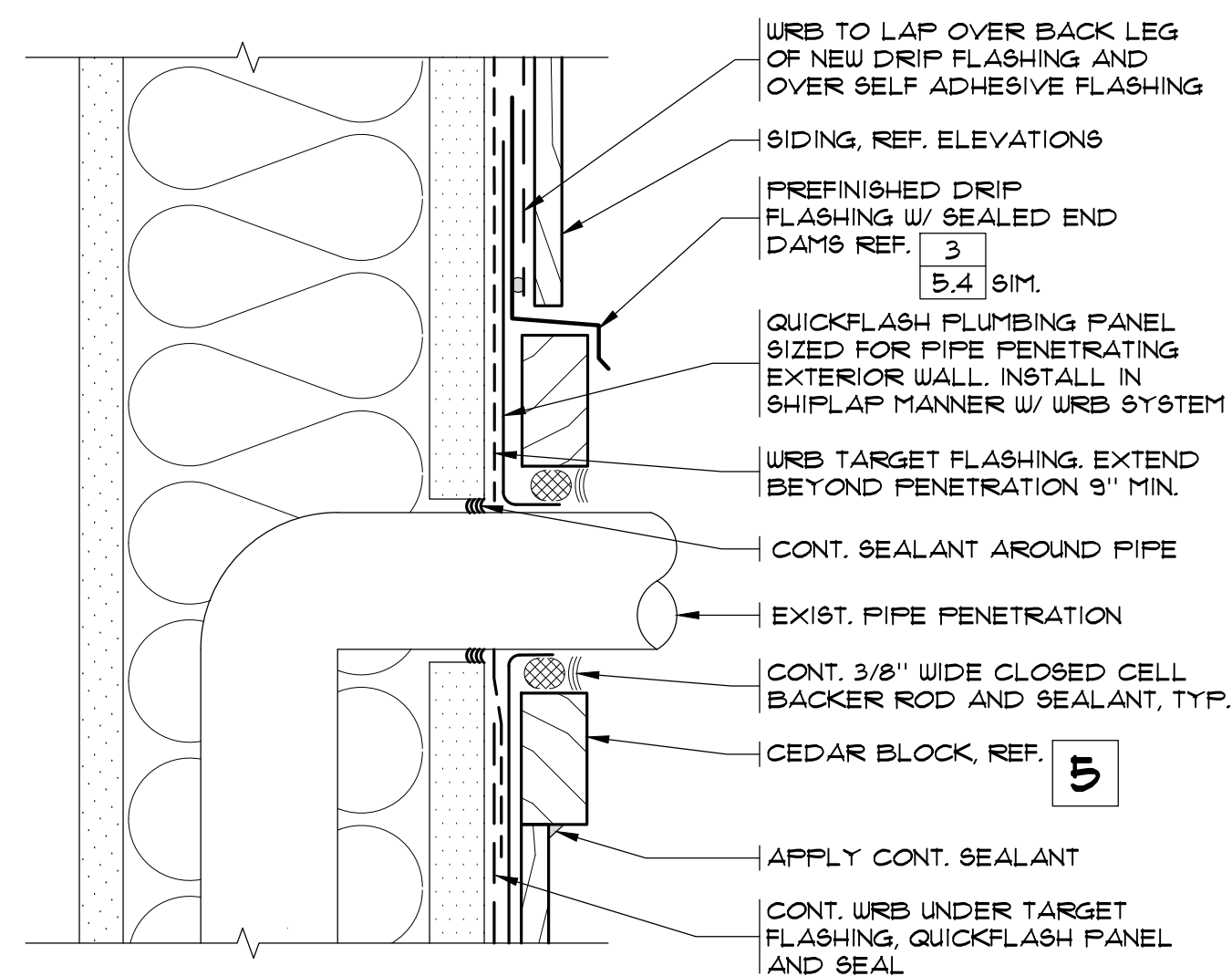
Revision	No.	Designed	Drawn	Checked	Date	Approved
BID SET		N. FRITZ	RCP	NLF	JUNE 2026	



PIPE PENETRATION 1
SCALE: N.T.S.

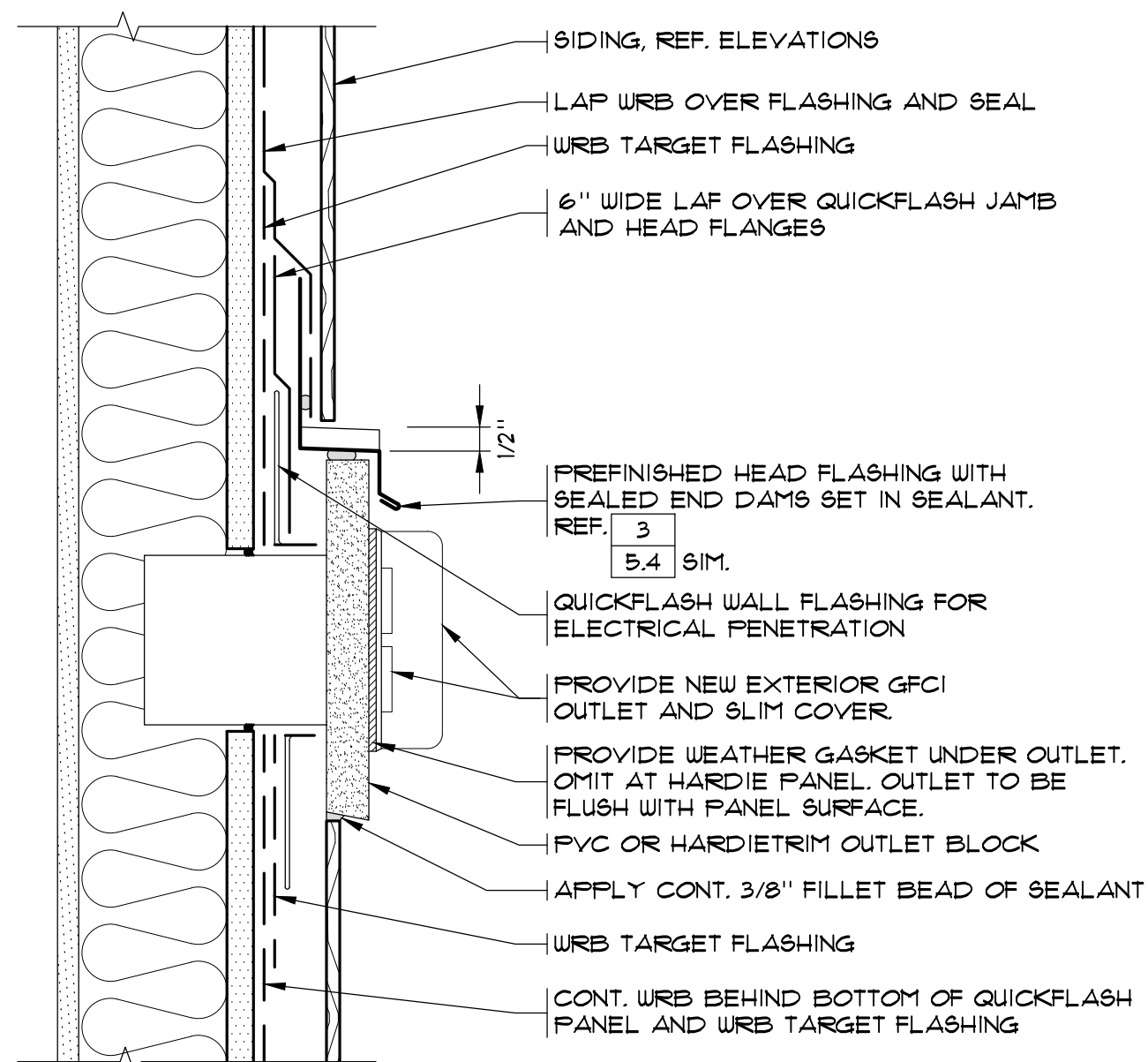


ELECTRICAL WALL OUTLET/ FIXTURE 2
SCALE: N.T.S.



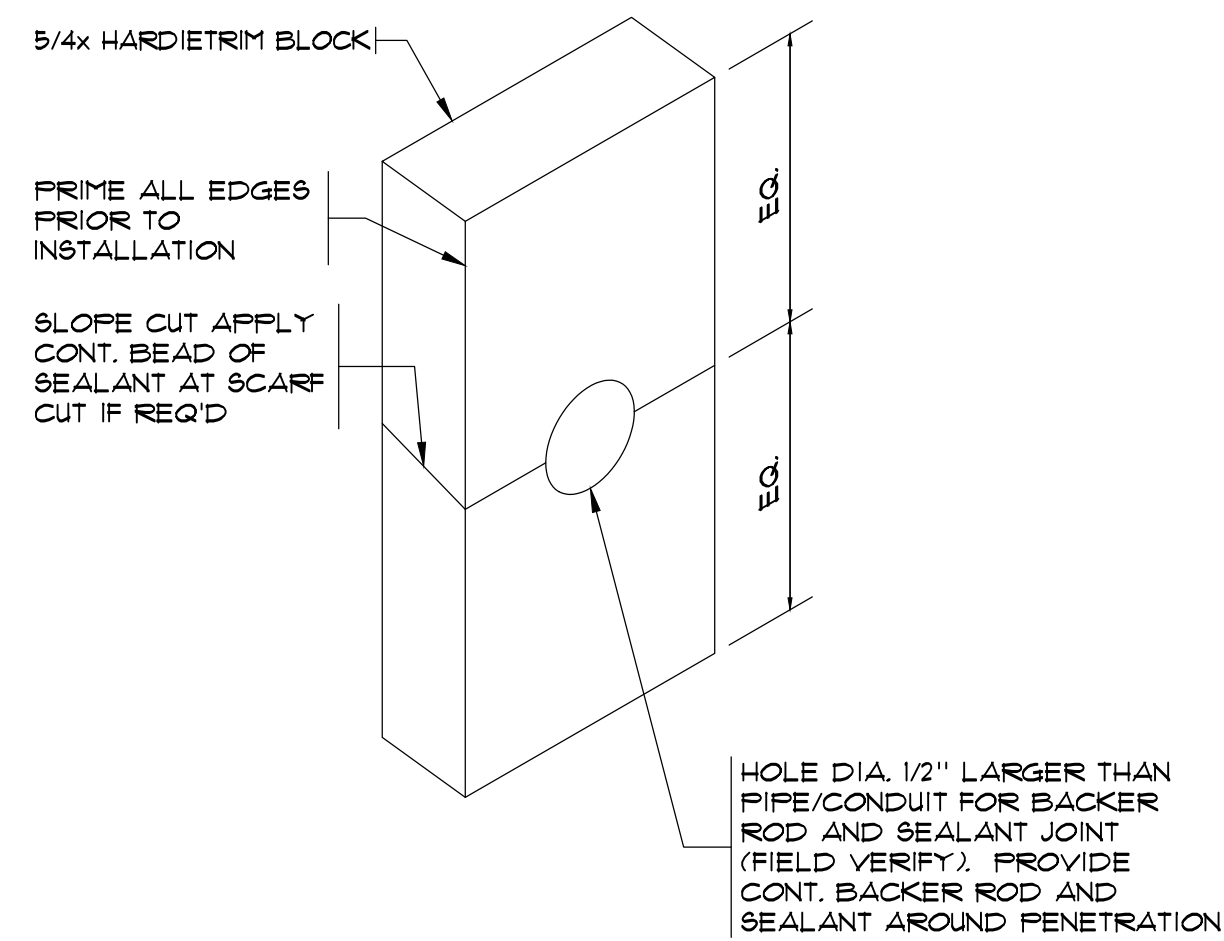
HOSE BIBB PENETRATION 3
SCALE: 6" = 1'-0"

NOTES:
1. ALTERNATE TO QUICKFLASH FLASHING IS LIQUID APPLIED FLASHING (LAF). LAF SHALL EXTEND 6" IN ALL DIRECTION AROUND PIPE PENETRATION AND 1/2" ONTO PIPE.
2. FOR ADDITIONAL INFORMATION, REF. 1

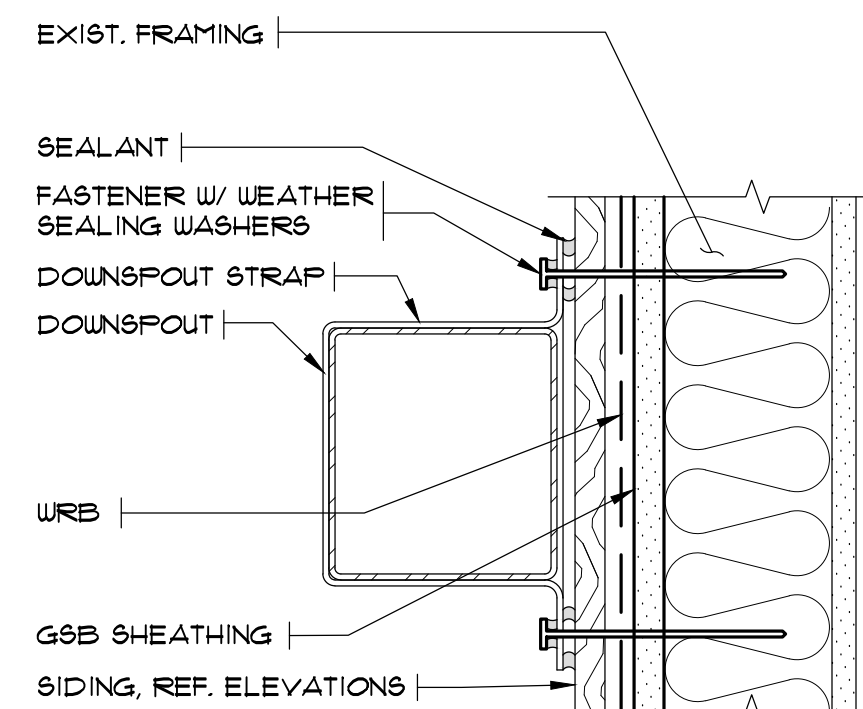


EXTERIOR OUTLET/ FIXTURE 4
SCALE: 3" = 1'-0"

NOTE:
1. FOR ADDITIONAL INFORMATION, REF. SECTION 2



HARDIETRIM SPLIT BLOCK 5
SCALE: N.T.S.



TYP. DOWNSPOUT 6
SCALE: 3" = 1'-0" (PLAN VIEW)

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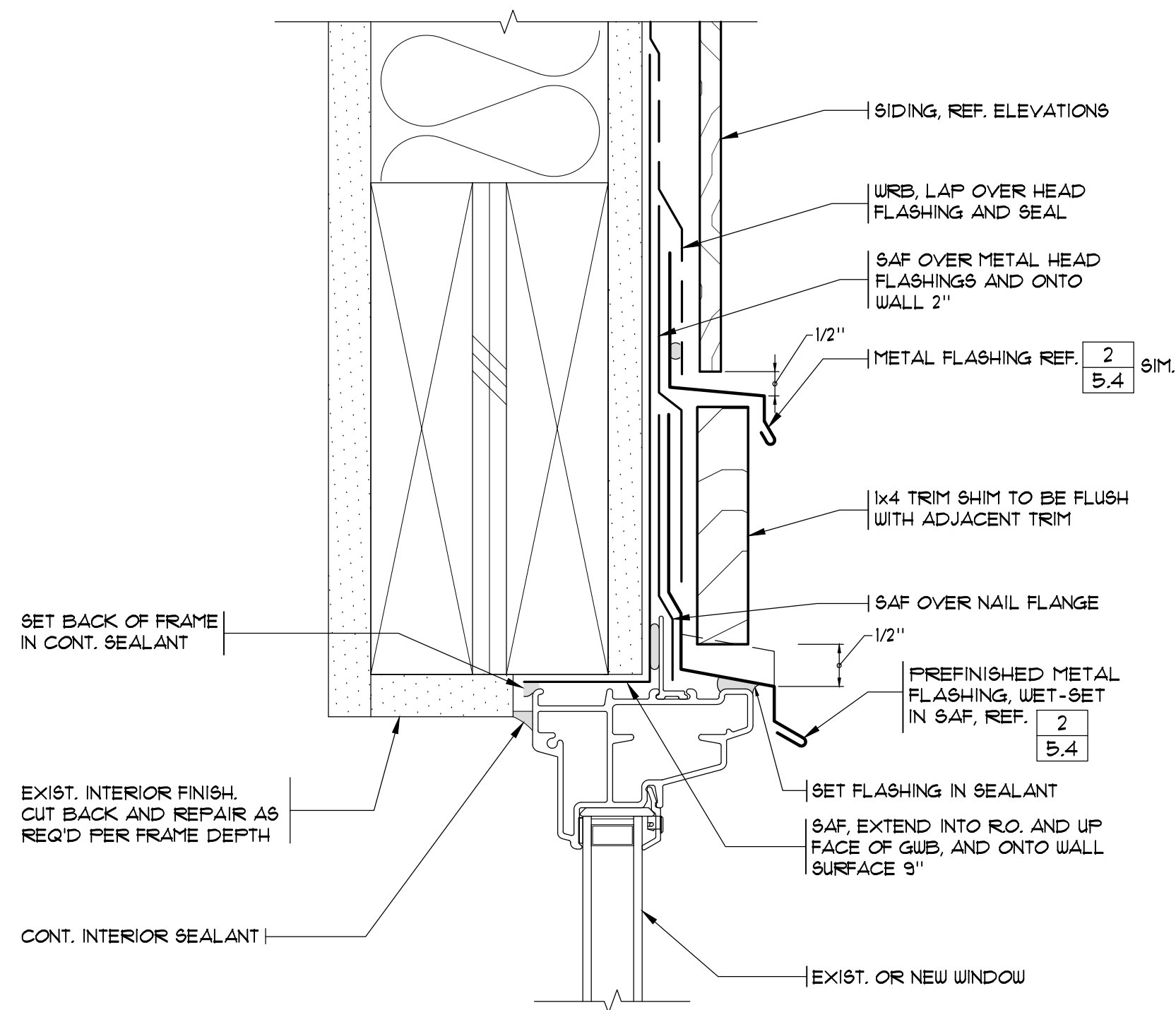
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Date	
Revision	BID SET
No.	
Designed	N. FRITZ
Drawn	RGP
Checked	NLF
Date	JUNE 2026
Approved	

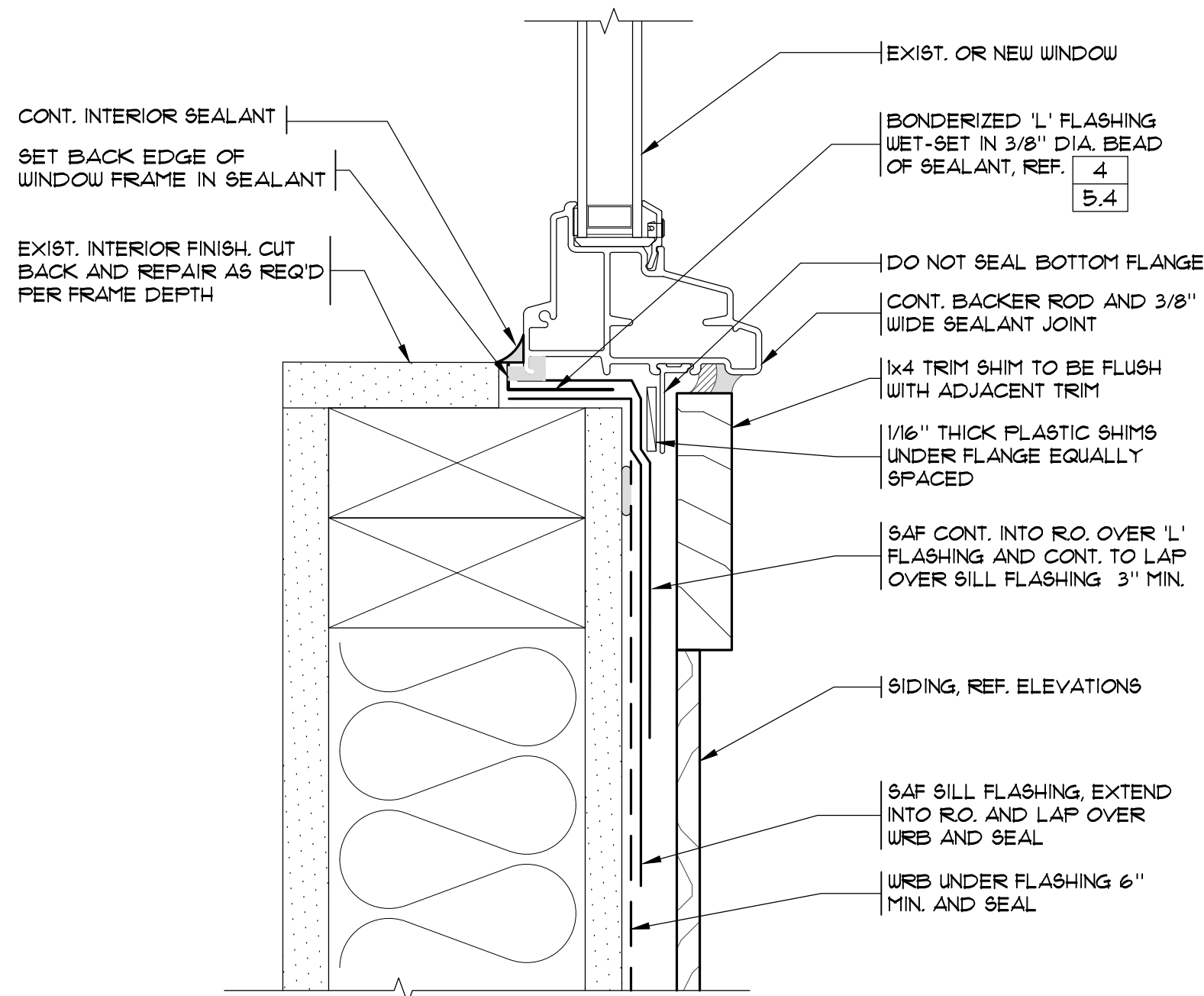
PACIFIC
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(206) 281-7500

Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	SEATTLE, WA
Sheet	5.2	3610 S. 180TH ST.
Job No.	26014.00	



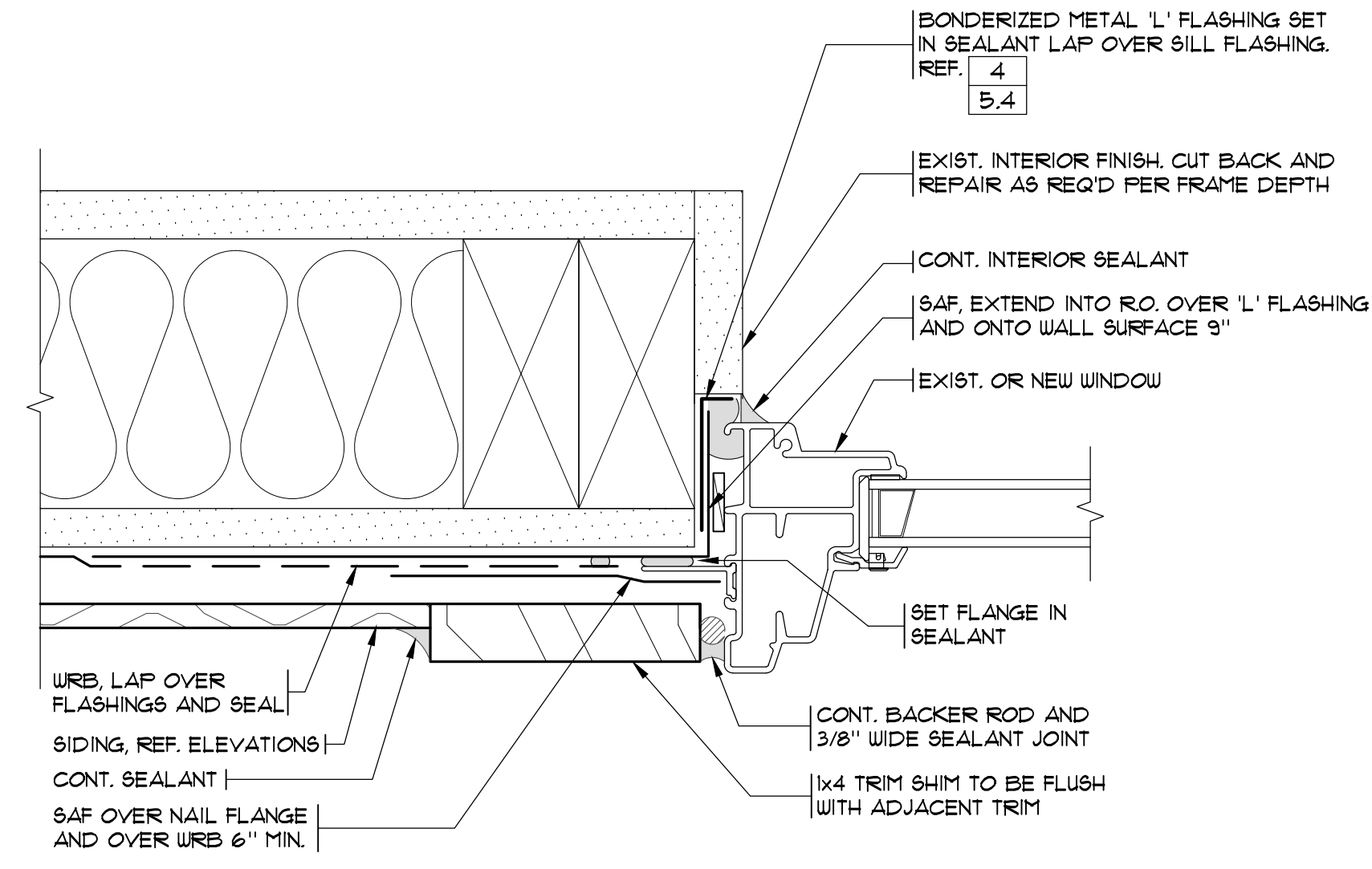
NEW OR EXIST. FLANGED WINDOW HEAD 1
SCALE: 6" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION,
REF. 1, 5.4



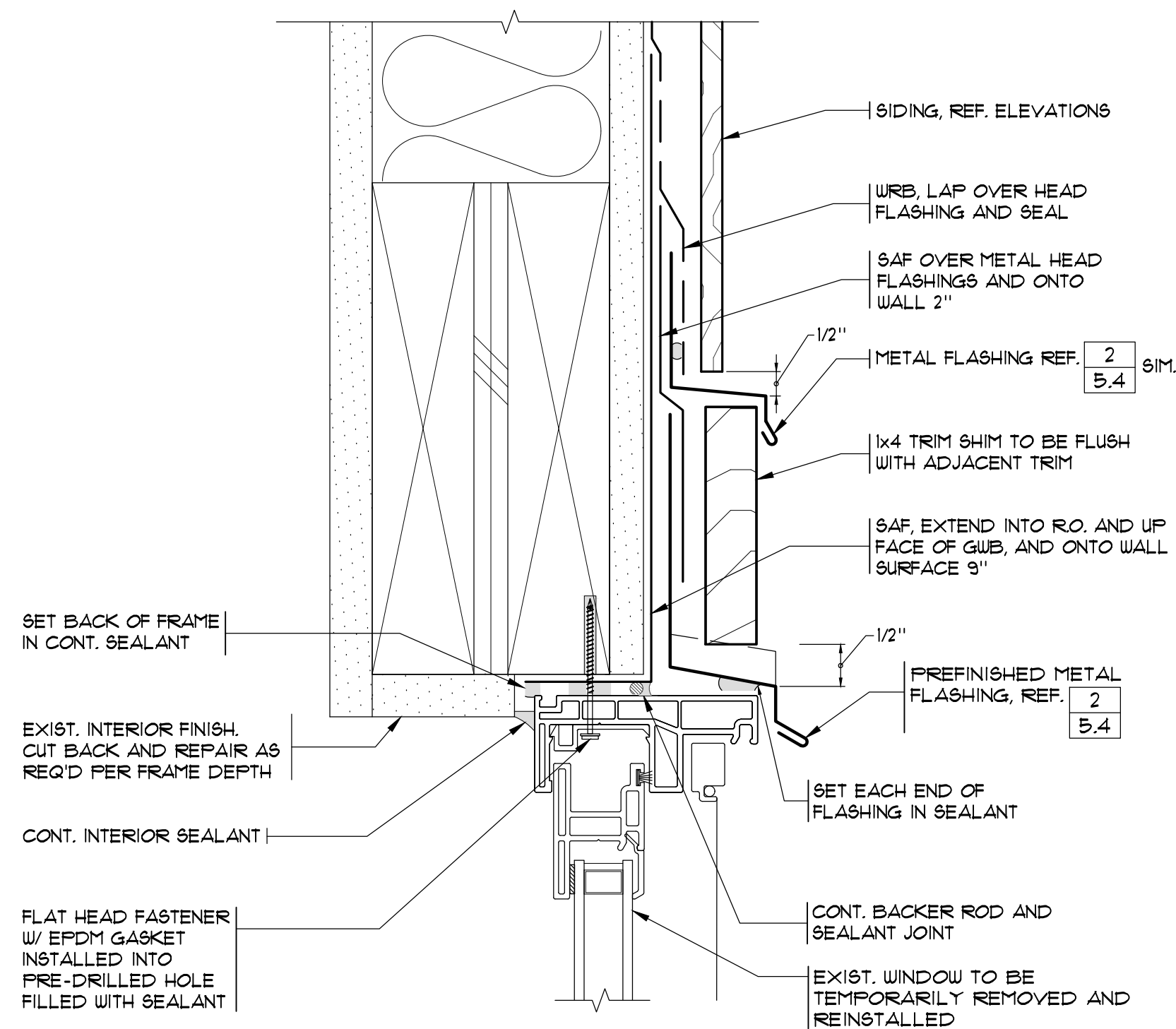
NEW OR EXIST. FLANGED WINDOW SILL 2
SCALE: 6" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION,
REF. 1, 5.4



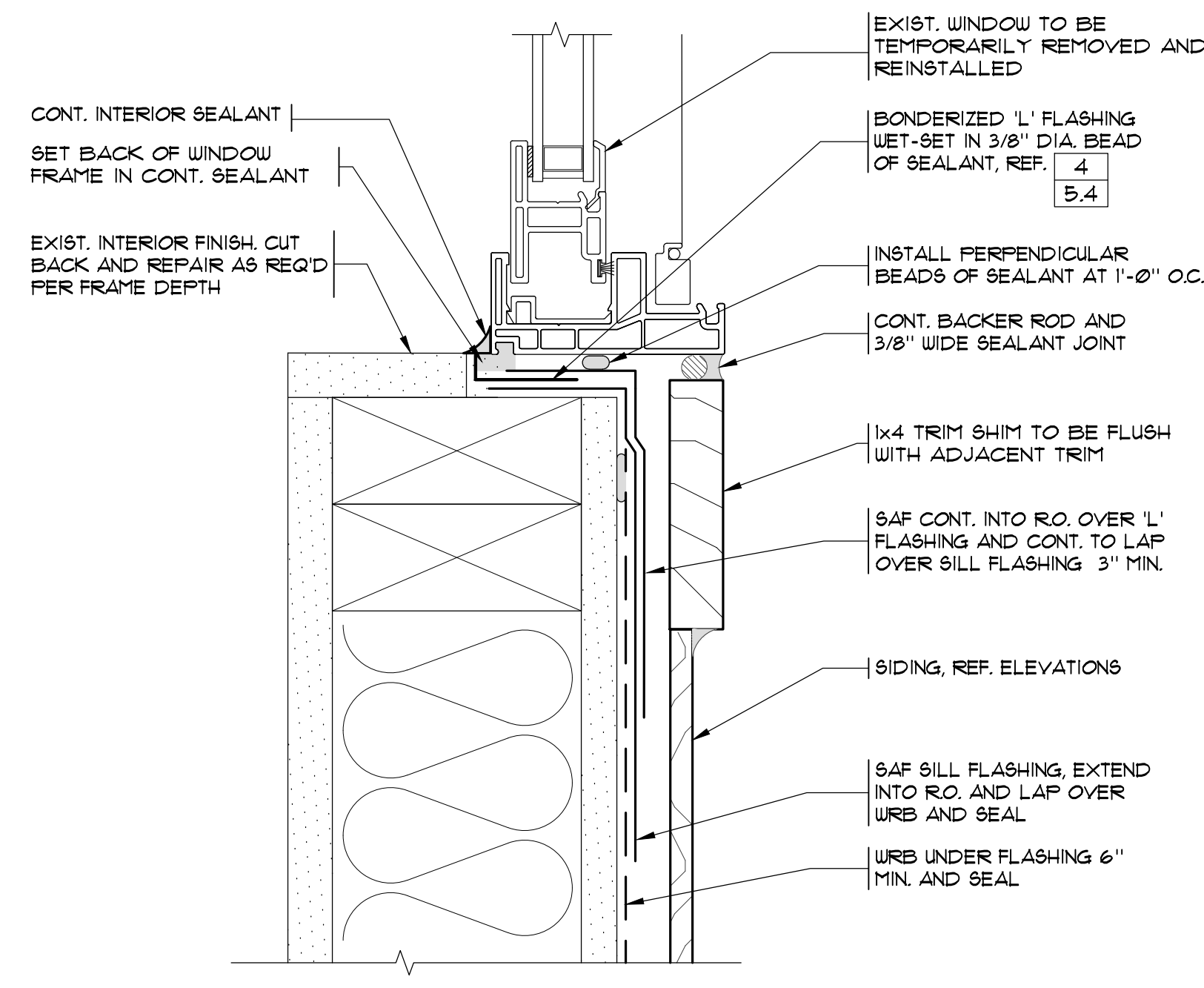
NEW OR EXIST. FLANGED WINDOW JAMB 3
SCALE: 6" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION,
REF. SECTION 1, 5.4



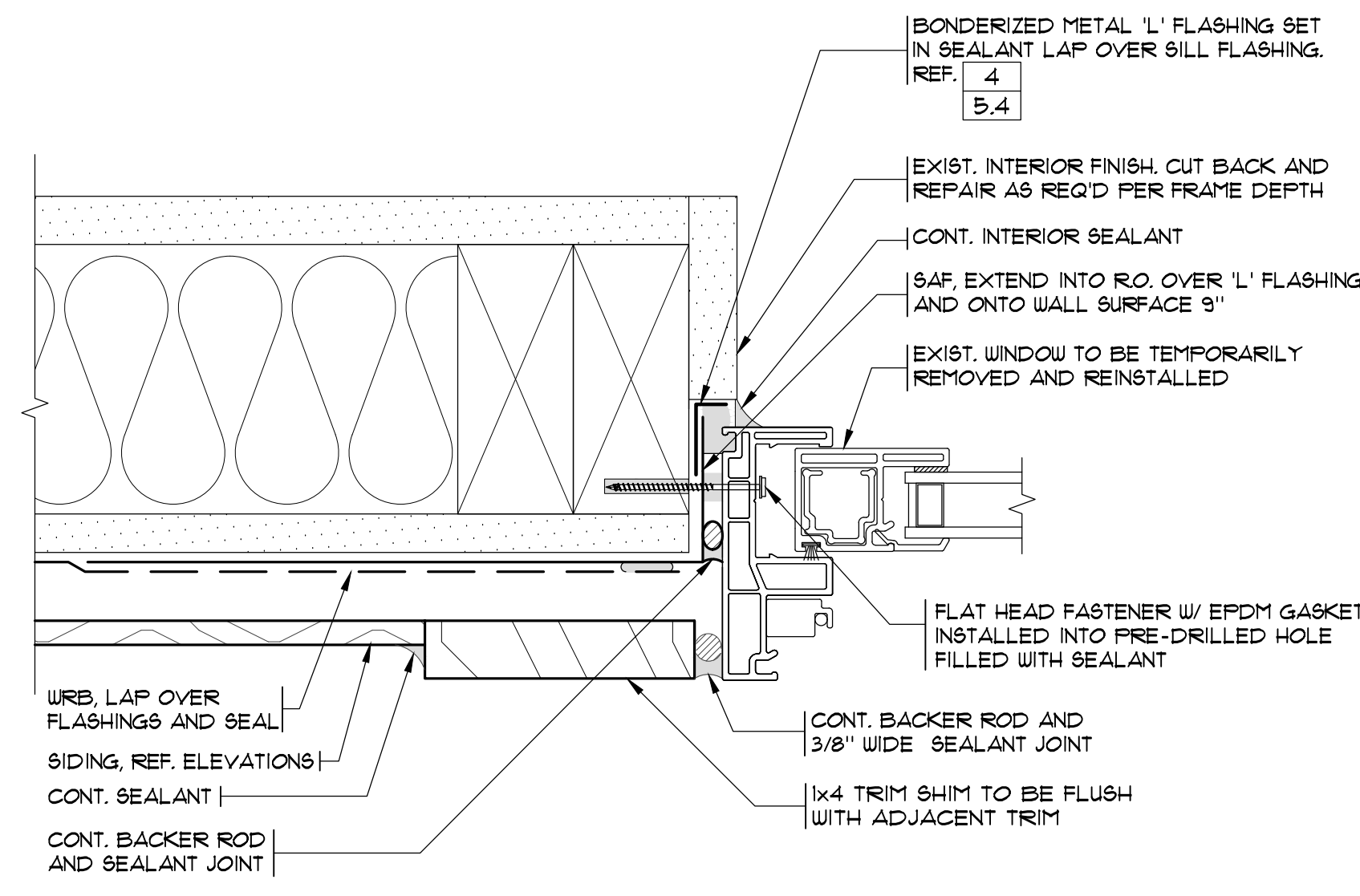
EXIST. FLANGELESS WINDOW HEAD 4
SCALE: 6" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION,
REF. 1, 5.4, 61M



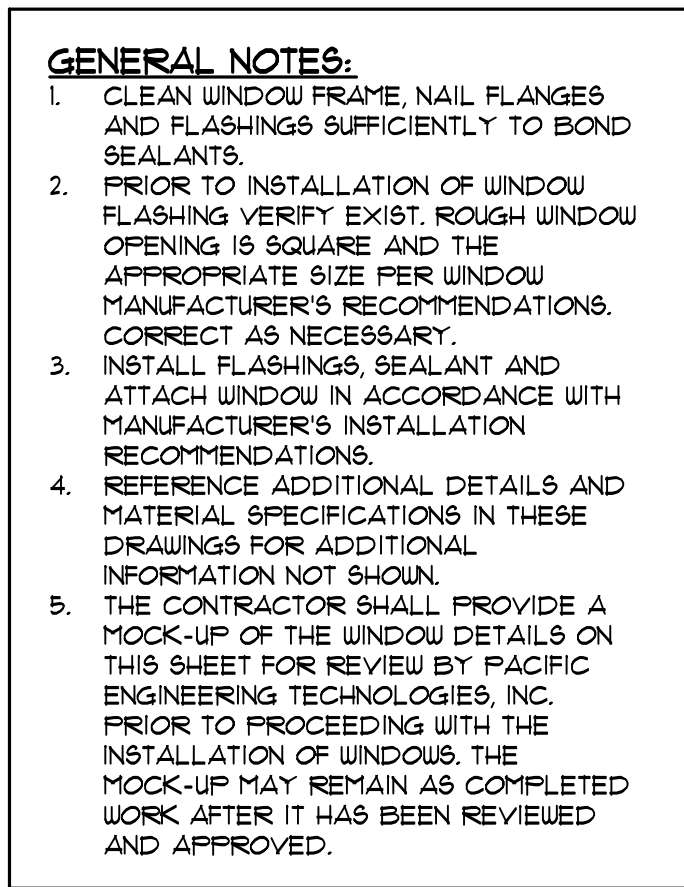
EXIST. FLANGELESS WINDOW SILL 5
SCALE: 6" = 1'-0"

NOTE:
1. DO NOT INSTALL FASTENERS THROUGH SILL.
2. CLEAN FRAME AND SEAL ANY EXISTING FASTENER HOLES IN FRAME SILL WITH SILICONE SEALANT.
3. FOR ADDITIONAL INFORMATION, REF. 1, 5.4, 61M.

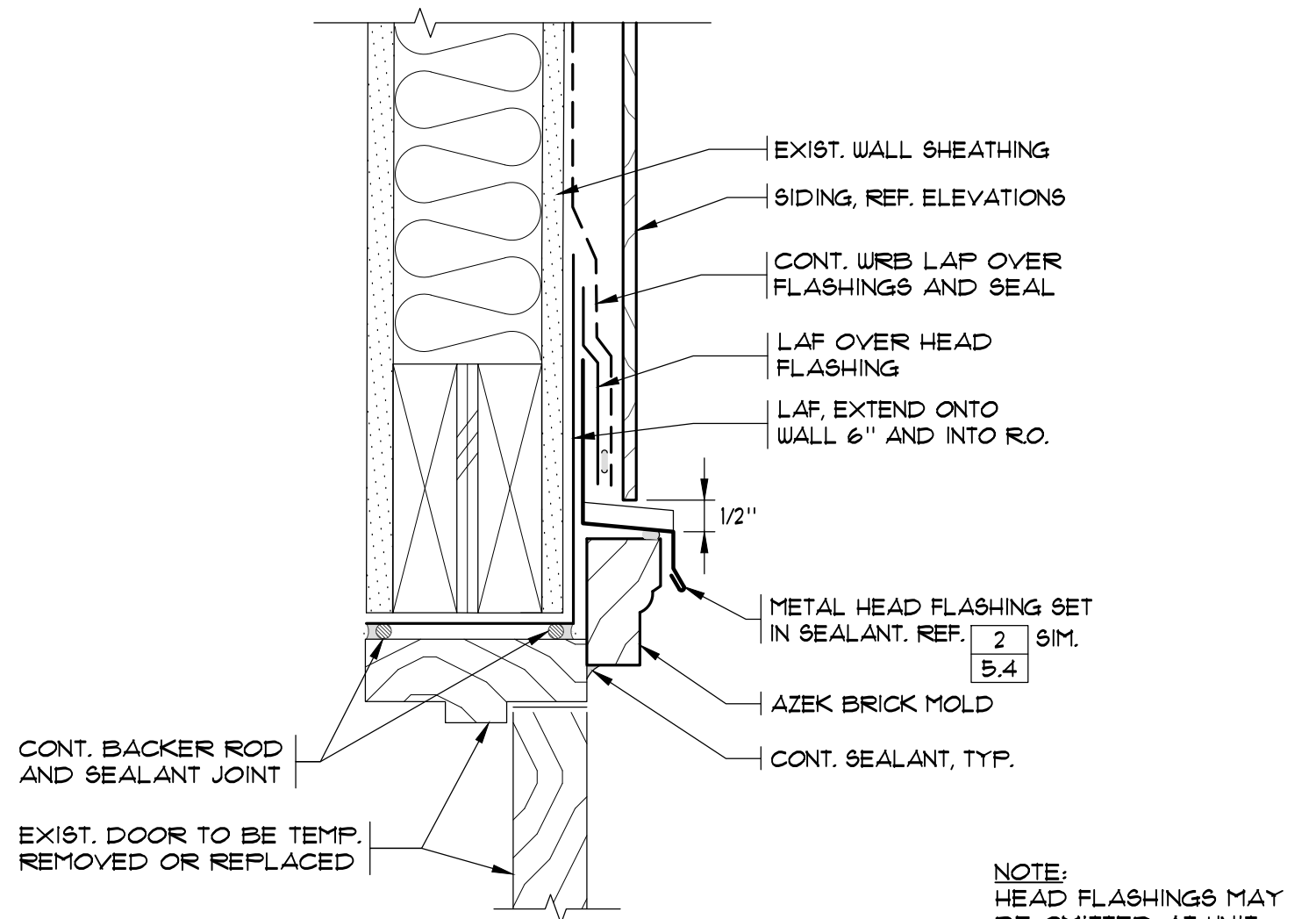


EXIST. FLANGELESS WINDOW JAMB 6
SCALE: 6" = 1'-0"

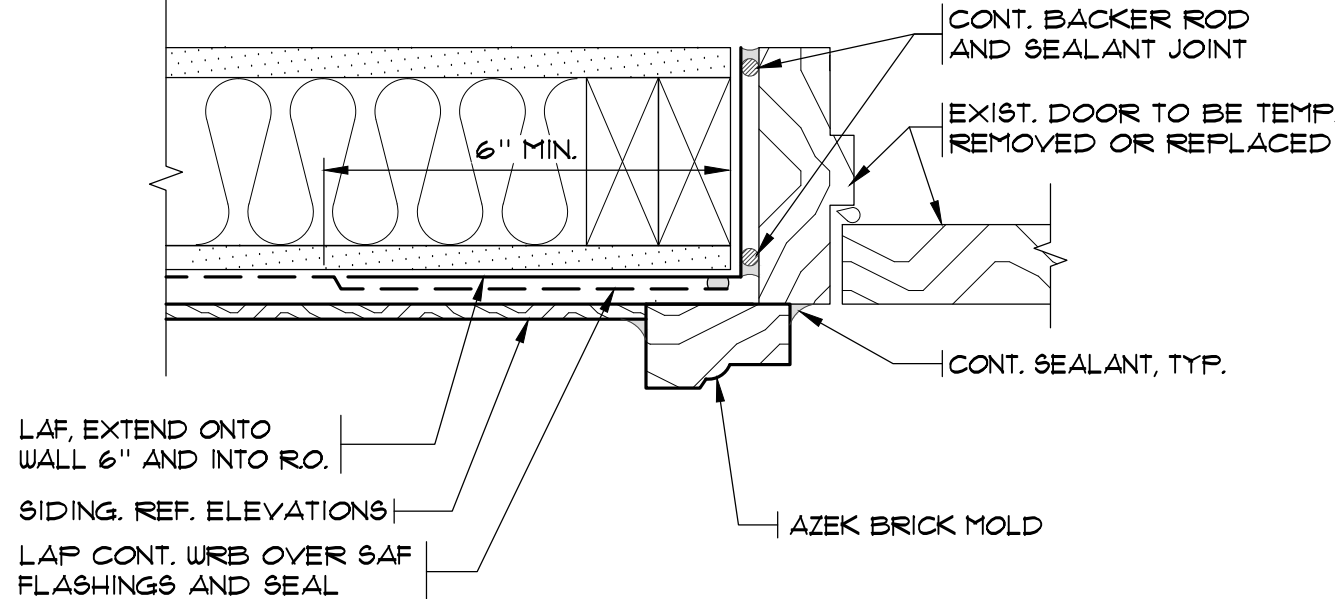
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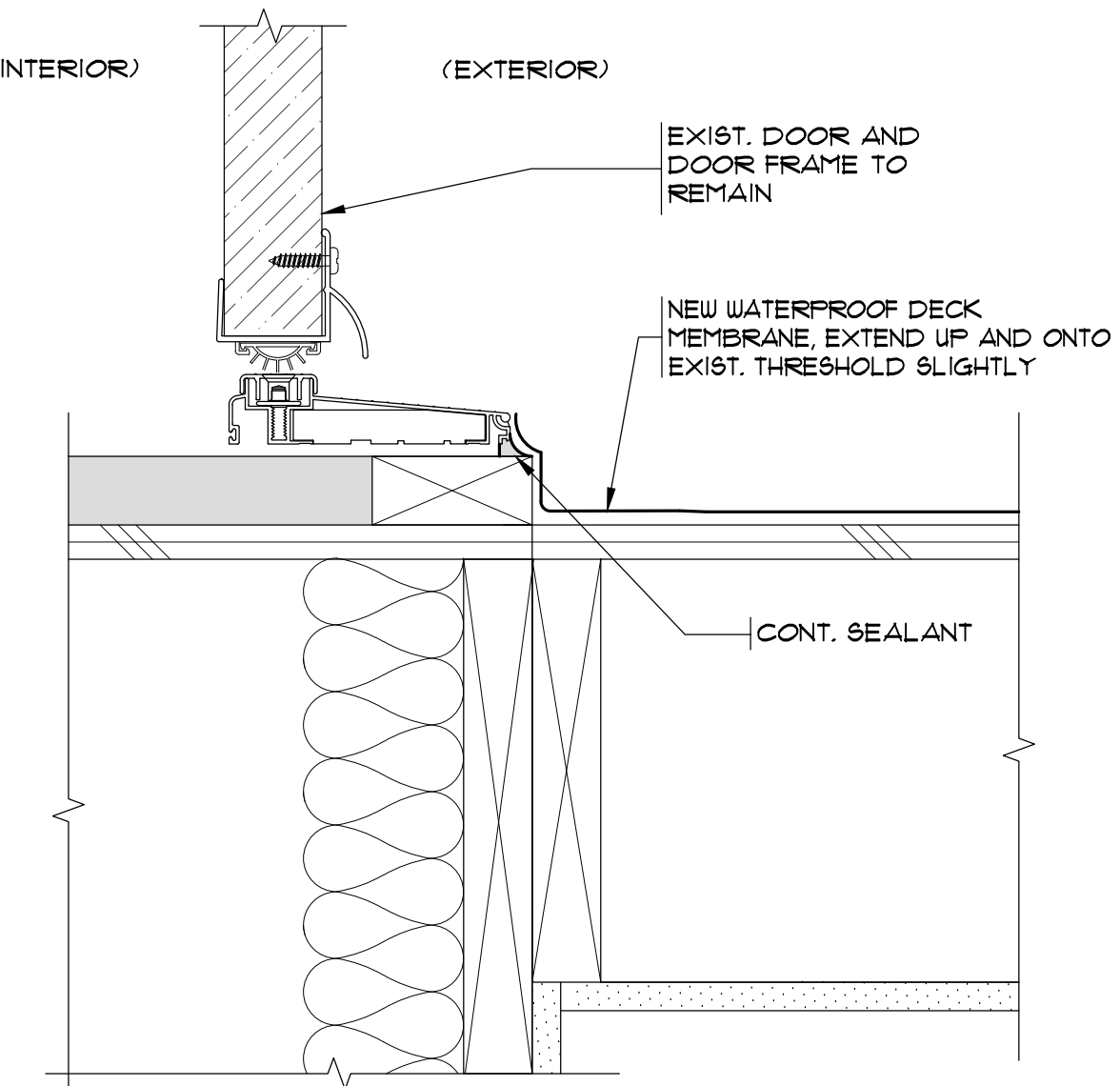
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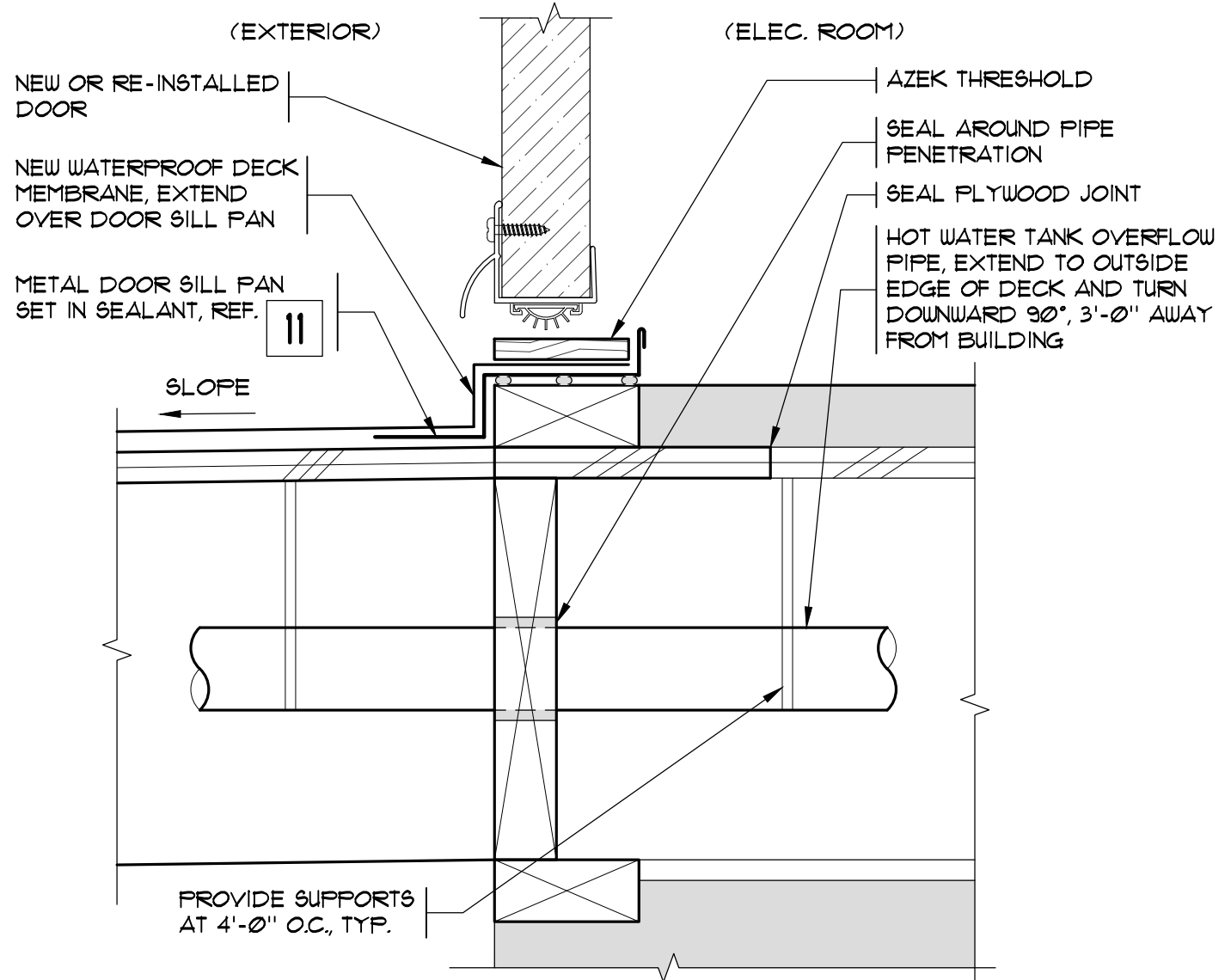
REMOVED OR REPLACED DOOR HEAD 1
SCALE: 3" = 1'-0"



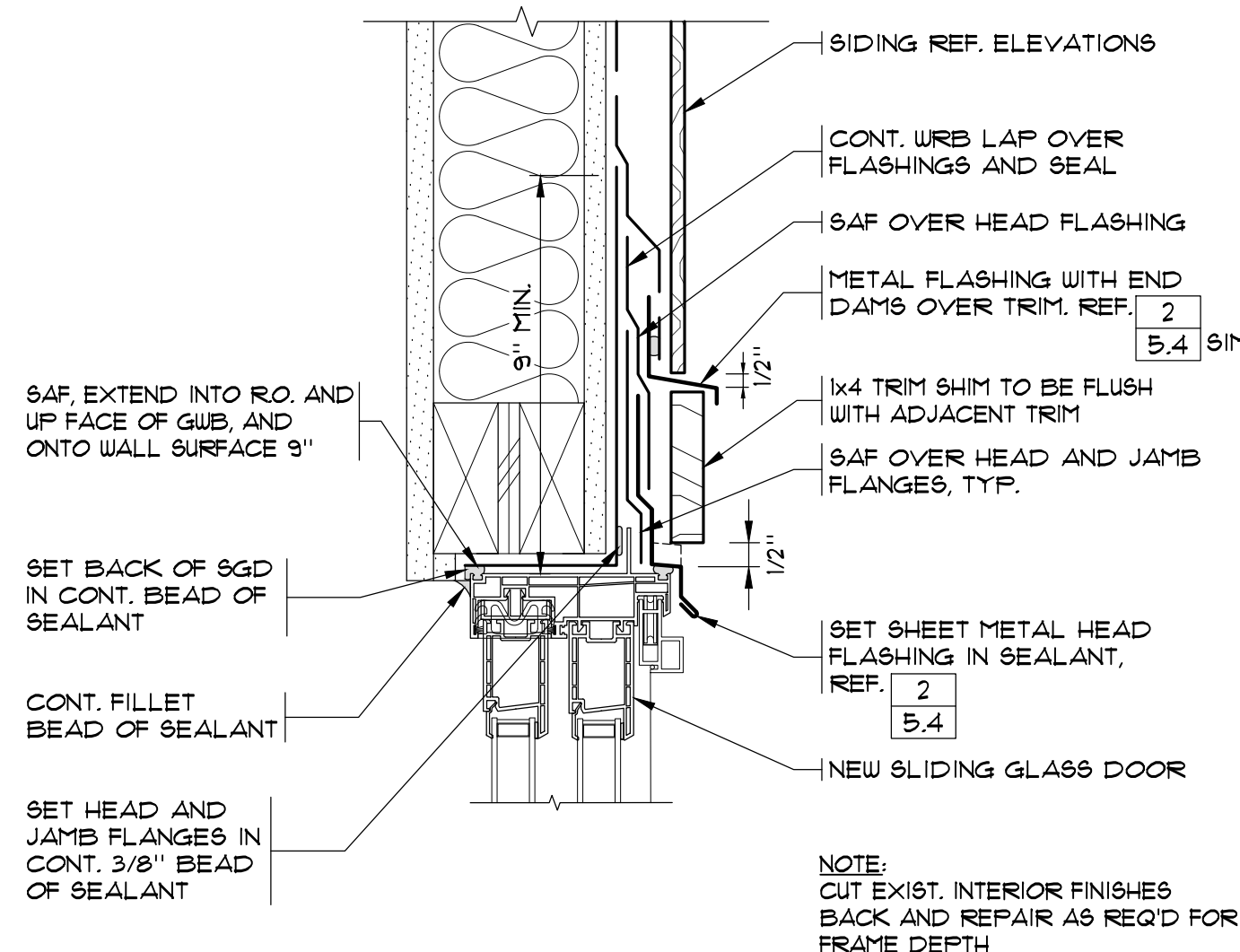
REMOVED OR REPLACED DOOR JAMB 2
SCALE: 3" = 1'-0"



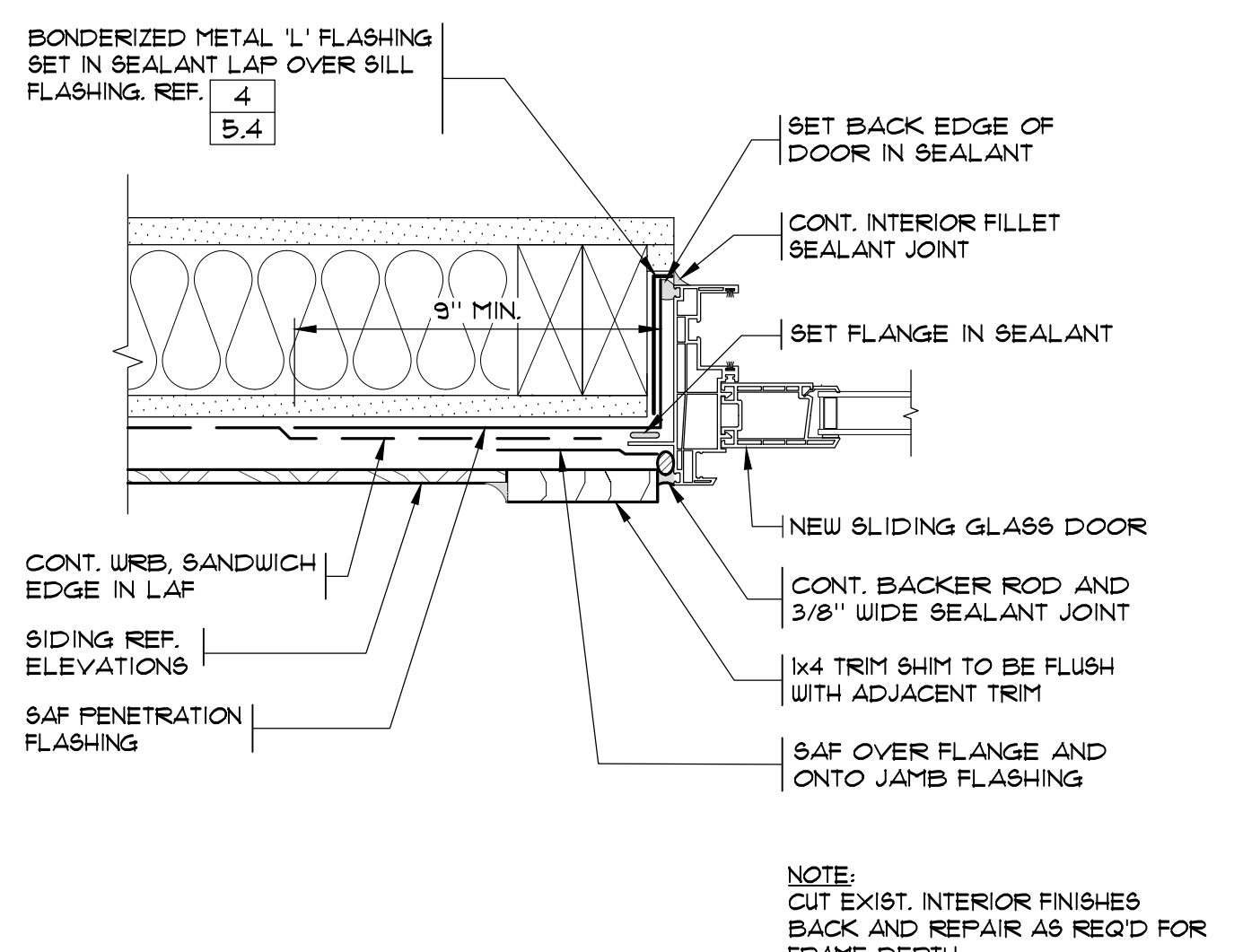
DOOR AT ENTRY WALKWAY 3
SCALE: 3" = 1'-0"



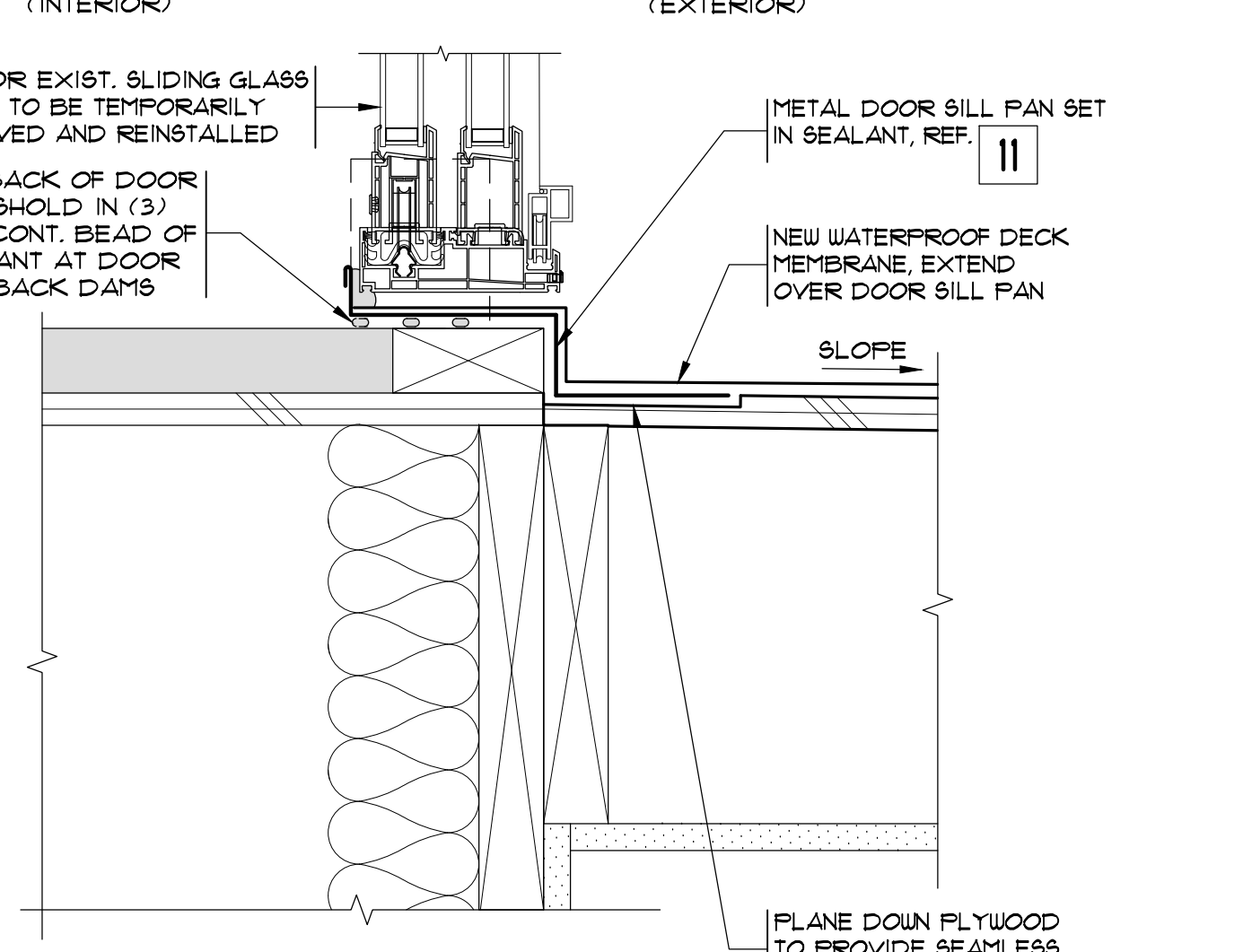
TYP. DOOR SILL AT ELECTRICAL ROOM 4
SCALE: 3" = 1'-0"



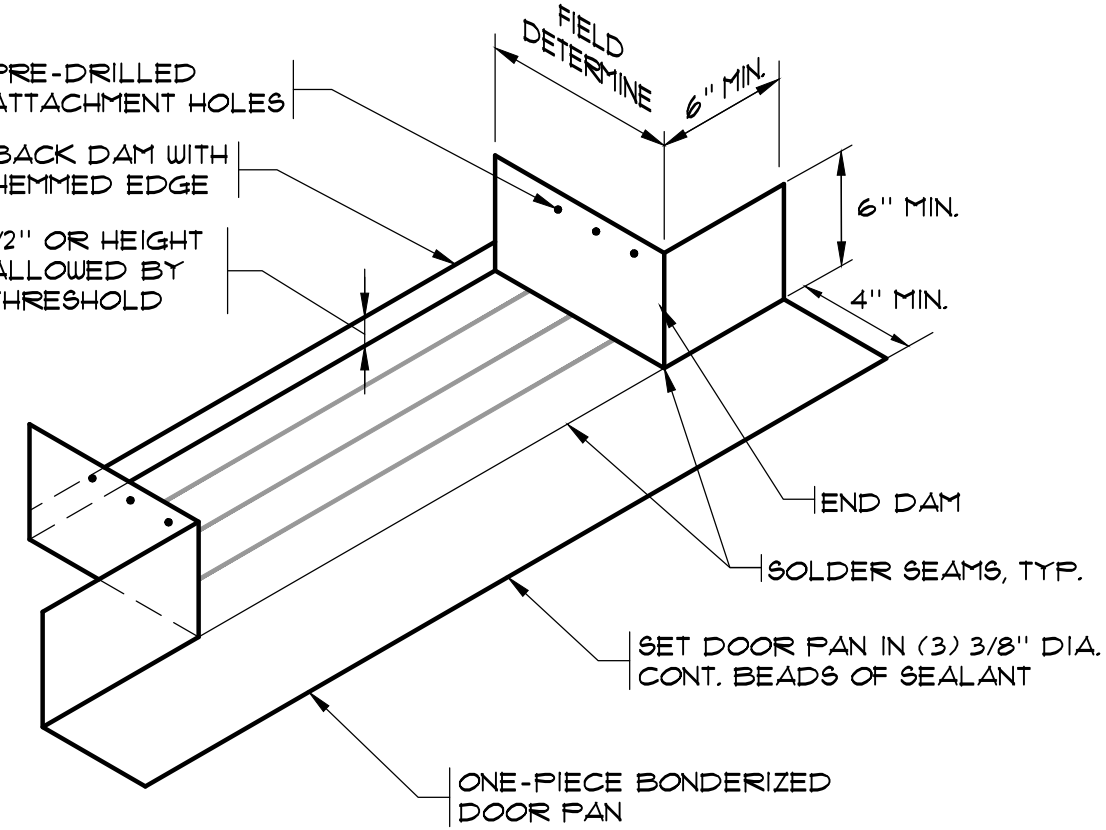
SLIDING GLASS DOOR HEAD 5
SCALE: 3" = 1'-0"



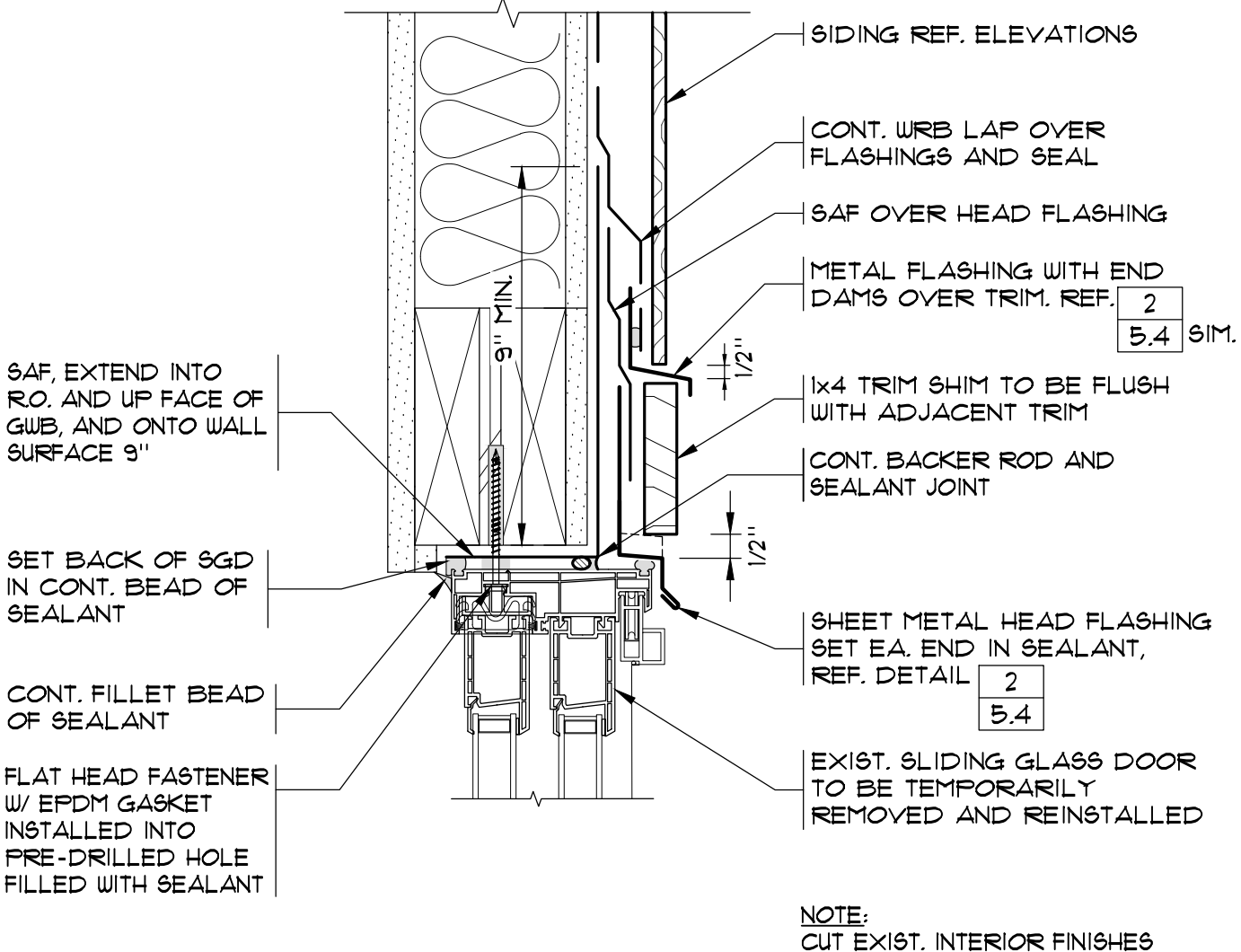
SLIDING GLASS DOOR JAMB 6
SCALE: 3" = 1'-0" (PLAN VIEW)



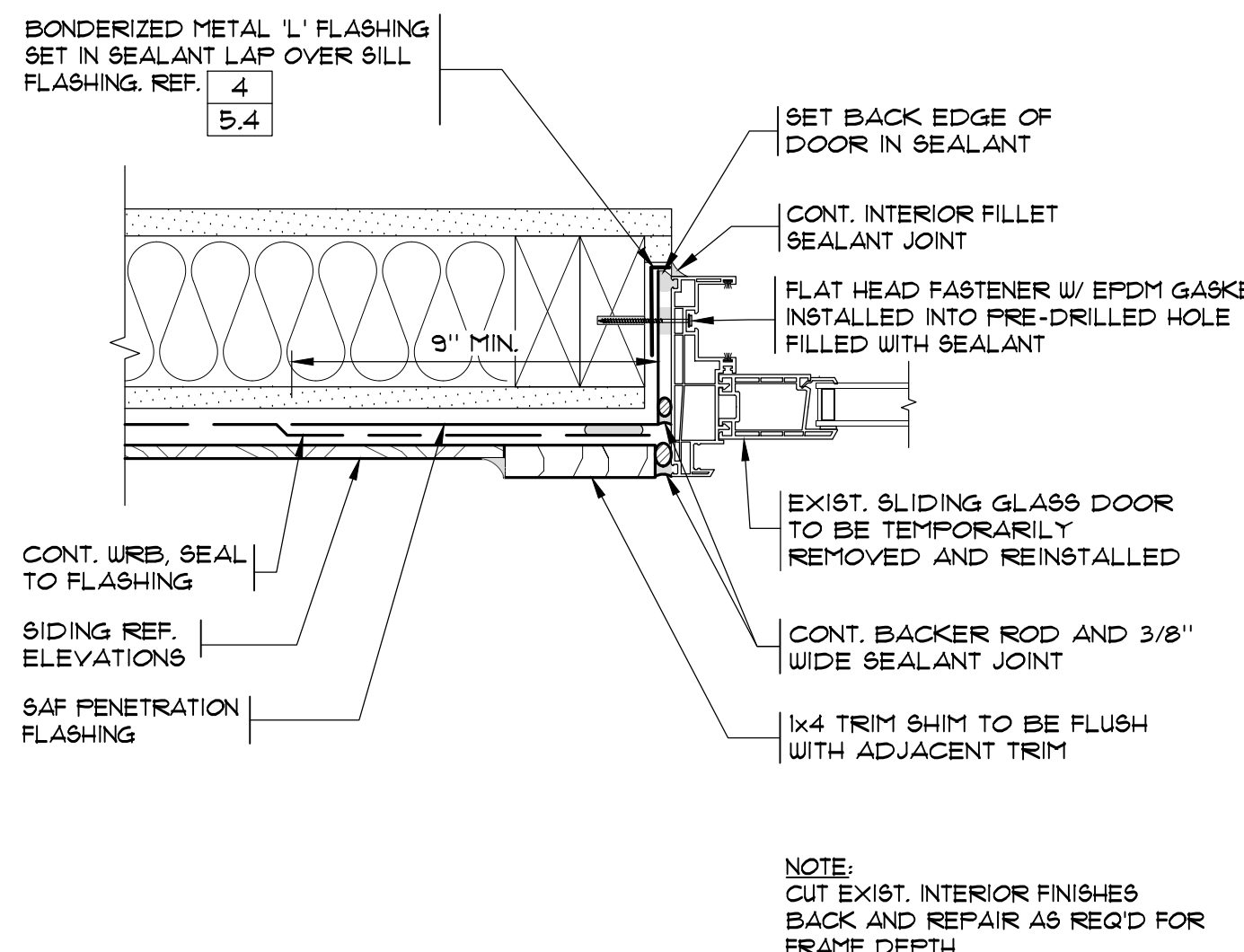
SLIDING GLASS DOOR SILL AT DECK 7
SCALE: 3" = 1'-0" NOTE: CONTRACTOR TO VERIFY IF VERTICAL STEP IS PRESENT AT SLIDING GLASS DOOR THRESHOLD



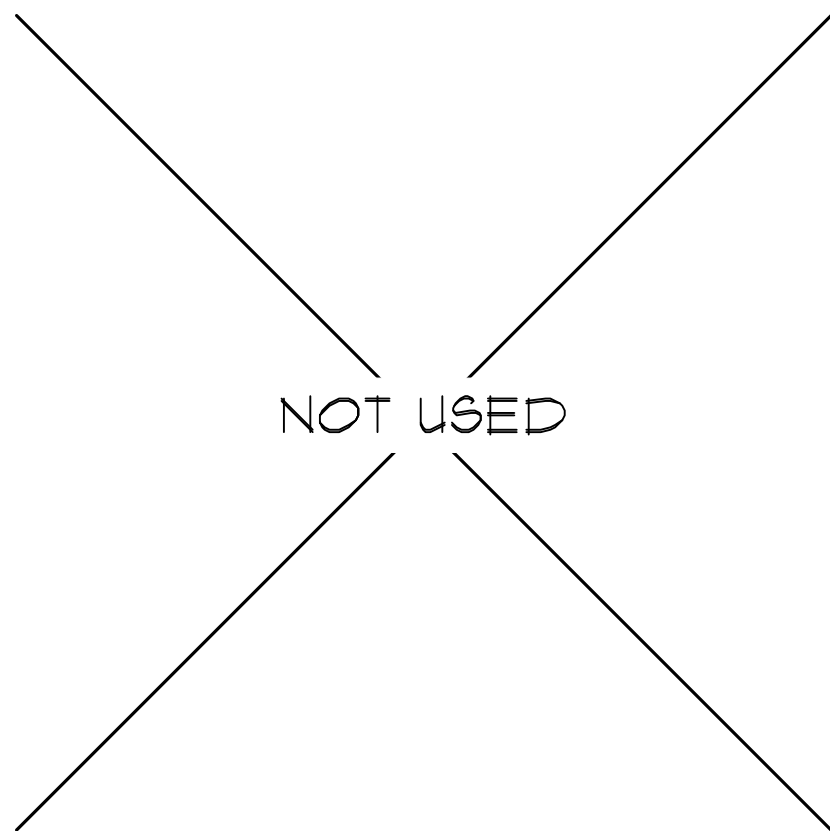
TYPE 'A'



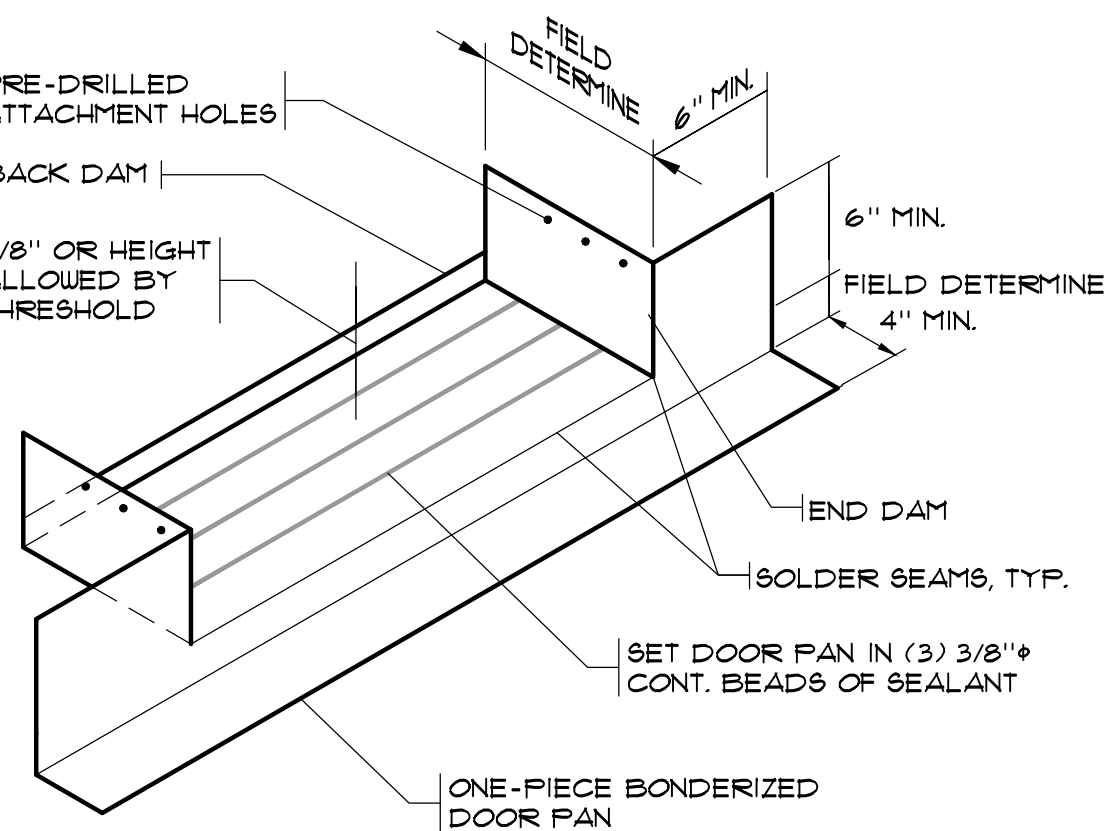
EXIST. FLANGELESS SLIDING GLASS DOOR HEAD 8
SCALE: 3" = 1'-0"



EXIST. FLANGELESS SLIDING GLASS DOOR JAMB 9
SCALE: 3" = 1'-0" (PLAN VIEW)



SECTION 12
SCALE: 3" = 1'-0"



TYPE 'B'

DOOR SILL PAN FLASHING 11
SCALE: N.T.S.

Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS		
Location	SEATTLE, WA		
Scale	3/8" = 1'-0"		
Author	N. FRITZ		
Checker	RGP		
Reviewer	NLF		
Date	JUNE 2026		
Revision	1		
Drawn	RGP		
Checked	NLF		
Approved	JUNE 2026		

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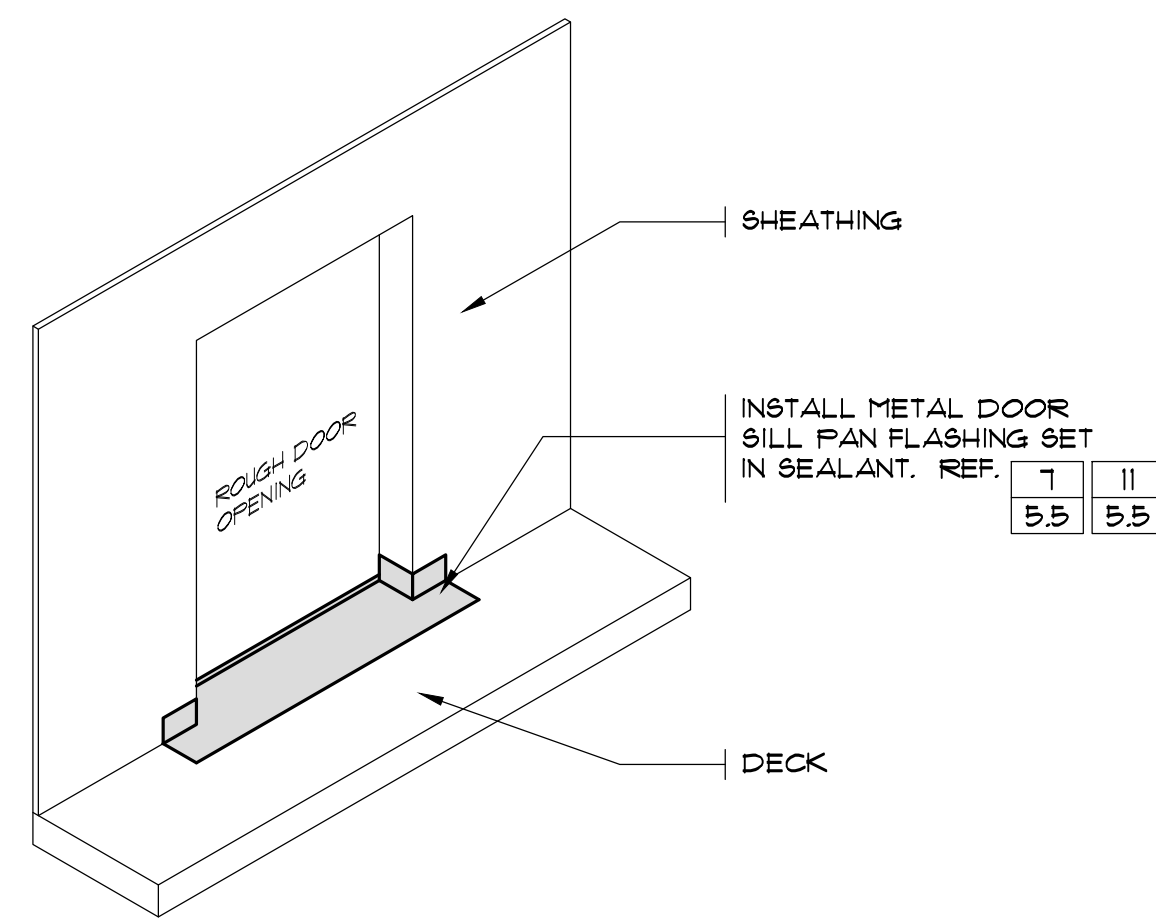
Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS		
Location	SEATTLE, WA		
Scale	3/8" = 1'-0"		
Author	N. FRITZ		
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Date	JUNE 2026		
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Approved	JUNE 2026		

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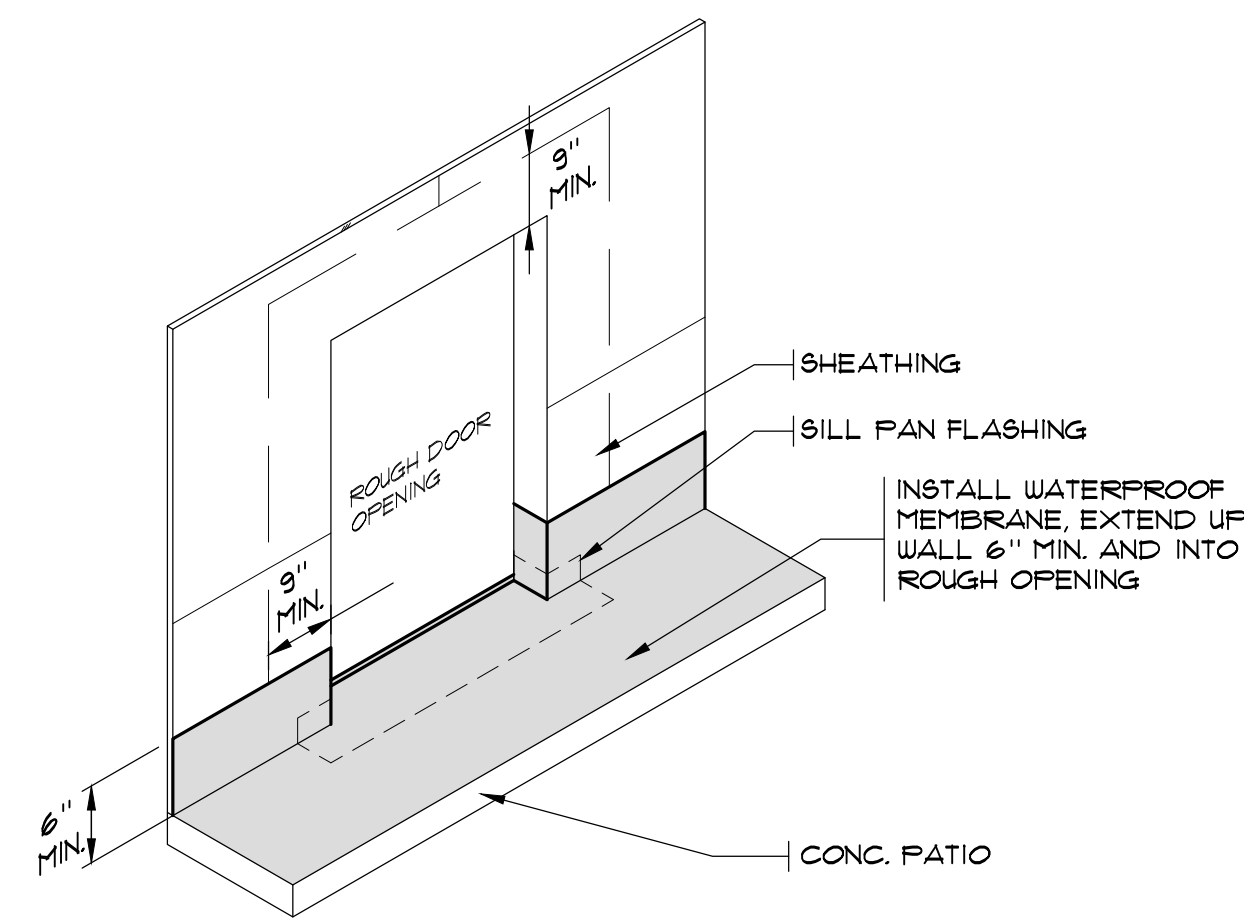
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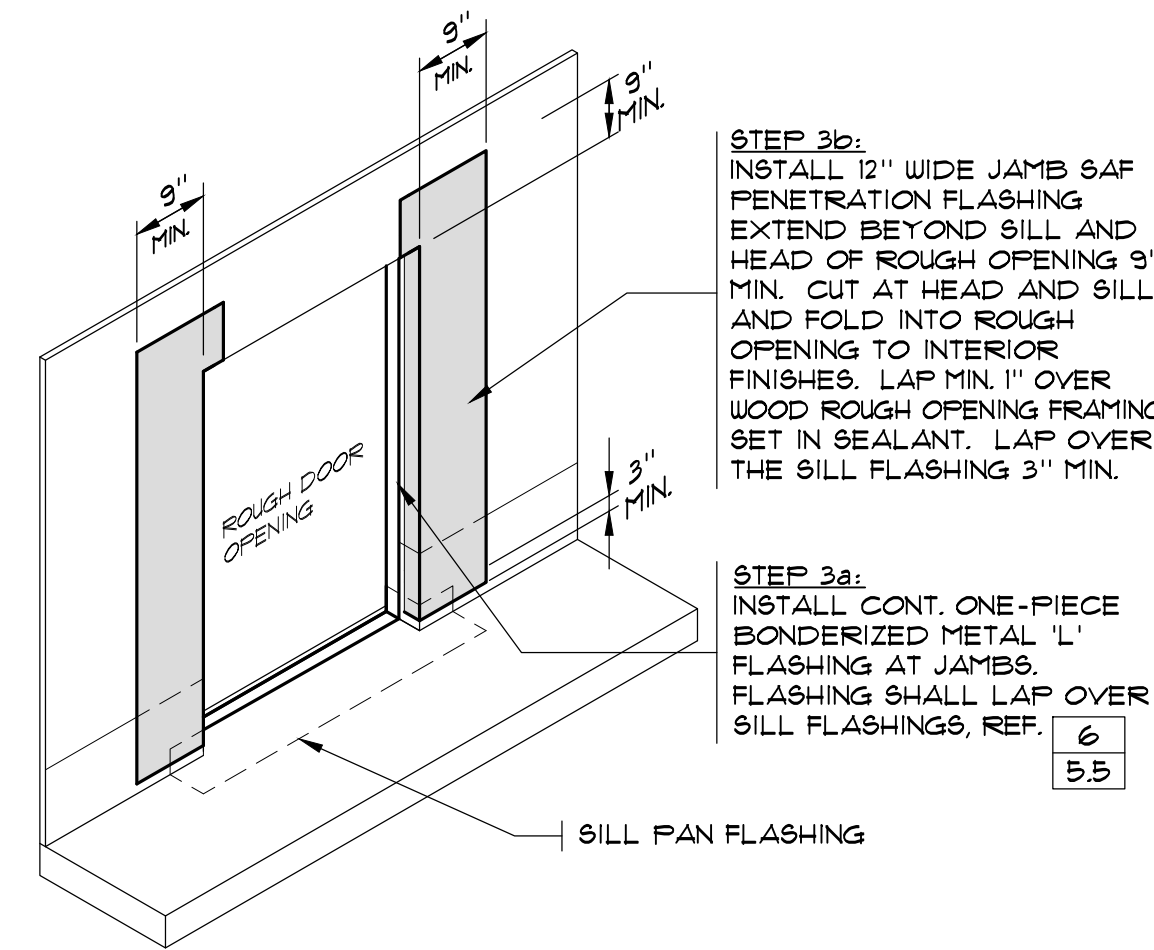
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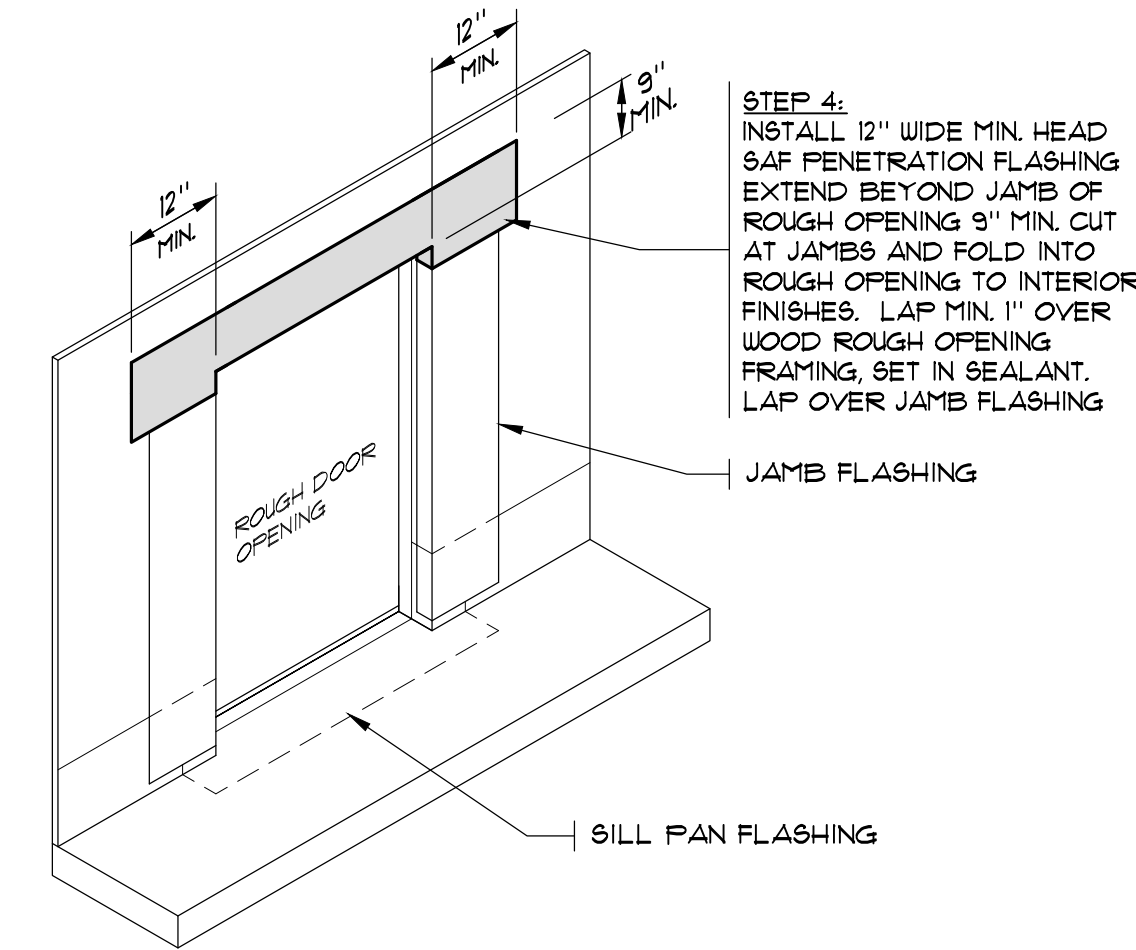
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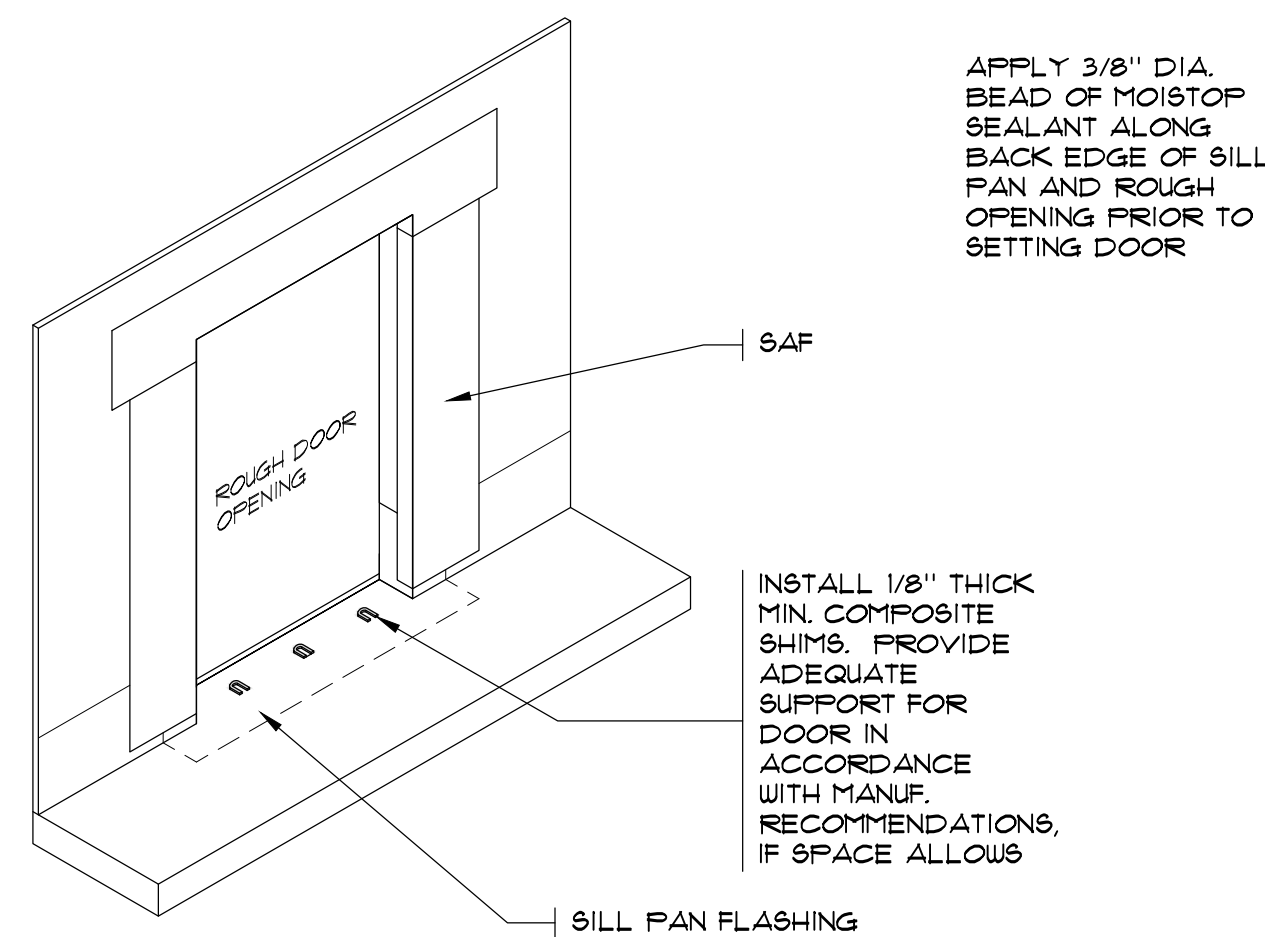
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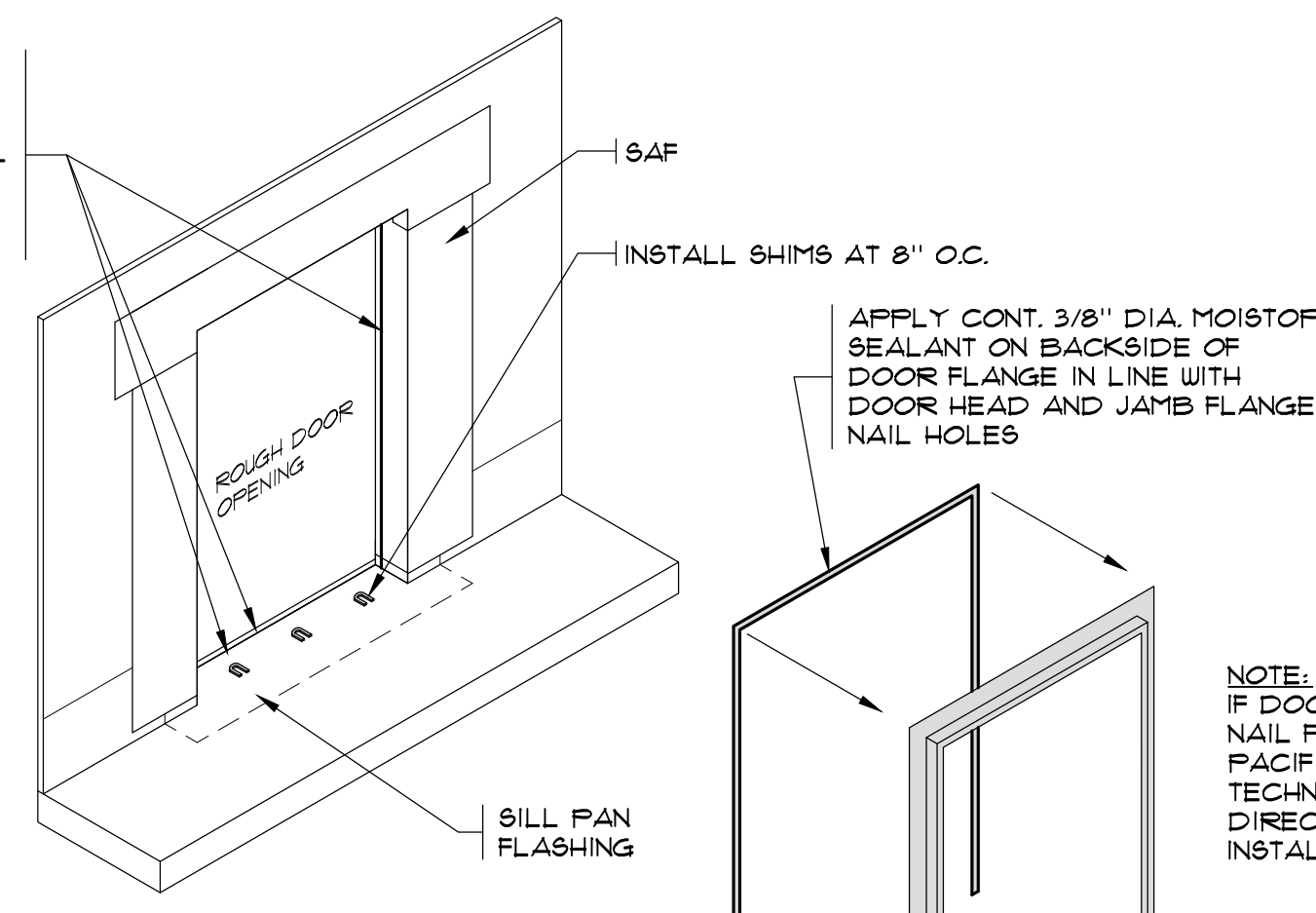
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STEP #4

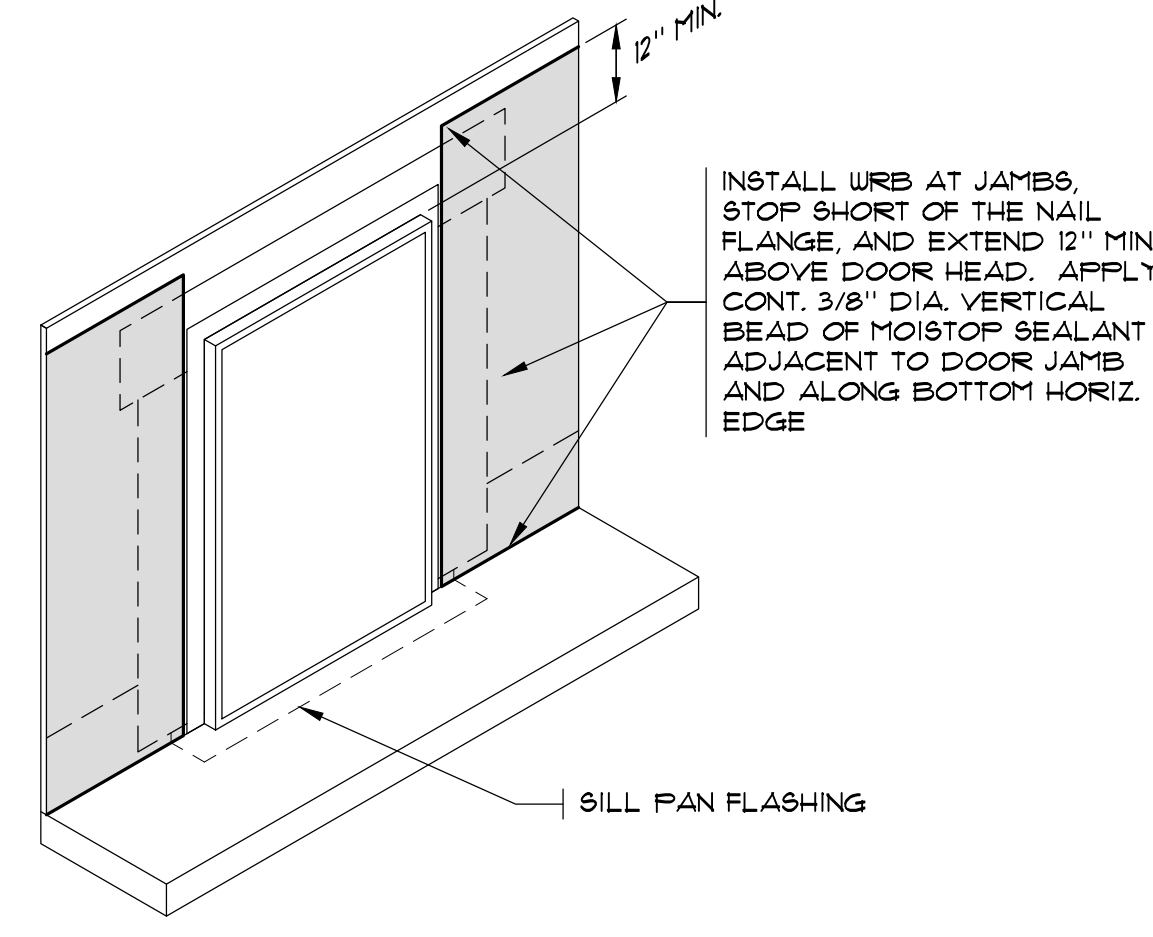


STEP #5

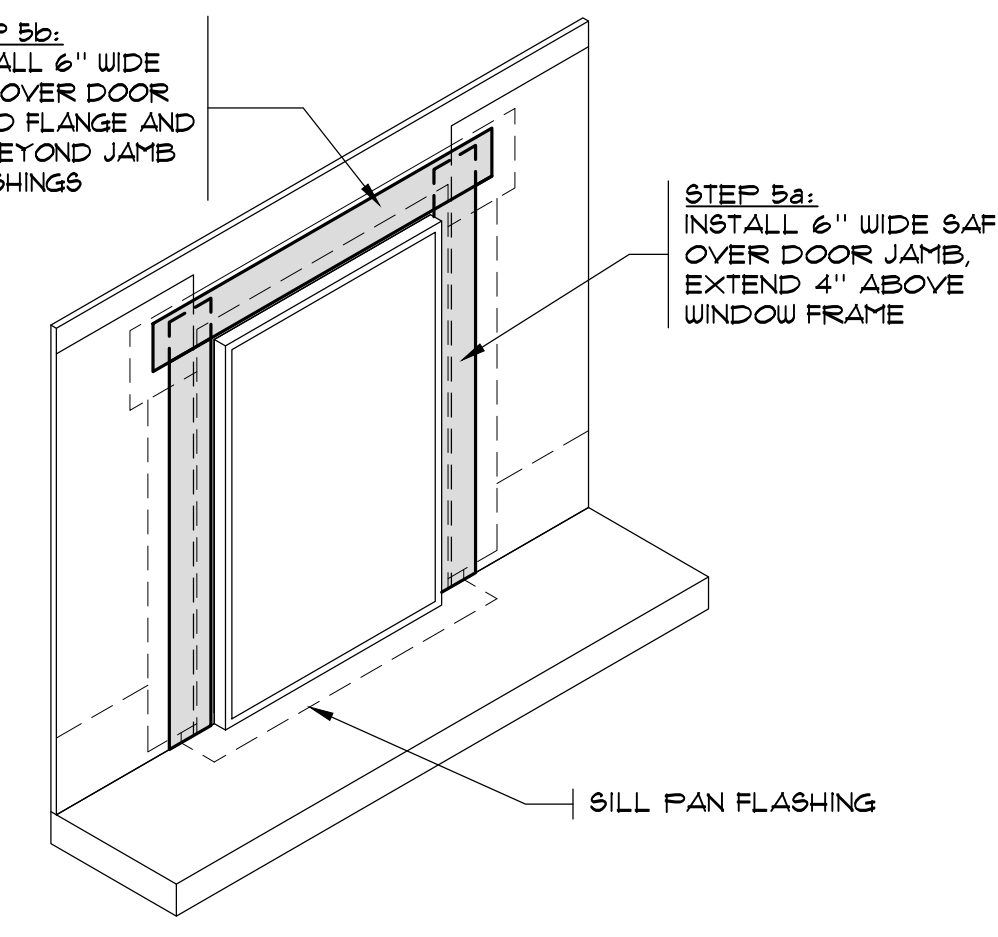


STEP #6

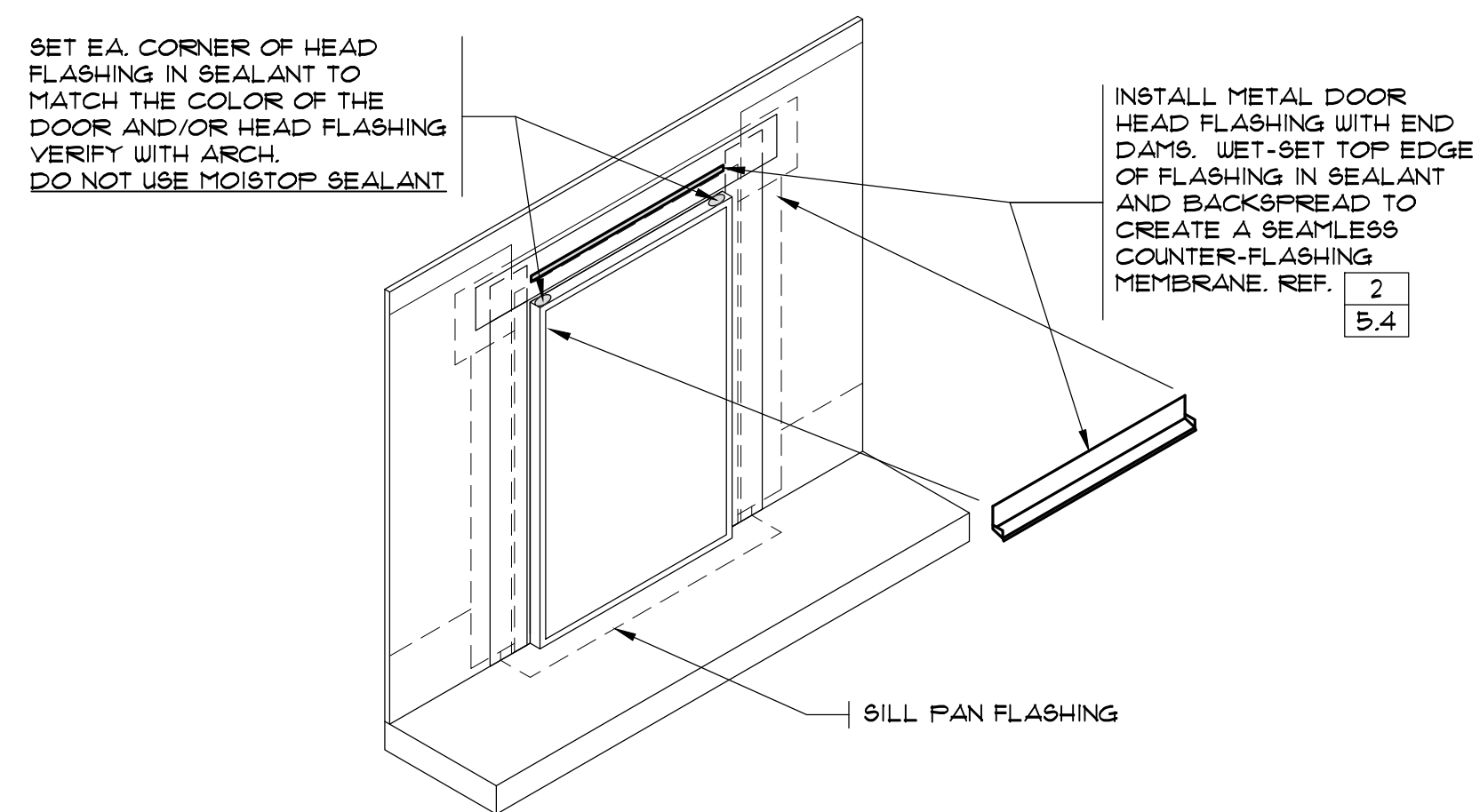
NOTE:
IF DOOR DOES NOT HAVE A NAIL FLANGE, CONTACT PACIFIC ENGINEERING TECHNOLOGIES, INC. FOR DIRECTION PRIOR TO INSTALLATION OF DOOR.



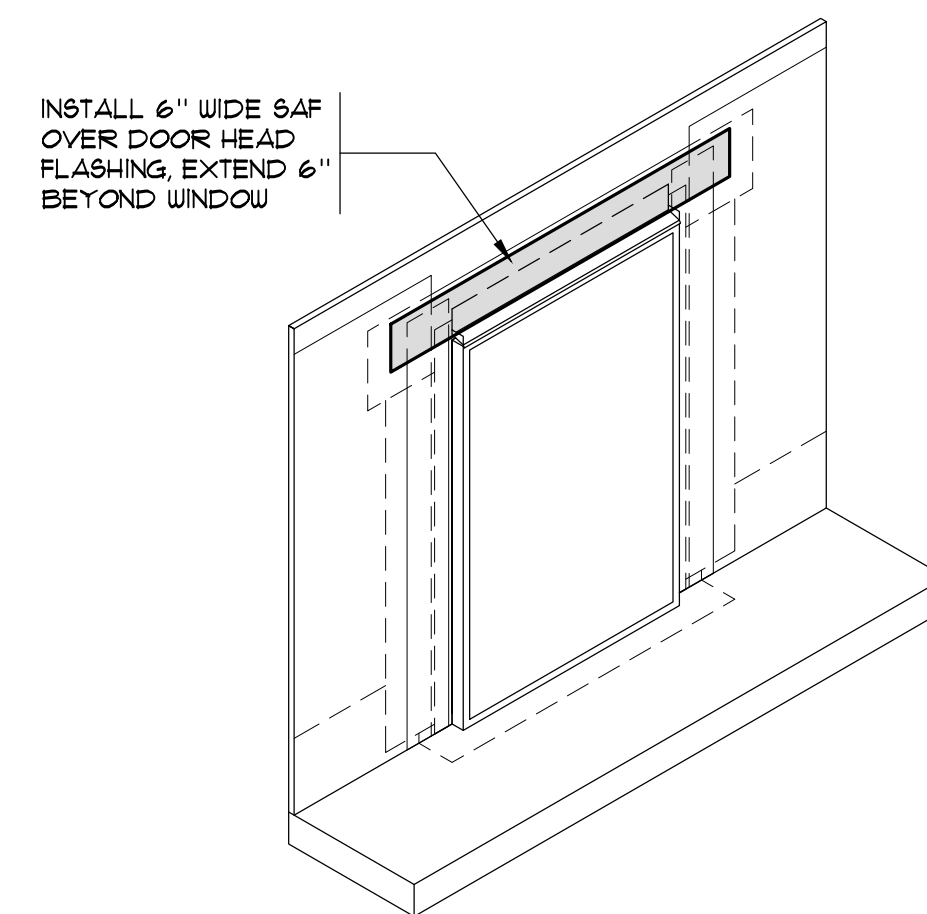
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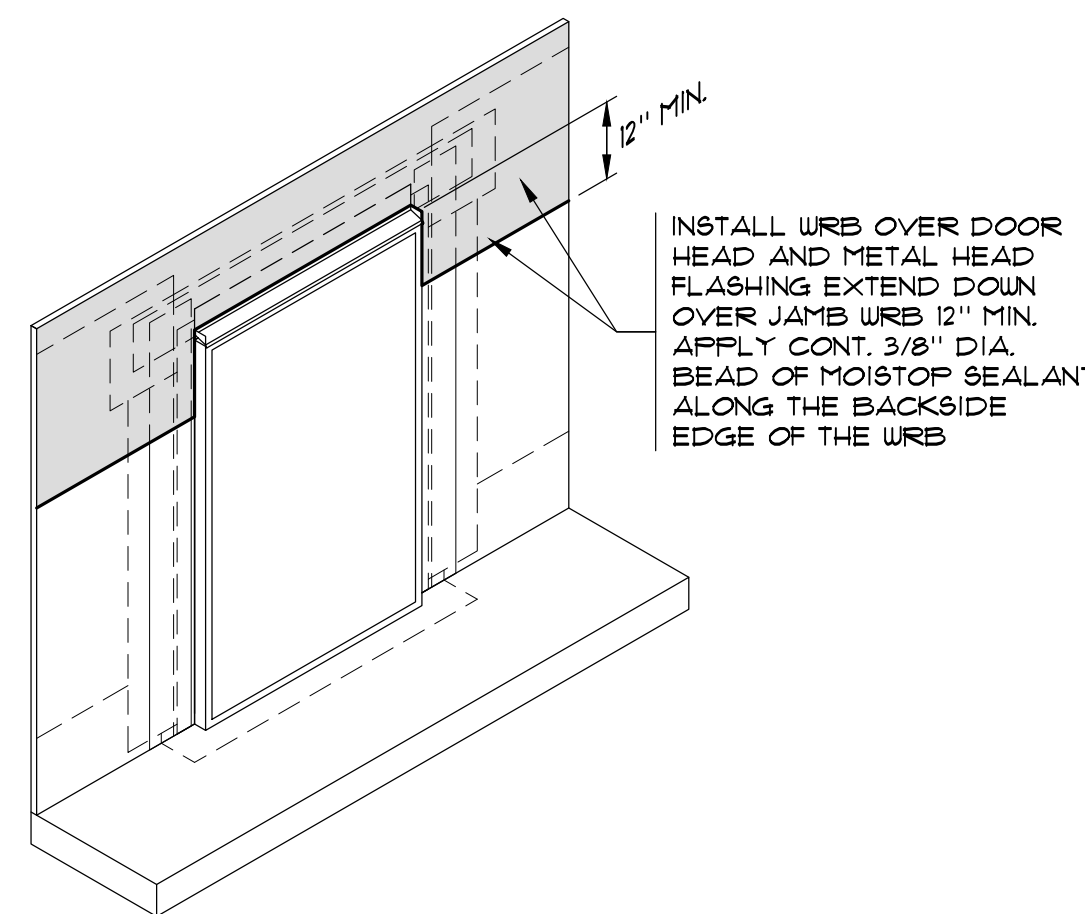
STEP #8



STEP #9



STEP #10



STEP #11

- GENERAL NOTES:**
1. CLEAN DOOR FRAME AND NAIL FLANGES SUFFICIENTLY TO BOND TO SEALANTS, IF PRESENT.
 2. PRIOR TO INSTALLATION OF DOOR FLASHING VERIFY ROUGH OPENING IS SQUARE AND THE APPROPRIATE SIZE PER DOOR MANUFACTURER'S RECOMMENDATIONS AND ALLOWS FOR THE REINSTALLATION OF THE DOOR AFTER THE FLASHINGS ARE INSTALLED. CORRECT AS NECESSARY.
 3. INSTALL FLASHINGS, SEALANT AND ATTACH DOOR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
 4. IF DOOR DOES NOT HAVE A NAIL FLANGE, CONTACT BUILDING ENVELOPE CONSULTANT FOR DIRECTION PRIOR TO INSTALLATION OF DOOR.
 5. REFERENCE DETAILS IN WEATHER RESISTIVE DESIGN DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN.
 6. THE CONTRACTOR SHALL PROVIDE A MOCK-UP OF THE DOOR DETAILS ON THIS SHEET FOR REVIEW BY THE BUILDING ENVELOPE CONSULTANT PRIOR TO PROCEEDING WITH THE INSTALLATION OF DOORS. THE MOCK-UP MAY REMAIN AS COMPLETED WORK AFTER IT HAS BEEN REVIEWED AND APPROVED.

TYPICAL SGD FLASHING SEQUENCE

SCALE: N.T.S.

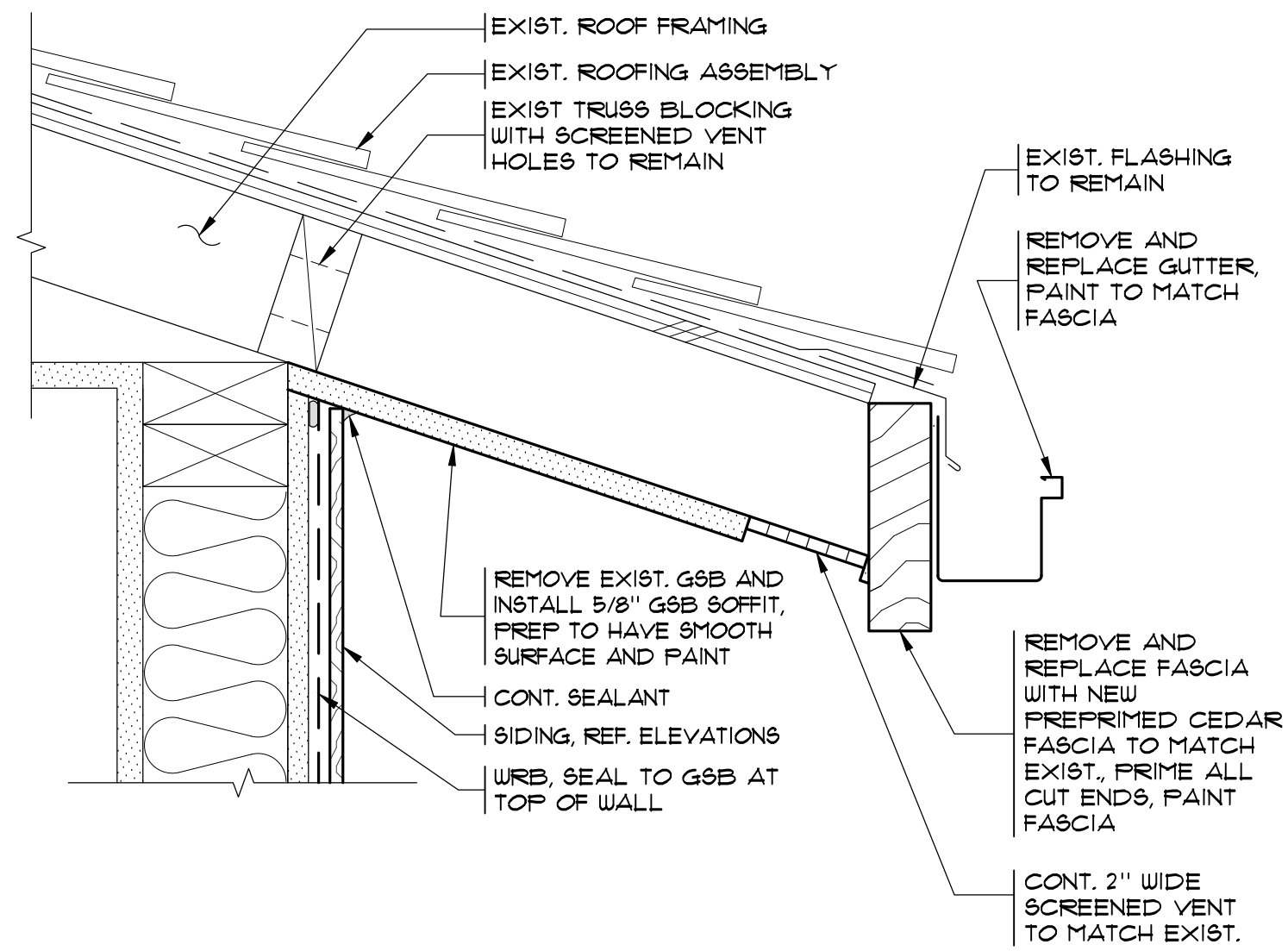
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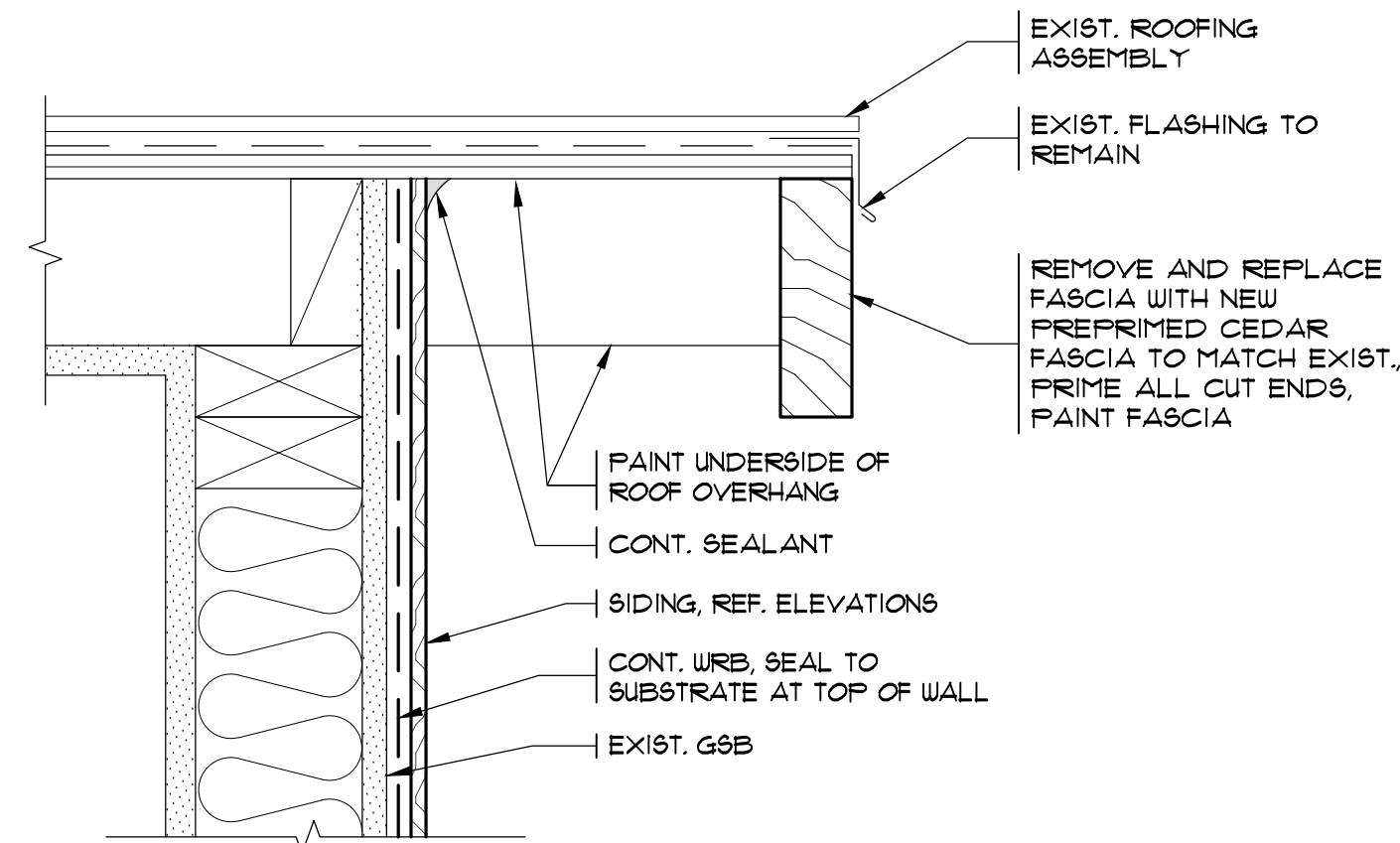
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Project	Contents	Details
CARRIAGE HOUSE APTS. BUILDING 'E'		
SELECT EXTERIOR IMPROVEMENTS		
3610 S. 180TH ST. SEACAC, WA		
Job No. 26014.00		
Sheet		
5.6		
Designed	N. FRITZ	
Drawn	RCP	
Checked	NLF	
Date	10 JUNE 2026	
Approved		
Revision	BID SET	
No.		
Date		

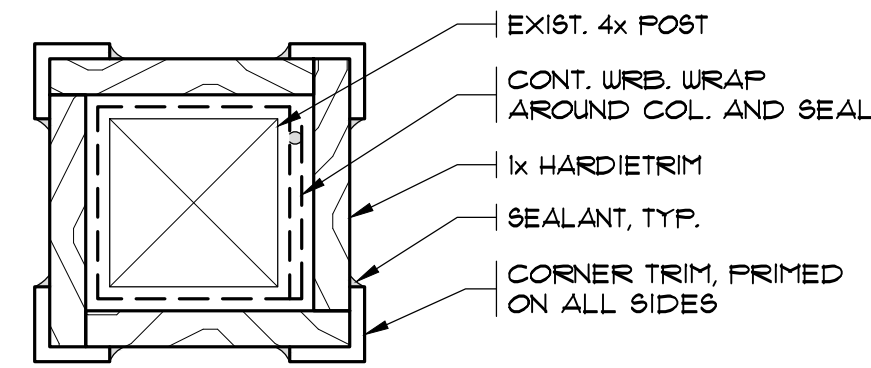
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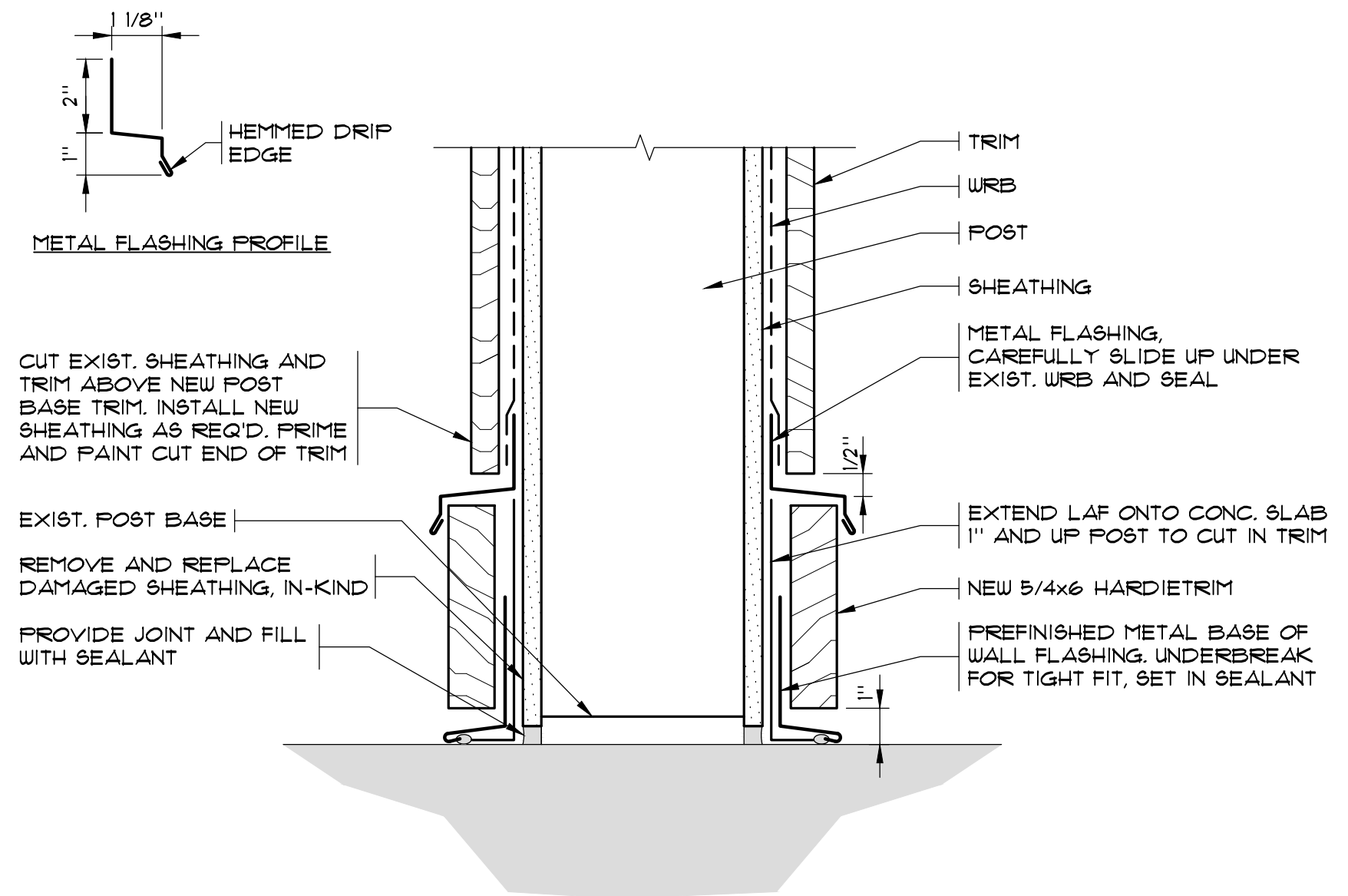
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SCALE: 3" = 1'-0"



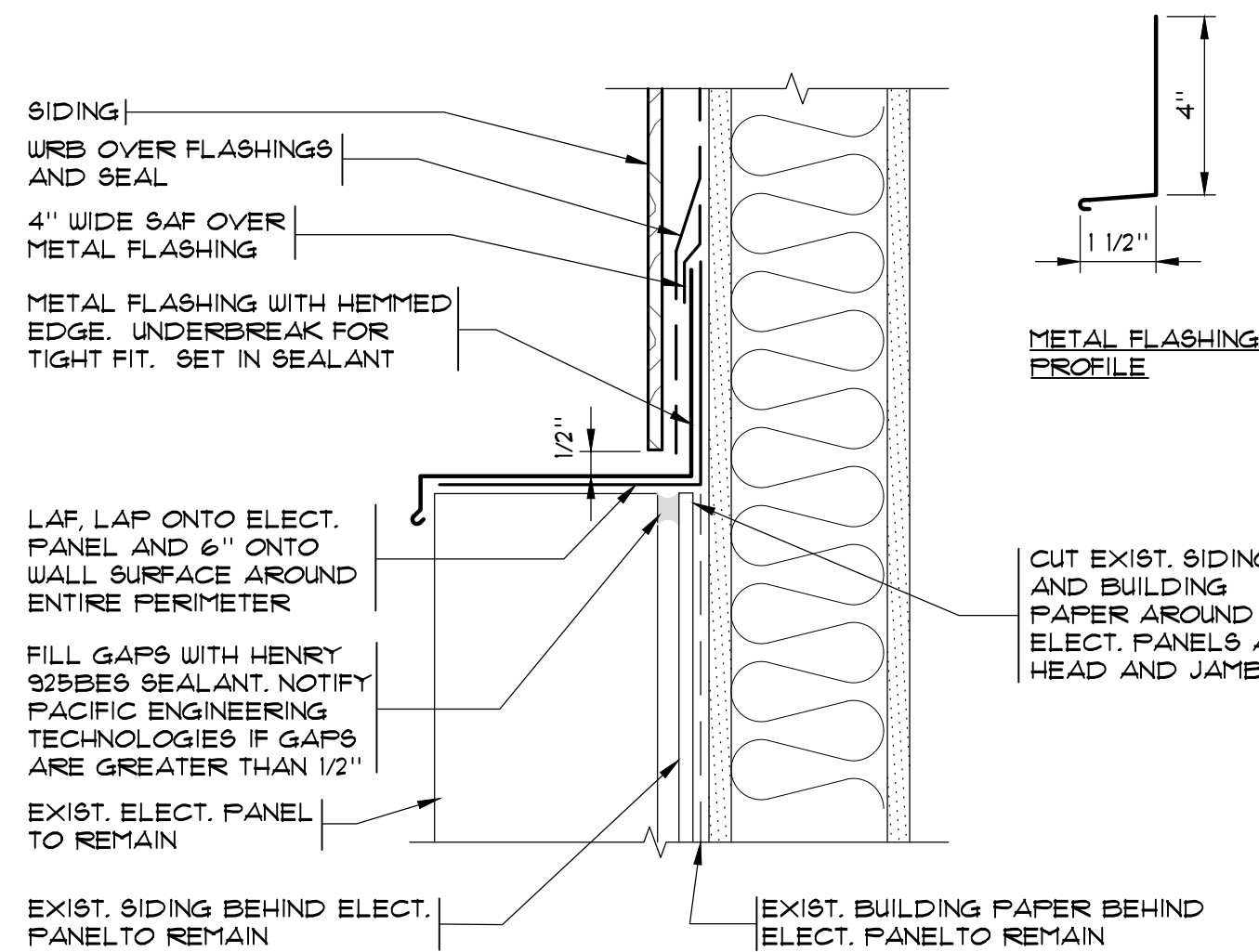
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SCALE: 3" = 1'-0"



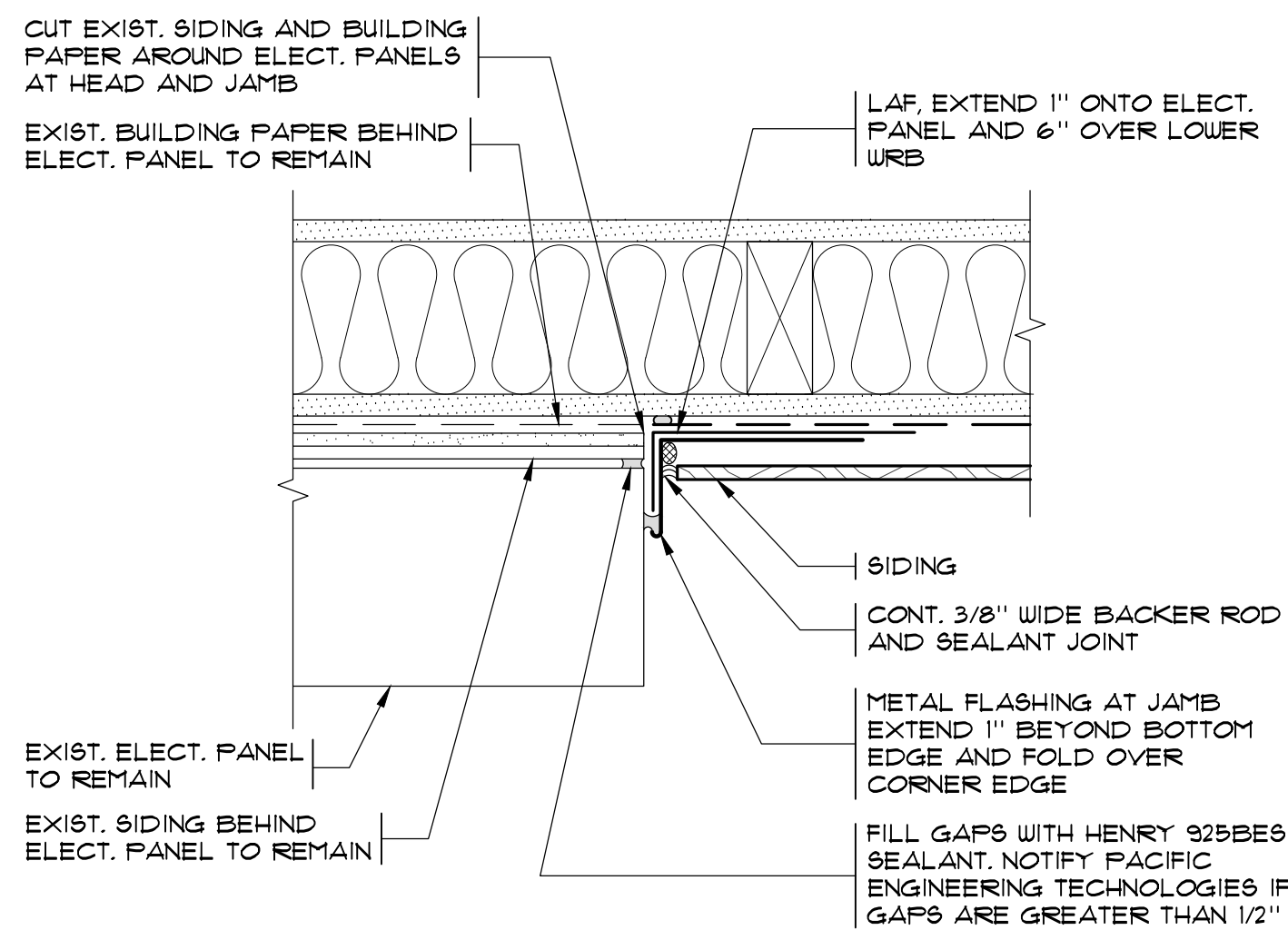
TYPICAL POST 3
SCALE: 3" = 1'-0"



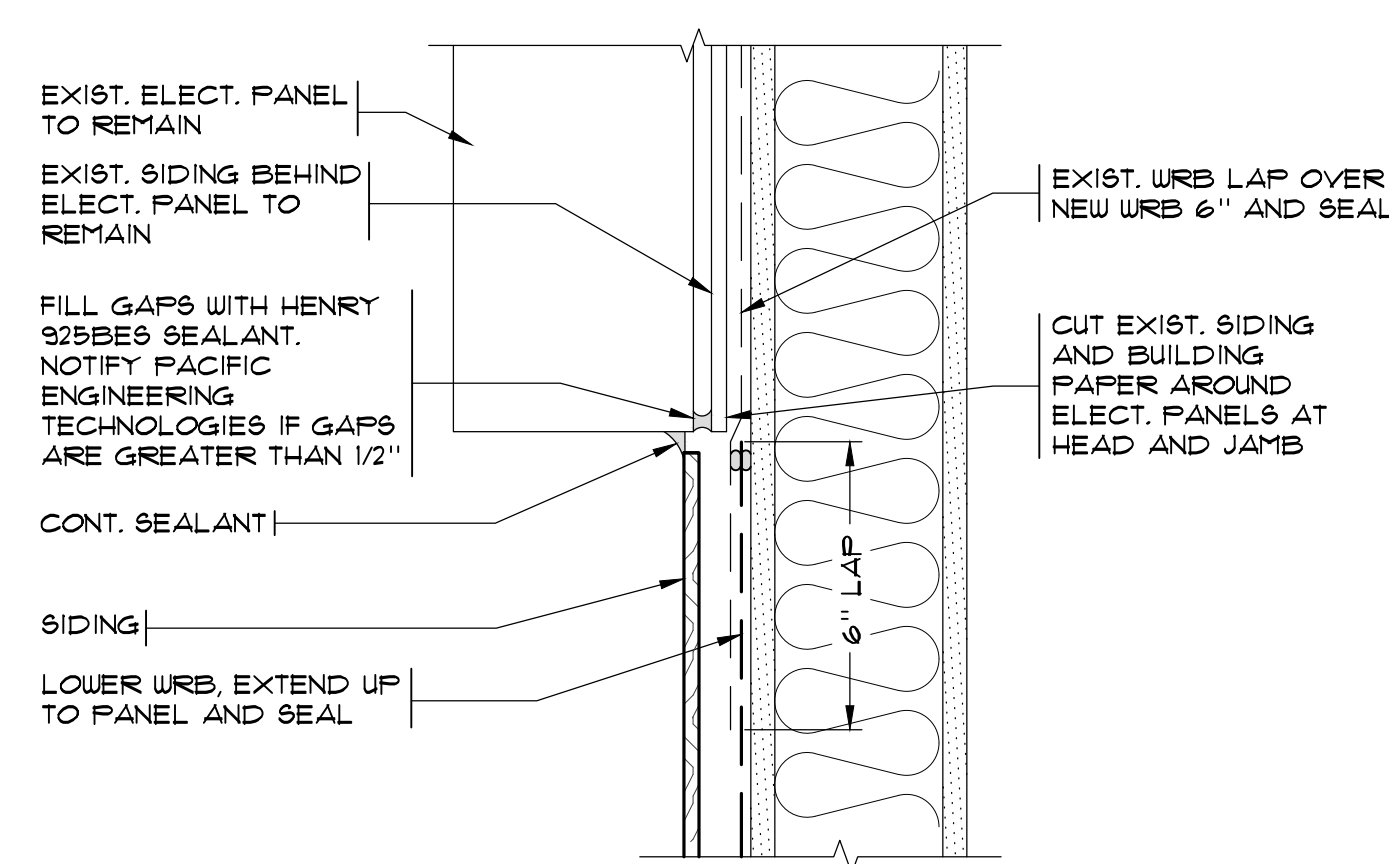
TYP. POST BASE FLASHING 4
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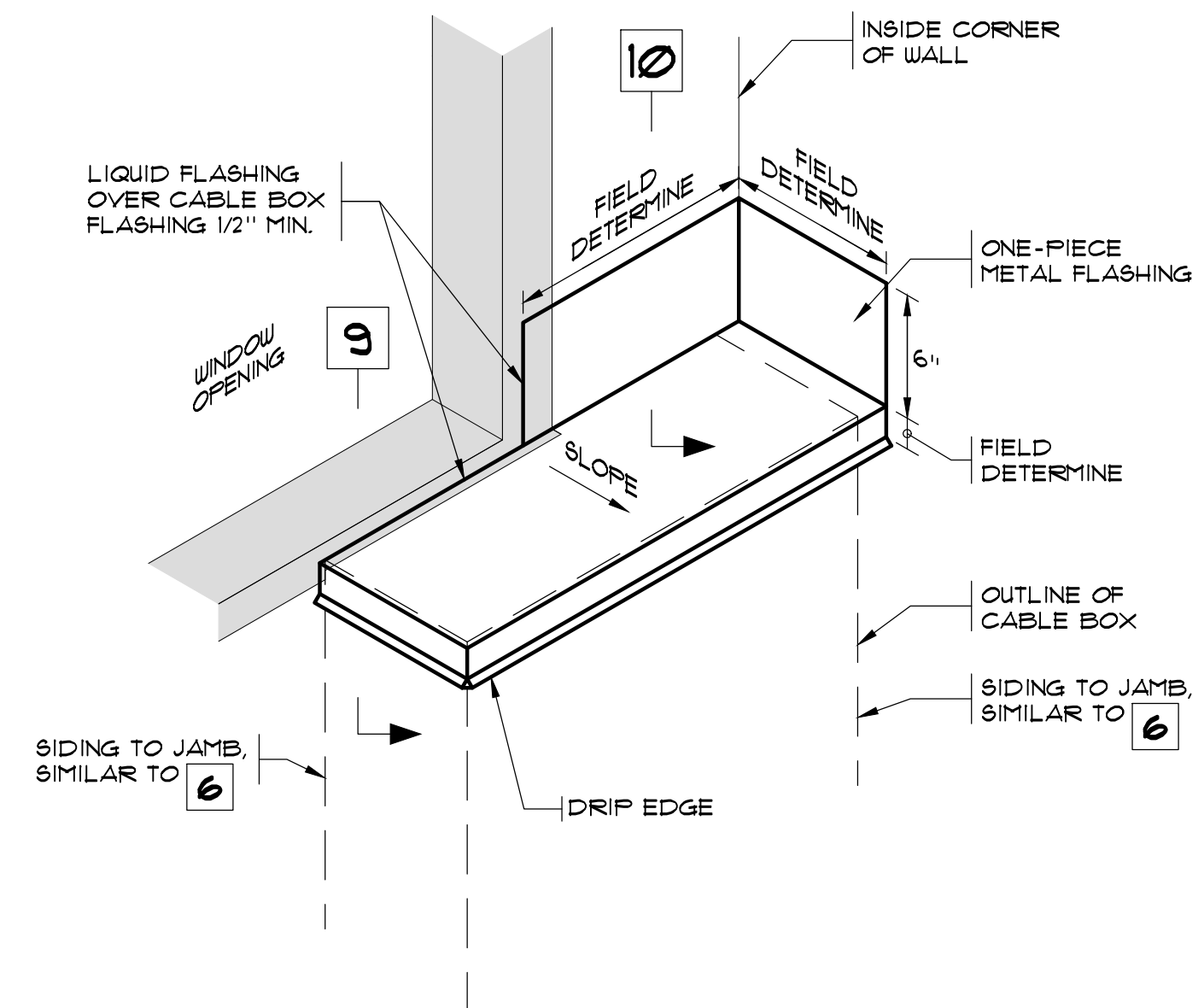
TYP. ELECTRICAL PANEL HEAD 5
SCALE: 3" = 1'-0"



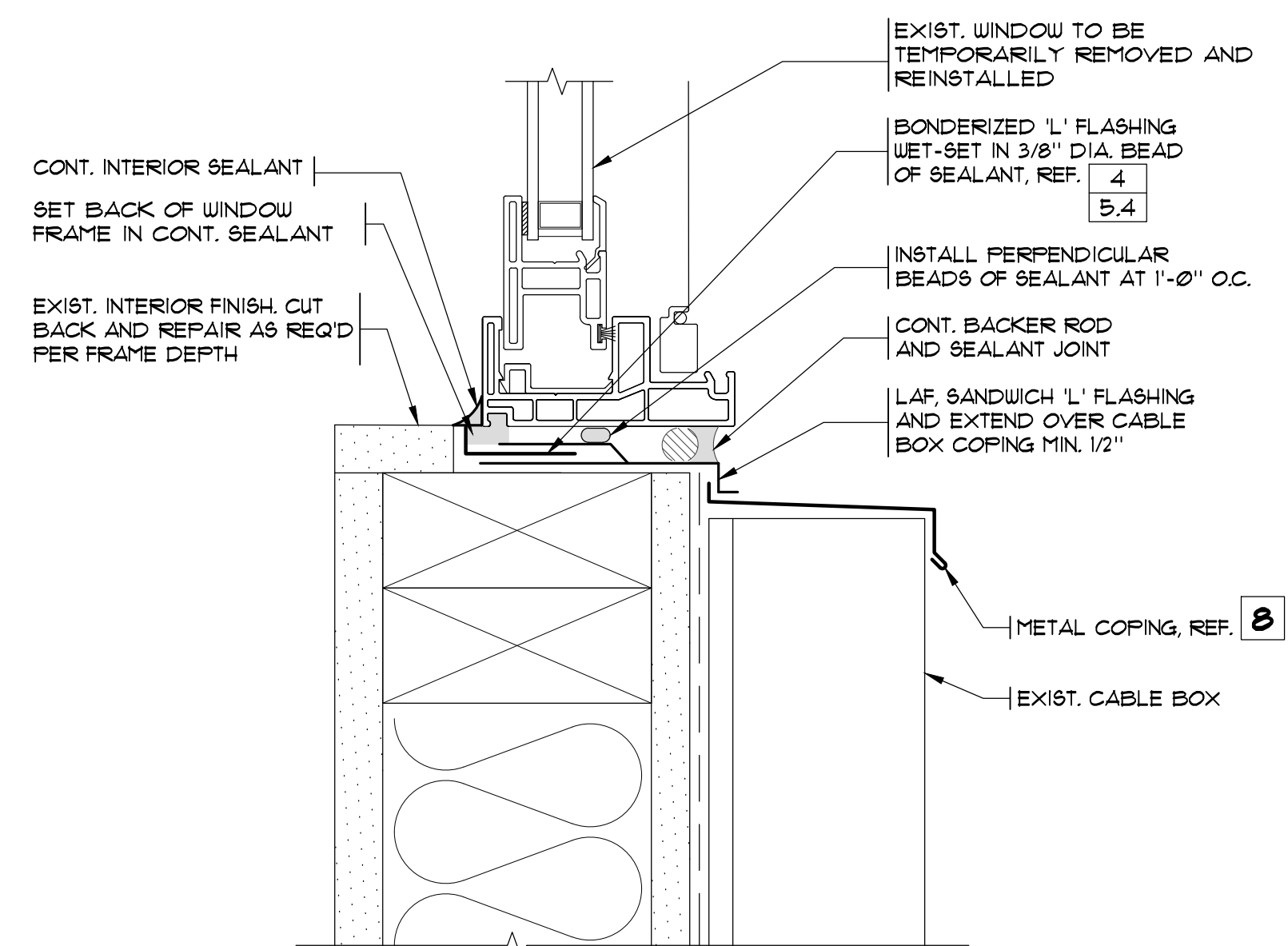
TYP. ELECTRICAL PANEL JAMB 6
SCALE: 3" = 1'-0"



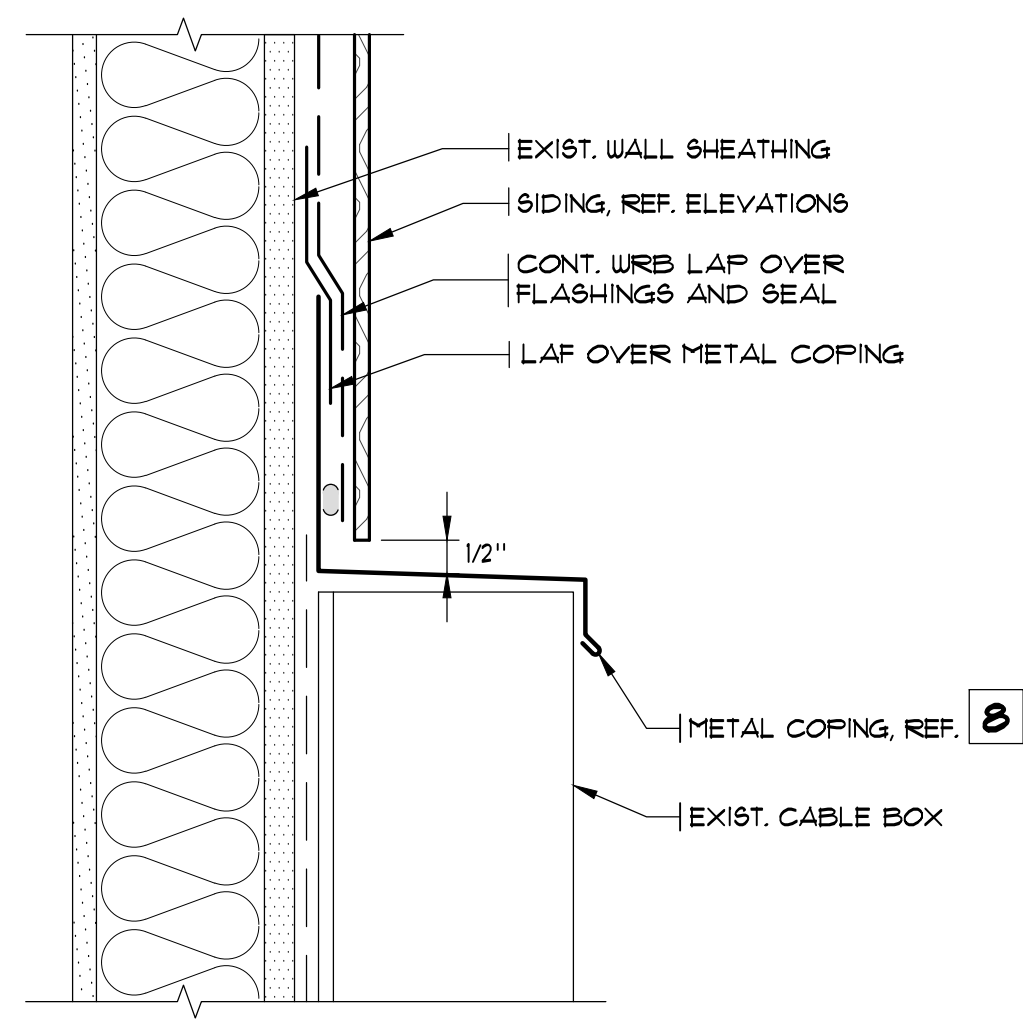
TYP. ELECTRICAL PANEL SILL 7
SCALE: 3" = 1'-0"



CABLE BOX METAL COPING 8
SCALE: N.T.S.



WINDOW SILL AT CABLE BOX 9
SCALE: 6" = 1'-0"



CABLE BOX HEAD AT SIDING 10
SCALE: 6" = 1'-0"

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Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	SEATTLE, WA
Sheet	5.1	Job No. 26014.00
Revision	BID SET	Date
No.	N. FRITZ	Drawn
Checked	RGP	Checked
Date	JUNE 2026	Approved
Approved	NLF	Approved
4444 Woodland Park Ave N., Suite 100 Seattle, Washington 98103-7499	(206) 281-7500	

Contents	DETAILS
Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS
Sheet	5.1
Job No.	26014.00

STEP #2
INSTALL SOFFIT CORNER
SADDLE FLASHING WITH
6" FLANGES OVER WRB
AND SAF, REF. SECTION
3

WALL SHEATHING

STEP #1a
INSTALL WALL
WRB CONT. UNDER
SOFFIT SADDLE
FLASHING

STEPS #1 AND #2

STEP #1b
INSTALL CONT. SAF
ALONG BOTTOM EDGE,
EXTEND ONTO
ADJACENT WALL 9"
OVER WRB ON WALL,
REF. 1
5.8

SOFFIT CORNER
FLASHING

WALL SHEATHING

STEP #2b
INSTALL SAF CONT. 9"
ONTO ADJACENT WALL
SURFACE, LAP OVER
SOFFIT FLASHING AND
WRB

WALL WRB

STEP #3

STEP #3a:
INSTALL SOFFIT
METAL DRIP
FLASHING, REF. 1
5.8

STEP #4
INSTALL METAL DECK
SADDLE FLASHING
OVER SEPARATION
SHEET (NOT SHOWN)
AND SET IN SEALANT
(SHOWN DASHED),
REF. SECTION
2
OFF
HAND

WALL SHEATHING

WALL WRB

SOFFIT CORNER
FLASHING

STEP #4

STEP #5b
INSTALL DECK
EDGE FLASHING
OVER DECK FASCIA,
REF. 1
5.8

SADDLE
FLASHING

WALL WRB

SOFFIT CORNER
FLASHING

STEP #5

STEP #5a:
FASCIA

SADDLE FLASHING

DECK EDGE
FLASHING

WALL WRB

STEP #6

STEP #6:
INSTALL METAL
DECK TO WALL
FLASHING, REF. 4
5.8

FASCIA AND
SAF

SOFFIT CORNER
FLASHING

SADDLE
FLASHING

DECK EDGE
FLASHING

WALL WRB

STEPS #7 AND #8

DECK TO WALL
FLASHING

STEP #8:
INSTALL WATERPROOF
MEMBRANE OVER
FLASHINGS AND EXTEND
UP WALL FLASHING 6" MIN.

FASCIA AND
SAF

SOFFIT CORNER
FLASHING

TYPICAL DECK SADDLE FLASHING AT FLAT WALL 1

SCALE: NONE

NOTES:

1. SIM. SECTION OMIT FASCIA
FLASHING AND FASCIA
2. FRAMING CONDITIONS SHOWN ARE
SCHEMATIC AND DO NOT SHOW
EXIST. BEAM AND EXISTING FIELD
CONDITIONS MAY DIFFER FROM
WHAT IS SHOWN
3. FURRING AND SIDING NOT SHOWN

WALKWAY DOWNSPOUT 5

SCALE: 3" = 1'-0"

NEW DOWNSPOUT. INSERT INTO
THROUGH FLASHING. PROVIDE
CLEANOUT

WATERPROOF MEMBRANE.
EXTEND UP FLASHING AND
INTO THROUGH DOWNSPOUT
DRAIN FLASHING

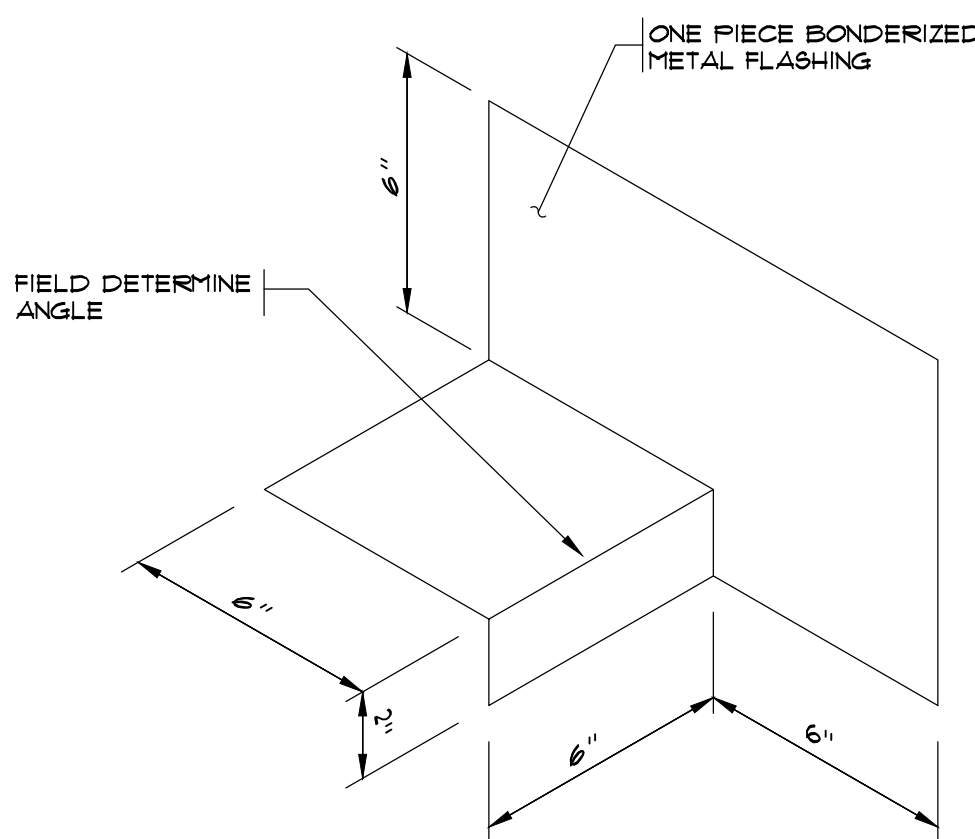
WATERPROOF MEMBRANE
EXTEND UP FLASHING AND
INTO OPENING

PIECE 'A', REF. 6

TWO-PIECE THROUGH
WALKWAY FLASHING,
REF. 6

PIECE 'B', REF. 6

NEW DOWNSPOUT. CONNECT TO
THROUGH FLASHING

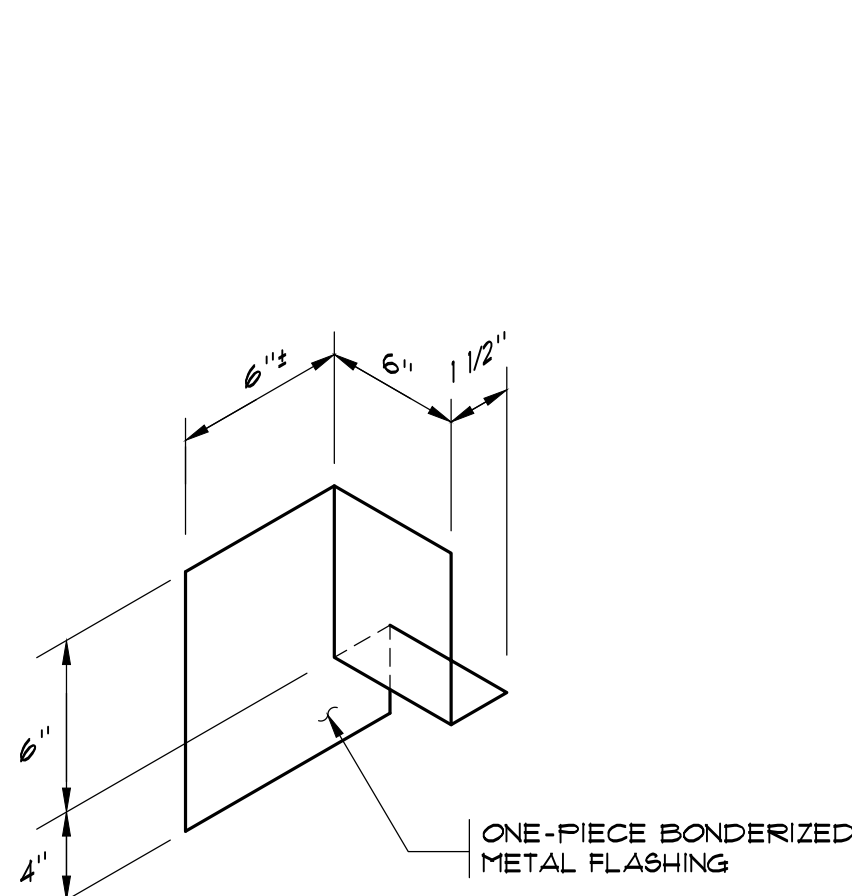


NOTES:

1. SADDLE FLASHING TO BE INSTALLED FIRST
PRIOR TO OTHER DECK SURFACE FLASHINGS.
2. REF. MATERIAL SPECIFICATION FOR
ADDITIONAL INFORMATION
3. PLACE FLASHING OVER TARGET FLASHING
STRIPS (WRB)

DECK SADDLE CORNER FLASHING 2

SCALE: NONE



NOTES:

1. REF. MATERIAL SPECIFICATION FOR
ADDITIONAL INFORMATION
2. EXIST. CONDITIONS WILL VARY. MODIFY
FLASHING TO MATCH WALL ANGLES
3. PLACE FLASHING OVER TARGET FLASHING
STRIPS (WRB)

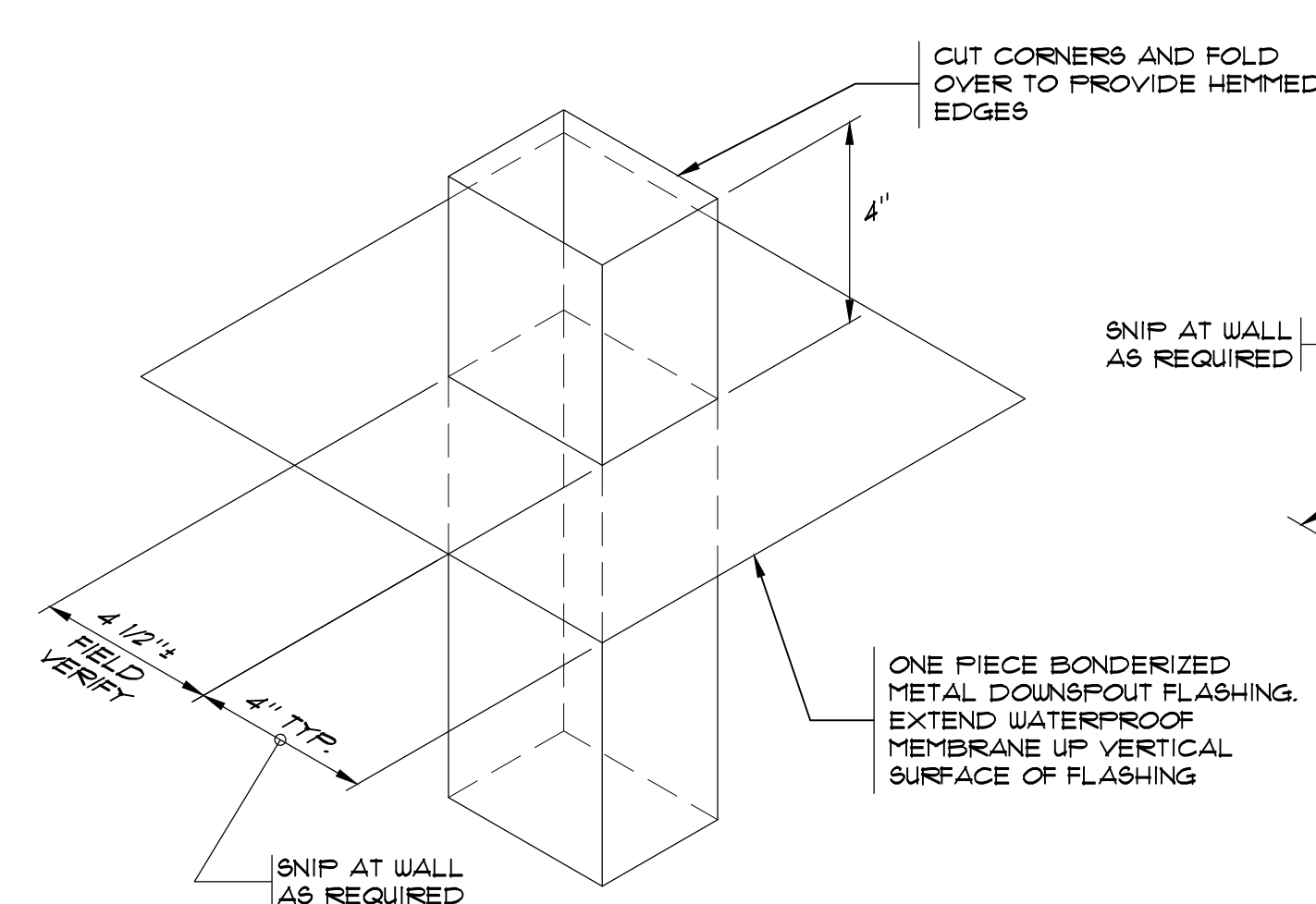
SOFFIT SADDLE CORNER FLASHING 3

SCALE: NONE

NOT USED

SECTION 4

SCALE: 3" = 1'-0"



PIECE 'A'

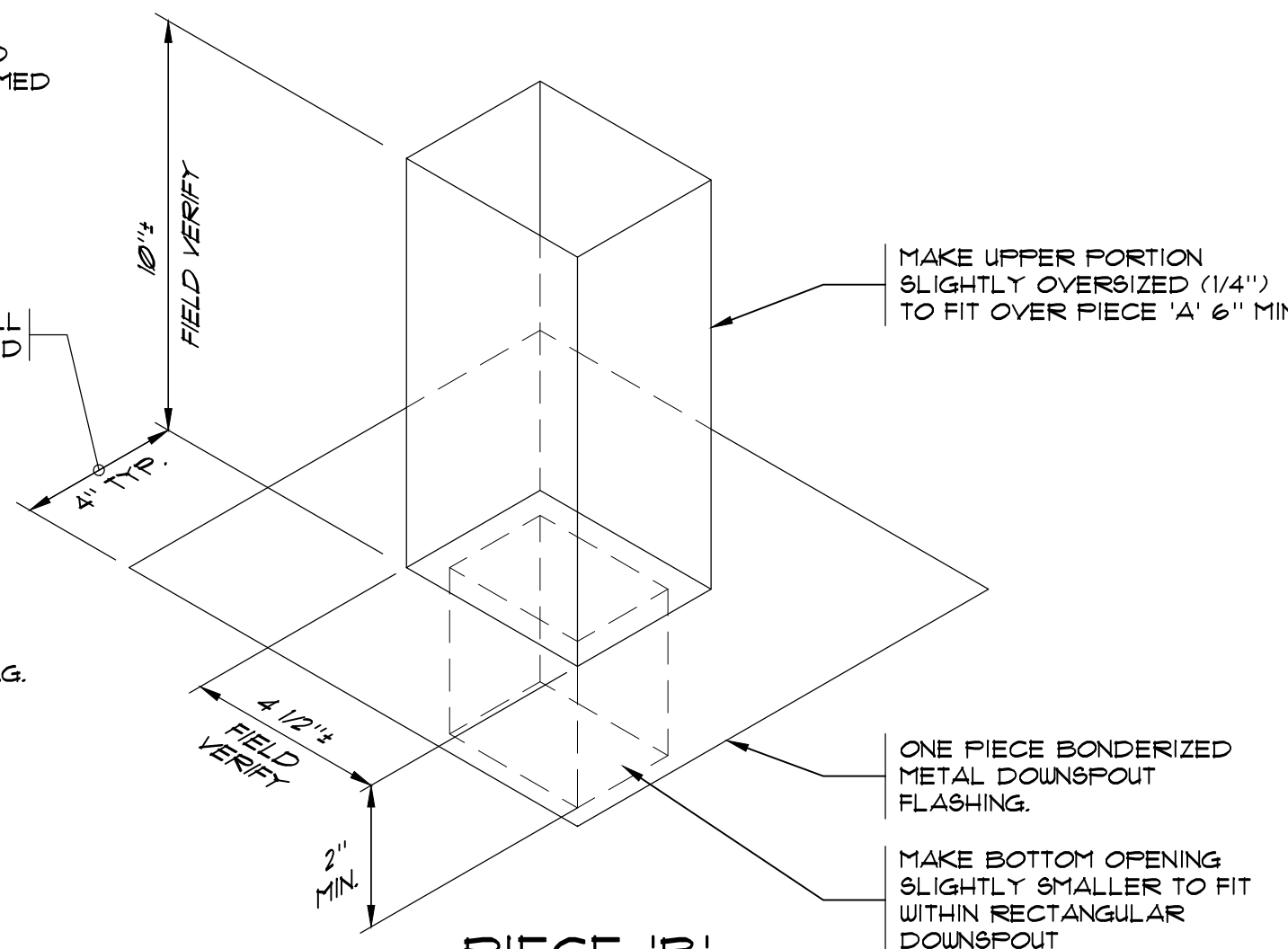
CUT CORNERS AND FOLD
OVER TO PROVIDE HEMMED
EDGES

ONE PIECE BONDERIZED
METAL DOWNSPOUT FLASHING.
EXTEND WATERPROOF
MEMBRANE UP VERTICAL
SURFACE OF FLASHING

SNIP AT WALL
AS REQUIRED

TYP. DOWNSPOUT THROUGH DECK FLASHING 6

SCALE: N.T.S.



PIECE 'B'

MAKE UPPER PORTION
SLIGHTLY OVERSIZED (1/4")
TO FIT OVER PIECE 'A' 6" MIN.

ONE PIECE BONDERIZED
METAL DOWNSPOUT
FLASHING.

MAKE BOTTOM OPENING
SLIGHTLY SMALLER TO FIT
WITHIN RECTANGULAR
DOWNSPOUT

Project
CARRIAGE HOUSE APTS.
BUILDING 'E'
SELECT EXTERIOR
IMPROVEMENTS
SEATTLE, WA
3610 S. 180TH ST.

Sheet
5.9

Job No. 26014.00

PACIFIC
ENGINEERING TECHNOLOGIES, INC.
4444 Woodland Park Ave N., Suite 100
Seattle, Washington 98103-7499
(206) 281-7500

Revision
No.
Date
Designed
N. FRITZ
Drawn
RGP
Checked
NLF
Date
10 JUNE 2026
Approved

STRUCTURAL NOTES:

CODE:
THE WASHINGTON STATE BUILDING CODE (WSBC) 2021 EDITION AND THE 2021 WASHINGTON STATE EXISTING BUILDING CODE (WSBEC).

LIVE LOADS:
FLOOR 40 PSF
DECK 100 PSF

CONCRETE:
CONCRETE Fc = 3,000 PSI AT 28 DAYS. CONCRETE EXPOSED TO THE WEATHER IS TO BE AIR-ENTRAINED.

CONCRETE PROTECTION FOR REINFORCING SHALL BE AS FOLLOWS:

BOTTOM OF FOOTINGS 3"
CONCRETE EXPOSED TO EARTH & WEATHER (#5 & LARGER) 2"
(#5 & SMALLER) 1 1/2"

ALL CONCRETE IN FOOTINGS SHALL BE PLACED IN A MONOLITHIC POUR UNLESS SHOWN OTHERWISE OR APPROVED BY THE ENGINEER PRIOR TO PLACING. ALUMINUM CONDUIT AND ACCESSORIES SHALL NOT BE EMBEDDED IN CONCRETE.

NAILS:
NAILING SHALL BE IN ACCORDANCE W/ FASTENING SCHEDULE TABLES 11-13 IN ICC-ES EVALUATION REPORT ESR-1539 PREPARED FOR THE INTERNATIONAL STAPLE, NAIL AND TOOL ASSOCIATION (ISANTA). ALL NAILS SHALL HAVE STANDARD SIZE ROUND HEADS UNLESS NOTED OTHERWISE ON THE DRAWINGS. NAIL LENGTHS AND DIAMETERS SHALL BE AS FOLLOWS:

10d 3" x Ø13 1/8" DIA.
10d COMMON 3" x Ø14 5/8" DIA.

ALL NAILS EXPOSED TO WEATHER OR IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153-CLASS D.

ADHESIVE FOR ANCHOR BOLTS:
ADHESIVE FOR ATTACHMENT TO CRACKED OR UNCRACKED CONCRETE SHALL BE SIMPSON STRONG-TIE AT-3G ACRYLIC ADHESIVE (ICC-ES AC308), UNLESS NOTED OTHERWISE ON THE PLANS. BOLTS SHALL BE STAINLESS STEEL ALL-THREAD ROD ANCHORS, UNLESS NOTED OTHERWISE ON THE PLANS.

HOLE DRILLING AND PREPARATION AS WELL AS INSTALLATION OF ANCHORS TO BE IN ACCORDANCE WITH SIMPSON'S PRINTED INSTALLATION INSTRUCTIONS. CONCRETE MUST BE DRY AND ITS TEMPERATURE MUST BE 23 DEGREES OR HIGHER AT TIME OF INSTALLATION. CONTACT ENGINEER IF THESE SITE CONDITION CANNOT BE ACHIEVED. THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 2500 PSI AT TIME OF INSTALLATION. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS.

LAG SCREWS:
LAG SCREWS SHALL CONFORM TO ANSI/A308 STANDARD B182.1 REFERENCE DRAWINGS FOR MINIMUM SCREW DIAMETER AND LENGTHS. ALL LAG SCREWS EXPOSED TO WEATHER OR IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153-CLASS C.

SCREWS INSTALLED IN WOOD:
SCREWS FOR INSTALLATION IN WOOD SHALL BE MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, IN ACCORDANCE WITH ICC-ES REPORT ESR-2236 AND IAPMO US REPORT #92. THE SCREW DIAMETERS AND LENGTHS ARE AS FOLLOWS:

SDUS22 (Ø.22" DIAMETER, LENGTHS: 3" TO 10")

SDUS22 SCREWS HAVE PROPRIETARY CORROSION-RESISTANT COATINGS EQUIVALENT TO ASTM A153-CLASS D AND ARE INTENDED TO BE USED WHERE EXPOSED TO WEATHER OR IN CONTACT WITH MOST PRESSURE TREATED WOOD. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL LOAD CAPACITIES AND CORROSION RESISTANCE.

LIGHT GAUGE FRAMING CONNECTORS:
NOTATIONS ON DRAWINGS RELATING TO FRAMING CLIPS, JOIST HANGERS AND OTHER CONNECTING DEVICES REFER TO CATALOG NUMBERS OF CONNECTORS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, DUBLIN, CALIFORNIA. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL LOAD CAPACITIES. CONNECTORS SHALL BE FASTENED TO THE FRAMING MEMBERS USING THE NUMBER AND TYPE OF FASTENERS CALLED FOR BY MANUFACTURER.

CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE ZMAX/HDG GALVANIZED. ALL FASTENERS USED WITH ZMAX/HDG GALVANIZED CONNECTORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153-CLASS D OR SDS SCREWS WITH PROPRIETARY COATING.

STRUCTURAL LUMBER GRADES AND SHEATHING RATINGS:
ALL LUMBER SHALL BE GRADED IN ACCORDANCE WITH CURRENT WUPA STANDARD GRADING RULES FOR WESTERN LUMBER. USE THE FOLLOWING SPECIES AND MINIMUM GRADE:

SISTERS HEM-FIR #2 Fc=850 PSI
STUDS & COLUMNS HEM-FIR #2 Fc=1300 PSI OR STUD GRADE Fc=800 PSI
WALL PLATES & SILLS HEM-FIR #2 Fc=850 PSI
JOISTS HEM-FIR #2 Fc=850 PSI
HEADERS HEM-FIR #2 Fc=850 PSI
POSTS AND TIMBERS HEM-FIR #2 Fc=575 PSI

ALL SHEATHING SHALL BE APA PERFORMANCE RATED PANELS. SHEATHING SHALL BE PLYWOOD OR ORIENTED STRAND BOARD (OSB). BOND CLASSIFICATION SHALL BE 'EXPOSURE 1' WHERE PROTECTED FROM THE WEATHER. BOND CLASSIFICATION SHALL BE 'EXTERIOR' WHERE EXPOSED, SUCH AS EAVE AND SIDING APPLICATIONS. ALL ABUTTING PANELS SHALL HAVE 1/8" GAP.

WOOD PROTECTION / TREATMENT:
ALL LUMBER IN CONTACT WITH GROUND OR CONCRETE OR EXPOSED TO THE ELEMENTS SHALL BE PRESSURE-TREATED (NOTED P.T.) IN ACCORDANCE WITH AUPA STANDARD U1. USE THE FOLLOWING MINIMUM AUPA USE CATEGORIES:

INTERIOR/DAMP (WOOD SILL PLATES): UC2
ABOVE GROUND EXPOSED (DECKS ABOVE GROUND): UC3B
GROUND CONTACT (DECK POSTS): UC4B

PAINT ALL SCARS, CUTS AND DRILL HOLES WITH A WOOD PRESERVATIVE THAT IS COMPATIBLE WITH THE CHEMICALS USED FOR THE PRESSURE TREATMENT OF THE WOOD. PRESERVATIVES FOR FIELD TREATMENT SHALL MEET THE REQUIREMENTS OF AUPA STANDARD M4.

GENERAL WOOD FRAMING NOTES:
1. MINIMUM NAILING SHALL BE IN ACCORDANCE WITH FASTENING SCHEDULE TABLES 11-13 IN ICC-ES EVALUATION REPORT ESR-1539.
2. PROVIDE CONTINUOUS 2x SOLID BLOCKING OR ENGINEERED LUMBER BLOCKING OR A RIM JOIST FOR FRAMING MEMBERS AT ALL SUPPORTS.
3. CURRENT IBC BUILDING CODES ARE AVAILABLE ONLINE FOR FREE PUBLIC ACCESS AT CODES.IBCSAFE.ORG.

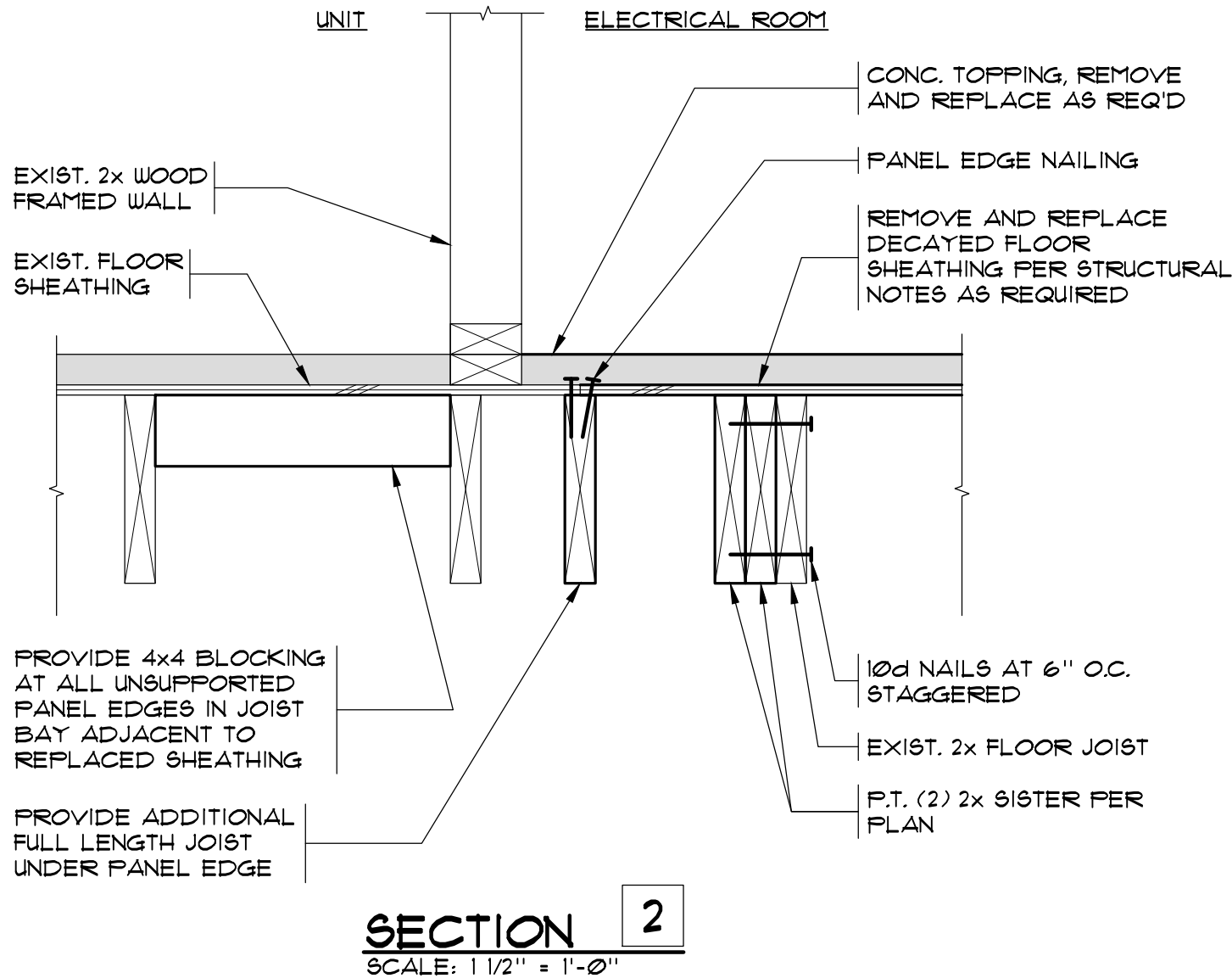
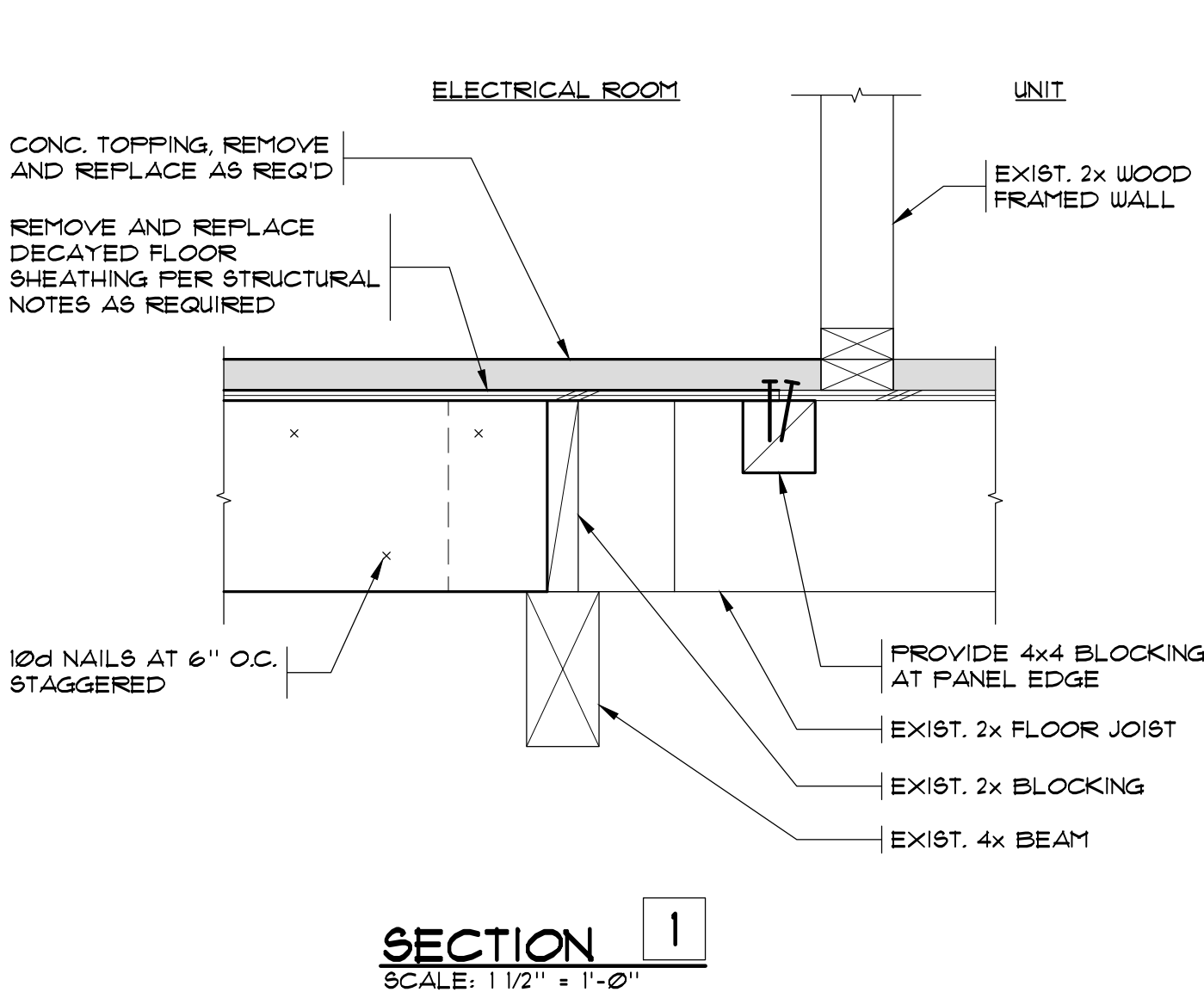
GLUED LAMINATED LUMBER:
DOUGLAS FIR-LARCH GRADE 24F-V4 (Fc=2400 PSI). ALL GLULAM MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AITC A190.1 AND BE STAMPED WITH AN AITC QUALITY MARK OR AN APA-EWS TRADEMARK. ADHESIVES USED IN THE GLULAM MANUFACTURING PROCESS SHALL CONFORM TO AITC 409 FOR WET USE. ADHESIVES, GLULAM MEMBERS SHALL BE MANUFACTURED FROM DOUGLAS FIR LAMINATING LUMBER. ALL BEAMS SHALL HAVE ZERO CAMBER UNLESS NOTED OTHERWISE. MEMBERS NOT EXPOSED TO VIEW IN THE COMPLETED WORK SHALL BE INDUSTRIAL APPEARANCE GRADE. MEMBERS EXPOSED TO VIEW IN THE COMPLETED WORK SHALL BE ARCHITECTURAL APPEARANCE GRADE.

STRUCTURAL NOTES (CONT.):

FLOOR SHEATHING:
APPLY PLYWOOD TO MATCH EXISTING THICKNESS, 19/32" MIN. NAILED TO JOISTS WITH 10d RING SHANK NAILS AT 6" O.C. AT ALL SUPPORTED PANEL EDGES AND AT 12" O.C. ALONG INTERMEDIATE SUPPORTS. UNSUPPORTED PANEL EDGES SHALL BE TONGUE-AND-GROOVE OR BLOCKED. NEW FLOOR SHEATHING AND EXISTING FLOOR SHEATHING TO SPAN ACROSS A MINIMUM OF THREE SUPPORTS. APPLY GLUE OVER FLOOR JOISTS PRIOR TO INSTALLATION.

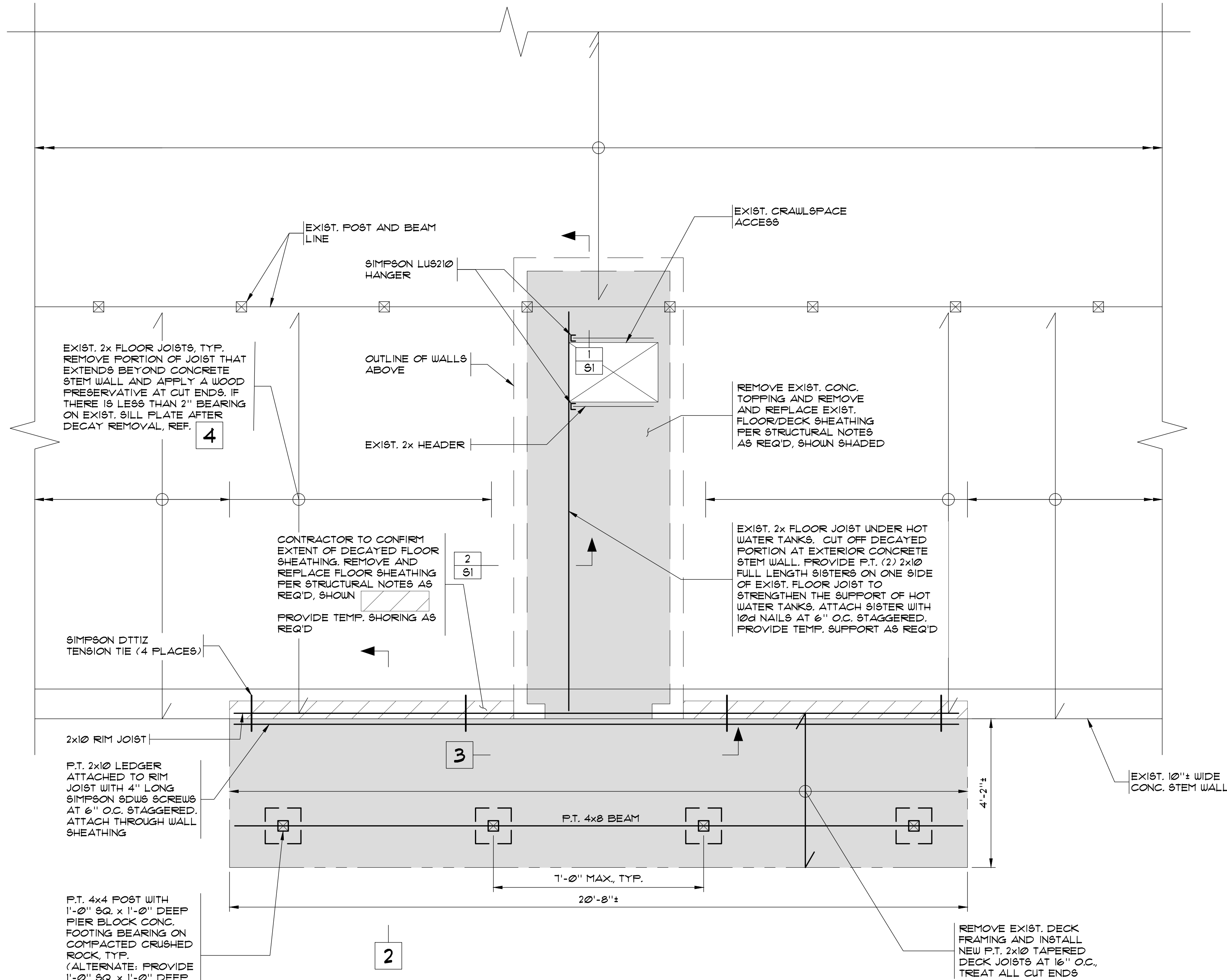
DECK SHEATHING:
APPLY 23/32" PLYWOOD/OSB NAILED TO JOISTS WITH CONSTRUCTION ADHESIVE. SCREW PLYWOOD/OSB TO JOIST WITH SIMPSON WENTL212 AT 6" O.C. AT ALL SUPPORTED PANEL EDGES AND AT 12" O.C. ALONG INTERMEDIATE SUPPORTS. UNSUPPORTED PANEL EDGES SHALL BE TONGUE-AND-GROOVE OR BLOCKED. NEW FLOOR SHEATHING TO SPAN ACROSS A MINIMUM OF THREE SUPPORTS.

EXTERIOR GYPSUM SHEATHING BOARD:
APPLY FIBERGLASS-FACED TYPE 'X' GYPSUM SHEATHING BOARD TO MATCH EXISTING GYPSUM SHEATHING THICKNESS NAILED TO STUDS WITH 6d COOLER NAILS AT 4" O.C. AT ALL SUPPORTED PANEL EDGES AND INTERMEDIATE SUPPORTS. ALL PANEL EDGES SHALL BE BACKED WITH 2" NOMINAL OR WIDER FRAMING.



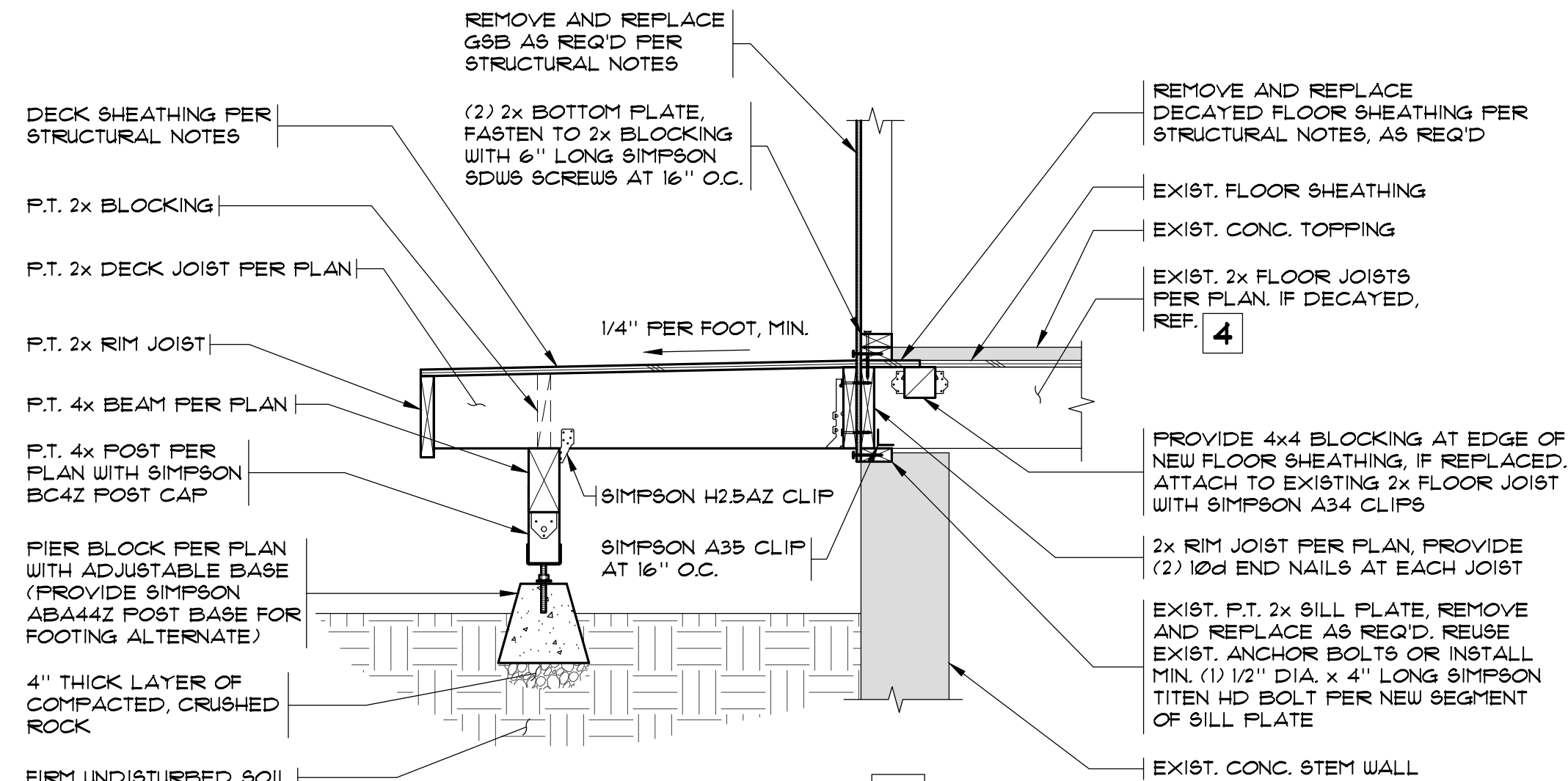
Revision	No.	Designed	Drawn	Checked	Date	Approved
BID SET		N. SELAFF	RCP	CEJ / JMB	03 APRIL, 2026	
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Contents	Project	Sheet
STRUCTURAL NOTES AND SECTIONS	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	S1
	3610 S. 180TH ST. SEATTLE, WA	Job No. 26014.00



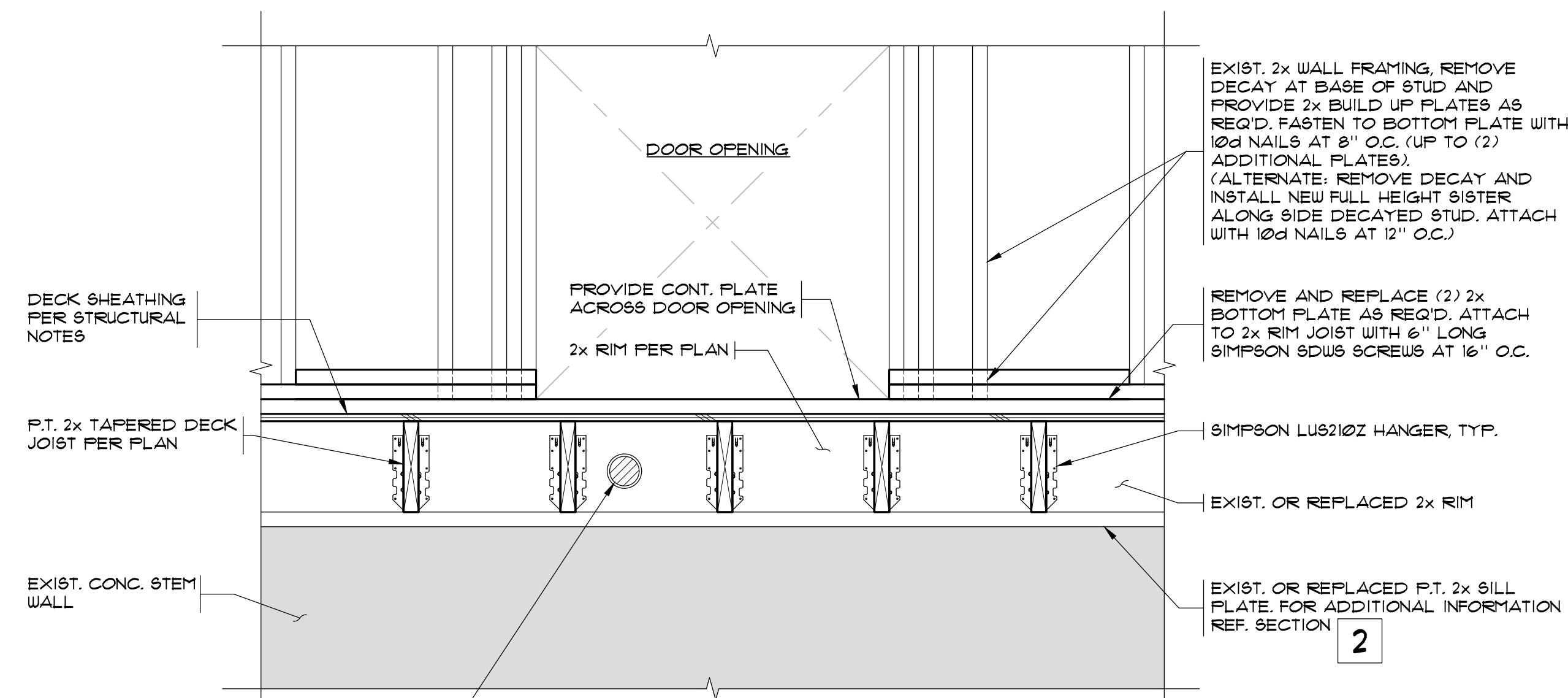
OPTION A
TYP. FIRST FLOOR ELECTRICAL ROOM/DECK REPAIR PLAN
 SCALE: 1/2" = 1'-0"

NOTE:
 PROVIDE TEMP. SUPPORT
 AS REQ'D TO PREVENT
 MOVEMENT/SETTLING

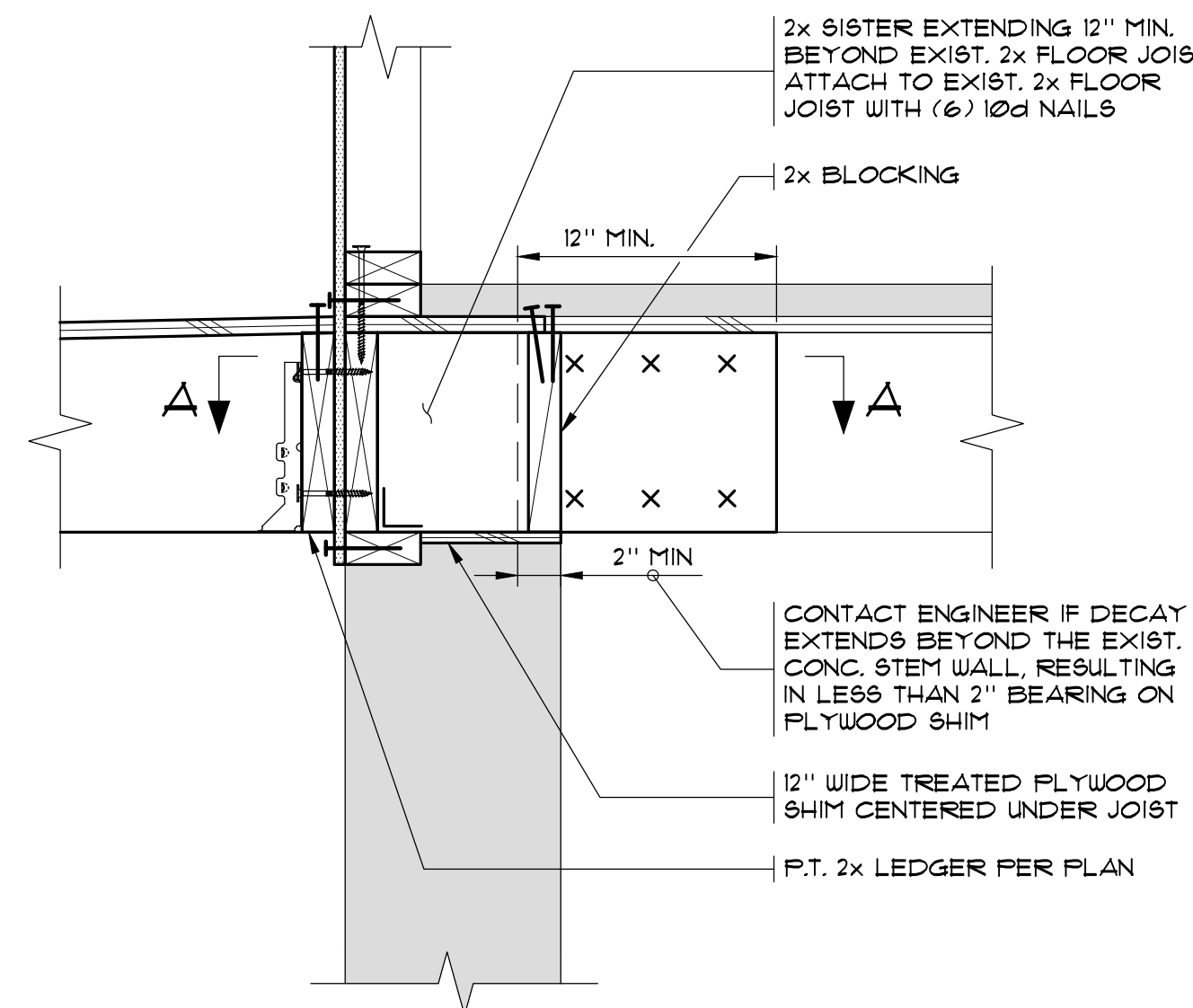


SECTION 2
 SCALE: 3/4" = 1'-0"

NOTE:
 REINSTALL OR REPLACE WALL
 AND FLOOR INSULATION AS
 REQ'D, NOT SHOWN FOR CLARITY

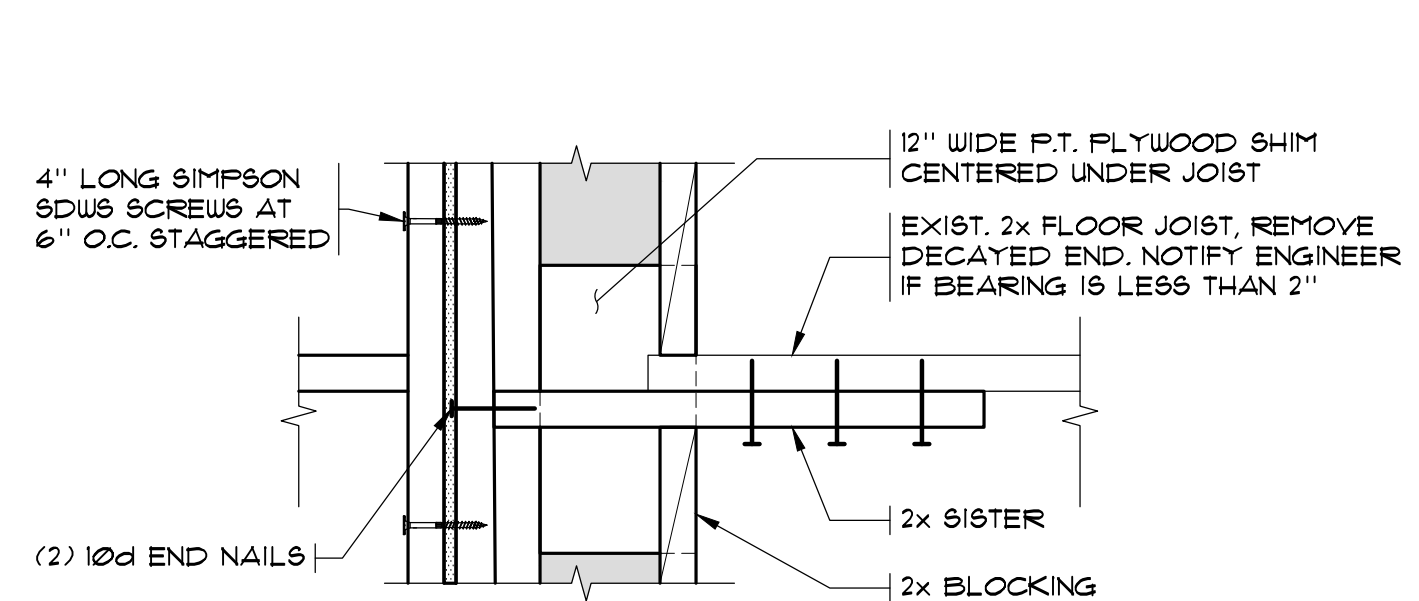


SECTION 3
 SCALE: 1" = 1'-0"



SECTION 4
 SCALE: 1/2" = 1'-0"

NOTE:
 FOR ADDITIONAL INFORMATION
 NOT SHOWN, REF. 2



SECTION A-A

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CARRIAGE HOUSE APTS. BUILDING 'E'	BID SET	
SECT EXTERIOR IMPROVEMENTS		
3610 S. 180TH ST. SEATTLE, WA 98148		
Drawn N. SELAFF	Checked RCP	Approved CEJ./JMB.
Date 03 APRIL 2026		
PACIFIC ENGINEERING TECHNOLOGIES, INC. 4414 Woodland Park Ave N., Suite 100 Seattle, Washington 98103-7499 (206) 281-7500		

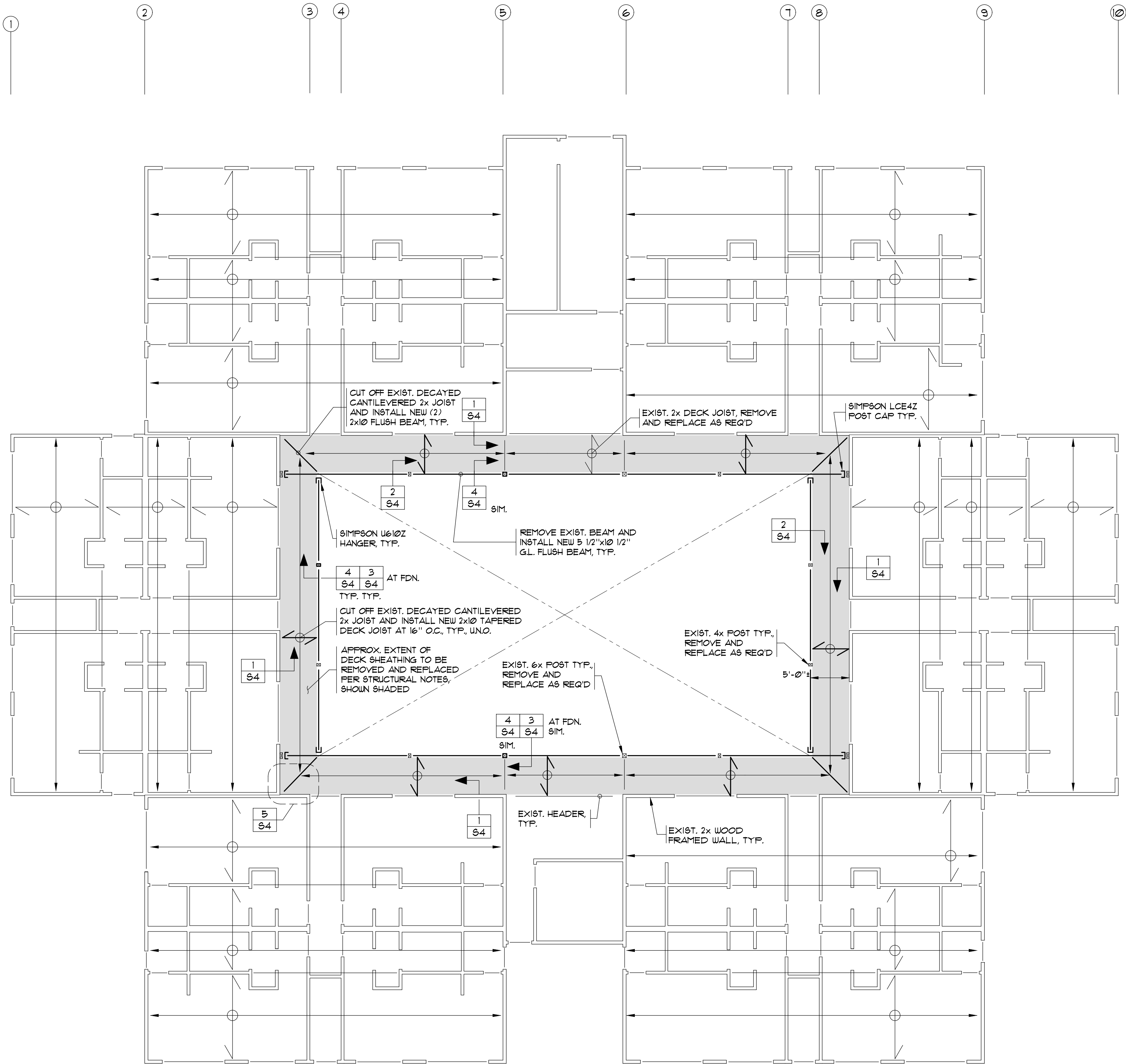
Project	Revision	Date
CARRIAGE HOUSE APTS. BUILDING 'E'	BID SET	
SECT EXTERIOR IMPROVEMENTS		
3610 S. 180TH ST. SEATTLE, WA 98148		
Drawn N. SELAFF	Checked RCP	Approved CEJ./JMB.
Date 03 APRIL 2026		
PACIFIC ENGINEERING TECHNOLOGIES, INC. 4414 Woodland Park Ave N., Suite 100 Seattle, Washington 98103-7499 (206) 281-7500		

Project	Revision	Date
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3610 S. 180TH ST. SEATTLE, WA 98148		
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Date 03 APRIL 2026		
PACIFIC ENGINEERING TECHNOLOGIES, INC. 4414 Woodland Park Ave N., Suite 100 Seattle, Washington 98103-7499 (206) 281-7500		

S2A

Job No. 26014.00

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SECOND FLOOR/ELEVATED WALKWAY FRAMING PLAN
SCALE: 1/8" = 1'-0"



NOTE:
PROVIDE TEMPORARY
SUPPORT AS REQ'D

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Contents
SECOND FLOOR/ELEVATED
WALKWAY FRAMING PLAN

Project
CARRIAGE HOUSE APTS.
BUILDING 'E'
SELECT EXTERIOR
IMPROVEMENTS
SEATTLE, WA
3610 S. 180TH ST.

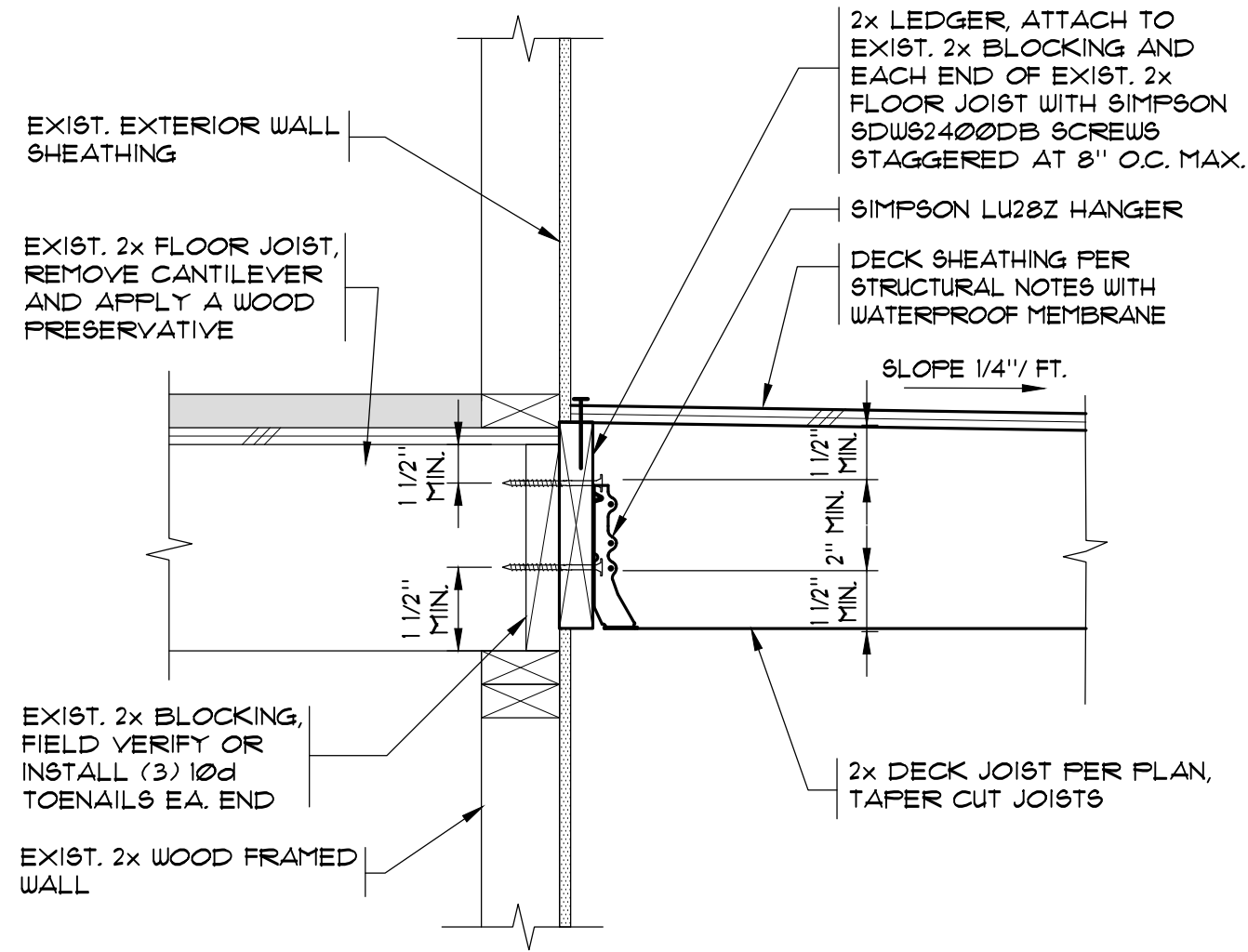
Sheet

53

Job No. 26014.00

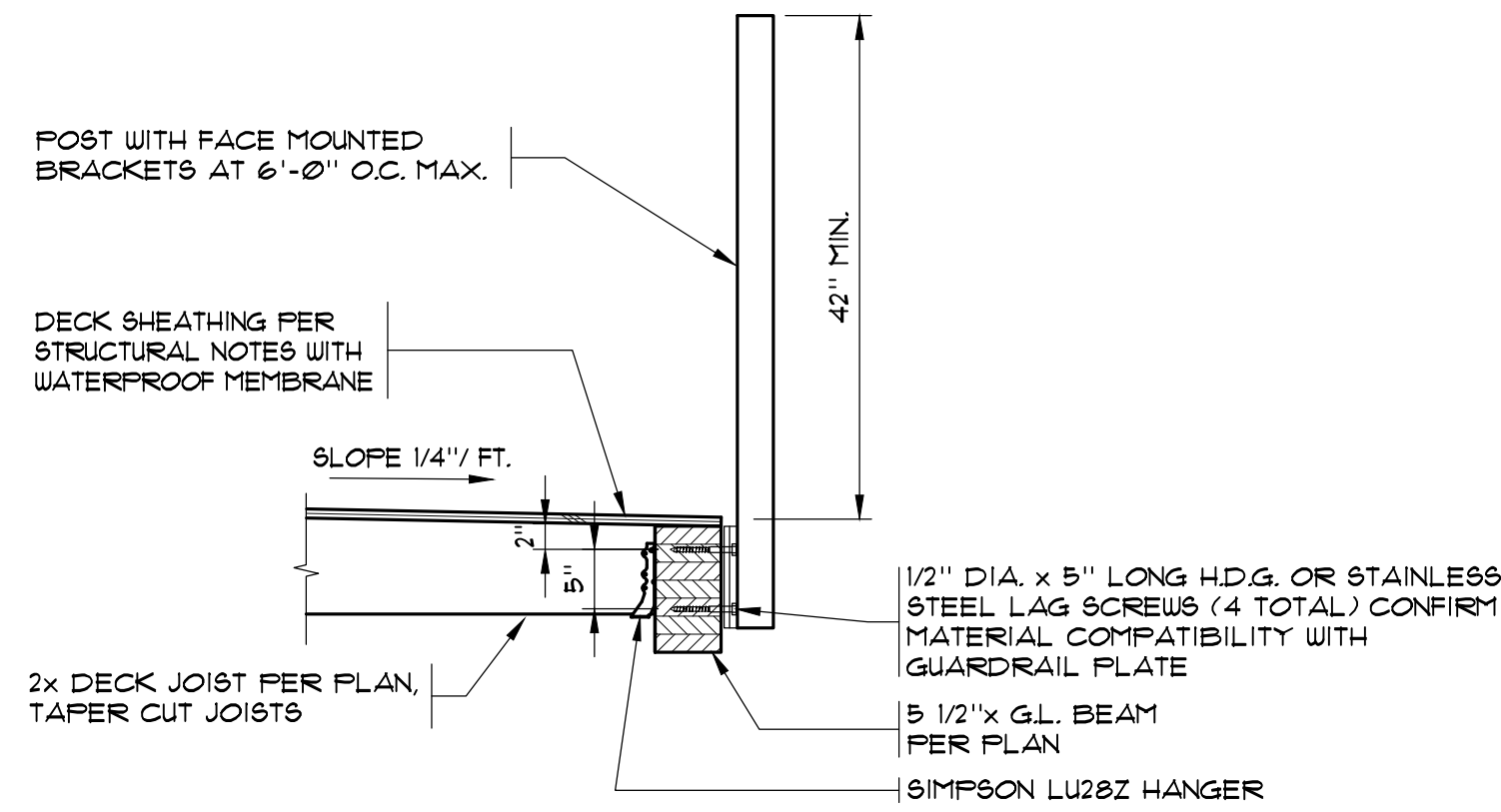
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Date	Revision	No.	Design	Drawn	Checked	Date	Approved
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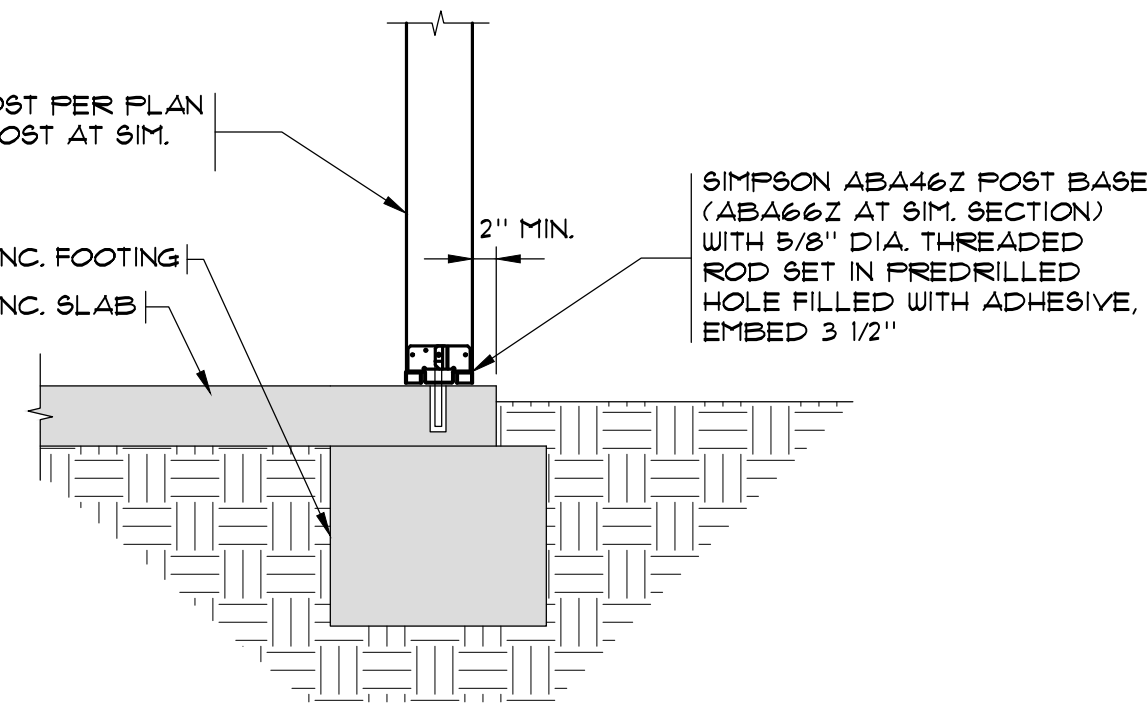
SECTION 1
SCALE: 1 1/2" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION
NOT SHOWN, REF. **6**
A5.8

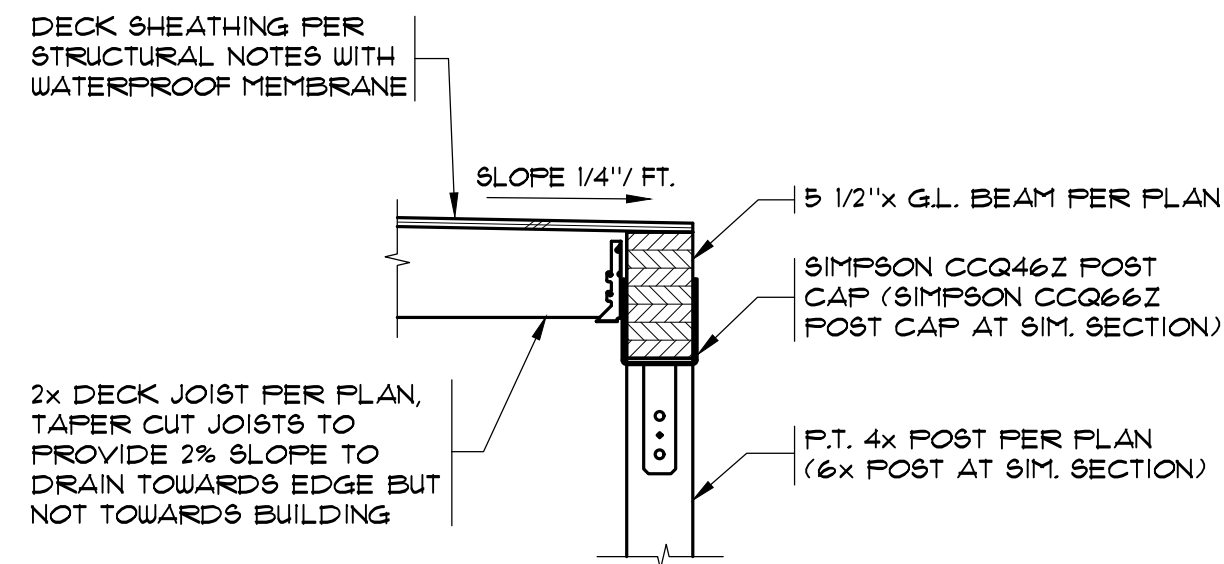


SECTION 2
SCALE: 3/4" = 1'-0"

NOTE:
FOR ADDITIONAL INFORMATION
NOT SHOWN, REF. **3**
A5.8

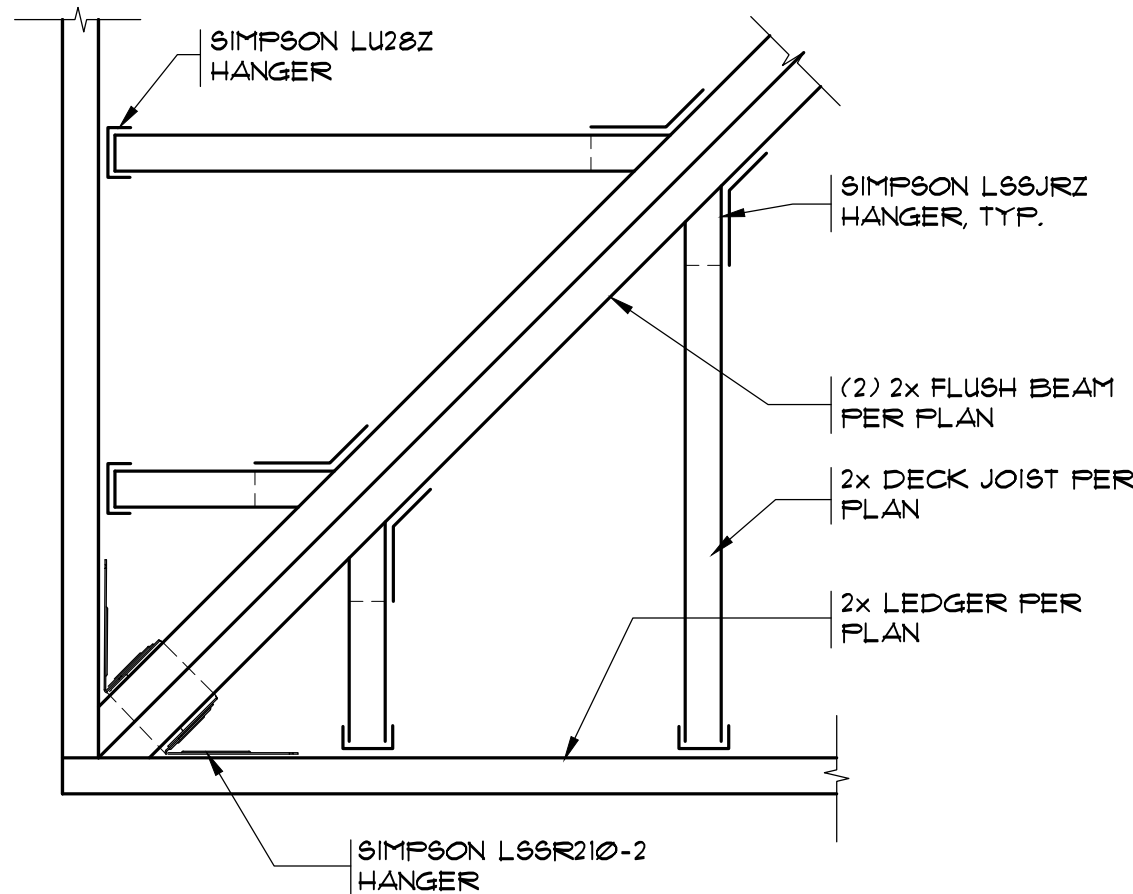


SECTION 3
SCALE: 3/4" = 1'-0"



SECTION 4
SCALE: 3/4" = 1'-0"

NOTES:
1. PROVIDE SOFFIT TO MATCH EXISTING, NOT SHOWN FOR CLARITY.
2. GUARDRAIL NOT SHOWN FOR CLARITY, FOR ADDITIONAL INFORMATION REF. SECTION **2**



PLAN VIEW

SECTION 5
SCALE: 1 1/2" = 1'-0"

NOTE:
EXIST. 2x FLOOR JOIST AND EXTERIOR WALL FRAMING NOT SHOWN FOR CLARITY

Date	
Revision	BID SET
No.	
Designed	N. SELAFF
Drawn	RCP
Checked	CEJ./JMB.
Date	03 APRIL, 2026
Approved	



Project	CARRIAGE HOUSE APTS. BUILDING 'E' SELECT EXTERIOR IMPROVEMENTS	SEATTLE, WA
Contents	SECTIONS	
Sheet	S4	
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INSTRUCTIONS TO BIDDERS

1.0 BIDDER RESPONSIBILITY CRITERIA

- A. It is the intent of Owner to award a contract to a responsible bidder submitting the lowest responsive bid. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by the Owner to submit documentation demonstrating compliance with the criteria. The bidder must:
1. At the time of bid submittal, have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have industrial insurance coverage for the bidder's employees working in Washington as required in Title 51 RCW; an employment security department number as required in Title 50 RCW; and a state excise tax registration number as required in Title 82 RCW;
 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3);
 5. Have received training on the requirements related to public works and prevailing wage under chapter 39.04.350 RCW and chapter 39.12 RCW or be listed as exempt by the Department of Labor and Industries on its website; and
 6. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW;
 7. Before award of a public works contract, a bidder shall submit to the contracting agency a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the responsible bidder criteria requirement of subsection A, 6 of this section.

1.1 SUBCONTRACTOR RESPONSIBILITY

- A. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.
- B. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have:
 - a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;

INSTRUCTIONS TO BIDDERS

- c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW.
- 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3);
 - 5. Have received training on the requirements related to public works and prevailing wage under chapter 39.04.350 RCW and chapter 39.12 RCW or be listed as exempt by the Department of Labor and Industries on its website; and
 - 6. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

1.2 SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

- A. RCW 39.04.350(2) specifically authorizes municipalities to adopt relevant supplement criteria for determining bidder responsibility applicable to a particular project which the bidder must meet.
- B. For the work in this project a responsible/qualified Bidder must meet the following standards:
 - 1. Have a current certificate of registration as a contractor, in compliance with chapter 18.27 RCW, for the last three years under the same business name;
 - 2. Have a good record of past performance that includes, but is not limited to, high quality work, ability to complete projects on time, contractor's integrity, compliance with public policy, financial, contractual and tax obligations, as well as Federal and State rules and regulations in performing construction contracts.
 - 3. Have a current Experience Modification Rate (EMR) of 1.0 or less, or an average EMR rate of 1.0 or less over the last three years. The requirement may, at the Owner's sole discretion, be waived on review of a written explanation that includes details of accidents, L&I records, a Loss Ratio Report for the last five years, costs, dates of events, and changes that have been made by the contractor to reduce accidents. A current company Safety Plan shall also be reviewed.
 - 4. Bidder shall provide evidence of previous successful completion of exterior siding and trim replacement projects, of similar scope and complexity. Poor performance, lack of response, or failure to complete projects successfully within the contract time may be grounds for the rejection of bidder.
 - 5. Contractors and Subcontractors shall have had three years minimum experience licensed in Washington State, under the same name, in the specific specialty contracting business.

1.3 PREPARATION OF BIDS – CONSTRUCTION

- A. Bids must be submitted on the Bid Form furnished by the Owner.
- B. All fields and questions on required forms must be fully answered and complete. Failure to do so may result in the bid being declared non-responsive.

INSTRUCTIONS TO BIDDERS

- C. Bidders shall acknowledge receipt of all addenda to this solicitation by inserting the addenda numbers in the space provided on the Bid Form. Failure to do so may result in the bid being declared non-responsive.
 - 1. Bidder is responsible for checking KCHA's website for addenda prior to submitting bid.
- D. In order for a bid to be considered responsive, bidders must submit the following signed documents with their bid package:
 - 1. Bid Form
 - 2. Bidder's Information Form
 - 3. Bid Guarantee
- E. The Bidder agrees to hold the base bid prices for sixty (60) days from date of bid opening.

1.4 BID GUARANTEE

- A. A bid guarantee in the amount of 5% of the base bid amount is required. Failure of the bidder to provide bid guarantee shall render the bid non-responsive.
- B. Acceptable forms of bid guarantee are: A bid bond or postal money order, or certified check or cashier's check made payable to King County Housing Authority.
- C. The Owner will return bid guarantees (other than bid bonds) to unsuccessful bidders as soon as practicable, but not sooner than the execution of a contract with the successful bidder. The successful bidder's bid guarantee will be returned to the successful bidder with its official notice to proceed with the work of the contract.

1.5 AMENDMENTS TO INVITATION TO BID

- A. If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.
- B. Bidders shall acknowledge receipt of all addenda to this solicitation by inserting the addenda numbers in the space provided on the Bid Form. Failure to do so may result in the bid being declared non-responsive.
 - 1. Bidder is responsible for checking KCHA's website for addenda prior to submitting bid.
 - 2. Addenda will not be issued later than three (3) calendar days before the deadline for receipt of Bids except Addendum withdrawing the request for Bids or extending the deadline for receipt of Bids.

1.6 PRE-BID MEETING

- A. All potential bidders are strongly encouraged to attend. Oral statements may not be relied upon and will not be binding or legally effective.

1.7 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

INSTRUCTIONS TO BIDDERS

- A. Before submitting a bid, the Bidder shall carefully examine each component of the Contract Documents prepared for the Work and any other available supporting data so as to be thoroughly familiar with all the requirements.
- B. The Bidder shall obtain copies of all agencies and associations guidelines and standards cited in the Contract Documents and necessary to perform the Work, including full size reproductions of material provided by Owner, at their own expense.
- C. The Bidder shall make a thorough and reasonable examination of the project site, facility and conditions under which the Work is to be performed, including but not limited to: Building access; resident occupancy; fire lanes; landscaping; obstacles and character of materials which may be encountered; traffic conditions; public and private utilities; the availability and cost of labor; and available facilities for transportation, handling, and storage of materials and equipment.

1.8 EXPLANATION TO PROSPECTIVE BIDDERS

- A. Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must submit a request in writing to the Owner by 9:00 am, seven (7) calendar days before the bid due date. Oral explanations or instructions given before the award of a contract will not be binding. Questions shall be submitted to:

Michelle Jackson
King County Housing Authority
600 Andover Park W
Tukwila, WA 98188
Email: MichelleJ@kcha.org

1.9 PREVAILING WAGES

- A. Contractor shall pay no less than the Washington State Department of Labor and Industries (L&I) prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of L&I. The schedule of prevailing wage rates for the locality or localities of the Work is determined by the Industrial Statistician of L&I. It is the Contractor's responsibility to verify the applicable prevailing wage rate.
 - 1. L&I prevailing wage rates may be found at <https://lni.wa.gov/licensing-permits/public-works-projects/prevaling-wage-rates/>
 - 2. The Owner has determined that the work meets the definition of residential construction.
 - 3. The prevailing wage rates publication date is determined by the bid due date.
 - 4. The work is to be performed in King County.
 - 5. A copy of the prevailing wage rates is available at KCHA.
 - 6. A copy of the prevailing wage rates may be mailed on request.

1.10 TAXES

- A. All taxes imposed by law shall be included in the bid amount. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.

INSTRUCTIONS TO BIDDERS

- B. The retail sales tax does not apply to the gross contract price.
- C. Prime and subcontractors are required to pay retail sales tax upon all purchases of materials, including prefabricated and precast items, equipment, leases or rentals of tools, consumables, and other tangible personal property which is installed, applied, attached, or otherwise incorporated in their work.

1.11 INSURANCE

Must, for the duration of the contract, procure and maintain Builders Risk insurance as stated in Part 2 of the General Conditions. This shall be in addition to General Liability and Automobile Liability Coverage.

1.12 ASSURANCE OF COMPLETION

- A. Payment and performance bonds for 100% of the Contract Sum, including all Change Orders and taxes imposed by law, shall be furnished for the Work, and shall be in a form acceptable to the Owner.

1.13 BID ERROR

- A. In the event Bidder discovers an error in its bid, the Bidder may, under certain conditions and if before the date and time that bids are due, modify, their bid, as detailed below:
 - 1. Prior to Date and Time Bids are Due:
 - a. A Bidder may withdraw its bid at any time prior to the date and time bids are due upon written request.
 - b. After withdrawing an original submitted bid, a Bidder may modify and resubmit its bid at any time prior to the date and time bids are due.
 - 2. After the Date and Time Bids are Due:
 - a. A bidder who submits an erroneous low bid may withdraw the bid. The bid withdrawal is permissible if there was an obvious error in the low bid, and the mistake is readily apparent from the bid itself.
 - b. Notification: Provide to the Owner, within 24 hours of bid opening, written notification of the bidder's intent to withdraw the bid due to error.
 - c. Documentation: Provide to the Owner within 48 hours of bid opening, documentation sufficient in content to justify bid withdrawal to the satisfaction of the Owner. Include description and evidence of the error.
 - d. Approval: the Owner will approve or reject the request for withdrawal in writing.
 - e. Any low bidder who withdraws its bid is prohibited from bidding on the same project if it is subsequently re-solicited.

1.14 ADDITIVE OR DEDUCTIVE BID ITEMS

INSTRUCTIONS TO BIDDERS

- A. The low bid, for purposes of award, shall be the lowest responsive bid from a qualified responsible bidder offering the low aggregate amount for the base bid, plus additive or deductive bid alternates selected by the Owner.

1.15 BID EVALUATION

- A. Responsive Bids: A bid will be considered responsive if it meets the conditions of the solicitation, in addition to but not limited to the following requirements:
 - 1. Bid is received not later than the time and date specified.
 - 2. Bid is submitted in the proper format on the form(s) provided.
 - 3. Bid includes the complete scope of work as defined in bid package.
 - 4. Bid does not include any exclusions or qualifications.
 - 5. Bid includes Unit and Lump Sum Costs as listed in Proposal Form.
 - 6. Forms are complete.
- B. After bid opening, bids will be checked for correctness of bid item prices, extensions and the total bid price. Discrepancies shall be resolved by accepting the bid item prices and the corrected extensions and total bid price.
- C. Responsible Bidders: the Owner will award contracts only to responsible bidders who demonstrate the ability to successfully perform under the terms and conditions as set forth in the Contract Documents and have successfully completed projects similar in scope and complexity.
 - 1. Bidders must demonstrate relevant experience on similar types of projects and submit detailed information as required on the Bidder Information Form.
- D. The Owner reserves the right to contact references and investigate past performance and qualifications of the Bidder, subcontractor, and project team members, including contacting third parties and/or the references provided by the Bidder.
 - 1. The Owner may contact references for other projects including those the Bidder did not identify and/or provided references.
 - 2. References may be asked to rate the performance of and describe their experience with project team members and subcontractors. Bidder Information may be solicited and evaluated on the following subjects: type and features of work; overall quality of project performance and quality of work; experience and technical knowledge and competence of the Bidder and Project Team Members; ability, capacity and skill to perform the Work; ability to manage submittals, requests for information, prevailing wage filings, and other paperwork; compliance with laws, ordinances, and contract provisions; and other information as deemed necessary.
 - 3. Poor reference(s) may be justification to determine a Bidder is not responsible.
- E. At the Owner's request, provide any additional explanation or information, which would assist in evaluating the qualifications of the Bidder, subcontractors, project team members, and bid price.
- F. The Owner will verify information submitted and if the lowest bidder is determined to be "not responsible," the Owner will issue, in writing, the specific reasons for this determination. The bidder may appeal this decision. The appeal must be in writing and shall be delivered to the Owner within two business days. The appeal may include additional information that was not

INSTRUCTIONS TO BIDDERS

included in the original bid documents. KCHA will make a final determination after the receipt of the appeal. The final determination may not be appealed.

1.16 CONTRACT AWARD

- A. Bonding and Insurance: Contract award will be contingent on ability to secure payment/performance bonding, and Contractor's ability to meet the Owner insurance requirements as detailed in the Bid Documents.
- B. Must, for the duration of the contract, procure and maintain Builders Risk insurance as stated in Part 2 of the General Conditions. This shall be in addition to General Liability, Automobile Liability, and Professional Liability/Errors and Omissions (if applicable) Coverage.
- C. Bonding, insurance certificate with endorsements, and an approved Statement of Intent to Pay Prevailing Wages shall be submitted to the Owner within 14 days of contract award. A Notice to Proceed shall be issued immediately after receipt.
- D. Right to Reject Bids/Waiver: The Owner reserves the right to reject any or all bids or to waive any informalities or irregularities in the bidding.
- E. Retainage Funds: The Owner will not pay interest to the Contractor for accounts where retainage funds are maintained by the Owner. As part of the procurement by which the Contractor was selected for this work, the Contractor agrees to waive any other options and has made allowances for this waiver.

GENERAL CONDITIONS

PART 1 - GENERAL PROVISIONS

1.1 DEFINITIONS

- A. "Authority Having Jurisdiction (AHJ)": A federal, state, local, or other regional department, or an individual such as a fire official, labor department, health department, building official, or other individual having statutory authority.
- B. "Contract Documents" means the Instructions to Bidders, Specifications, Plans, General Conditions, Prevailing Wage Rates, Bid Form, Contract Form, other Special Forms, Drawings and Specifications, and all Addenda and modifications thereof.
- C. "Contract Sum" is the total amount payable by Owner to Contractor for performance of the Work in accordance with the Contract Documents.
- D. "Contract Time" is the number of consecutive Days allotted in the Contract Documents for achieving completion of the Work.
- E. "Contracting Officer" means the person delegated the authority by King County Housing Authority to enter into, and/or terminate this Contract. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer.
- F. "Contractor" means the person or other entity entering into the Contract with King County Housing Authority to perform all of the services or work required under the Contract.
- G. "Day" means calendar day, unless otherwise specified.
- H. "Final Acceptance" means the acceptance by Owner that the Contractor has completed the requirements of the Contract Documents.
- I. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, including, but not limited to, unusually severe weather conditions which could not have been reasonably anticipated.
- J. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- K. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- L. "Liquidated Damages" means the amount prescribed in the Contract Documents to be deducted from any payments due or to become due Contractor, for each day's delay in completion of the Work beyond the time allowed in the Contract Documents as stated in the Notice to Proceed, plus any extensions of such time.
- M. "Manager" means the person who is an authorized agent of the King County Housing Authority to administer the Contract.
- N. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.
- O. "Owner" means the King County Housing Authority or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- P. "Property Manager" means the property management company, its officers and employees.
- Q. "Provide": Furnish and install, complete and ready for the intended use.

GENERAL CONDITIONS

- R. "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a Subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime Contract or a subcontract.
- S. "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another Subcontractor.
- T. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

1.2 EXECUTION AND INTENT

- A. The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Contract Documents.
- B. All work is to be executed in accordance with the Building Codes, as adopted by the Authority Having Jurisdiction, and other applicable codes and generally accepted industry standards. All products and materials are to be new and handled and applied in accordance with the manufacturer's recommendations.
- C. Contractor makes the following representations to Owner:
 - 1. The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;
 - 2. Contractor has carefully reviewed the Contract Documents, had an opportunity to visit and examine the Project site, has become familiar with the local conditions in which the Work is to be performed, and has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, permits, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.
- D. The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

PART 2 - INSURANCE AND BONDS

2.1 INSURANCE REQUIREMENTS FOR BUILDING TRADES CONTRACTORS

- A. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or Subcontractors.

2.2 MINIMUM SCOPE OF INSURANCE

- A. Contractors shall maintain coverages no less than:
 - 1. Insurance Services Office Commercial General Liability coverage including Products/Completed Operations.
 - 2. Insurance Services Office covering Automobile Liability, code 1 (any auto).
 - 3. Workers' Compensation insurance as required by State law and Employer's Liability Insurance.
 - 4. Builders Risk (Property / Course of Construction insurance covering for all risks of loss for all projects in excess of \$250,000.00).

GENERAL CONDITIONS

2.3 MINIMUM LIMITS OF INSURANCE

A. Contractor shall maintain limits no less than:

1. General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit of \$2,000,000.
2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
3. Employer's Liability: \$1,000,000 per accident for bodily injury/sickness or disease.
4. Builders Risk (Property) / Course of Construction: Completed value of project.

2.4 DEDUCTIBLES AND SELF INSURED RETENTION

- A. Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the Owner guaranteeing payment of losses and related investigations, claim administration and defense expenses. **NOTE: If this contract deals with hazardous materials or activities (i.e. lead based paint, asbestos, armed security guards) additional provisions covering those exposures must be included in order to protect the Owner's interests.**

2.5 OTHER INSURANCE PROVISIONS

A. The policies are to contain, or be endorsed to contain, the following provisions:

1. The Owner, the Property Manager, its officers, officials, employees, partners, agents and volunteers are to be covered as additional insureds under a "completed operations" type of additional insured endorsement with respect to general liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. The endorsement(s) effectuating the foregoing additional insured coverage shall be ISO form CG 20 10 11 85, or CG 20 10 10 01 issued concurrently with CG 20 37 10 01, or their equivalent as long as it provides additional insured coverage, without limitation, for completed operations; (ii) automobile liability arising out of vehicles owned, leased, hired, or borrowed by or on behalf of the Contractor; (iii) any insurance written on a claims made basis, shall have a retroactive date that coincides with, or precede, the commencement of any work under this contract. Evidence of such coverage shall be maintained for a minimum of six (6) years beyond the expiration of the project.
2. King County will not accept Certificates of Insurance Alone. Improperly Completed Endorsements will be returned to your insured for correction by an authorized representative of the insurance company.
3. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the Owner, its officers, officials, agents, partners, employees, and volunteers. Any insurance or self-insurance maintained or expired by the Owner, its officers, officials, agents, partners, employees, volunteers, or shall be excess of the Contractor's insurance and shall not contribute with it. King County Housing Authority's Insurance is Non-Contributory in Claims Settlement Funding.
4. The "General description of agreement(s) and/or activity(s) insured" shall include reference to the activity and/or to either specific King County Housing Authority's; project of site name, contract number, lease number, permit number or construction approval number.
5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled or materially changed, except after thirty (30) days' [ten (10) days for non-payment of premium] prior written notice by certified mail, return receipt requested, has been given to the Owner.
6. Maintenance of the proper insurance for the duration of the contract is a material element of the contract. Material changes in the required coverage or cancellation of the coverage shall constitute a material breach of the contract.
7. Builders Risk / Course of Construction policies shall contain the following provisions:
 - a. The King County Housing Authority shall be named as loss payee.
 - b. The insurer shall waive all rights of subrogation against the Owner and the Property Manager, its officers, officials, employees and volunteers.

GENERAL CONDITIONS

2.6 ACCEPTABILITY OF INSURERS

- A. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-:VII. The name of the Insurance Company underwriting the coverage and its address shall be noted on the endorsement form. Contractors must provide written verification of their insurer's rating.

2.7 VERIFICATION OF COVERAGE

- A. Contractor shall furnish the Owner with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Owner before work commences in sufficient time to permit contractor to remedy any deficiencies. The Owner reserves the right to require complete, certified copies of all required insurance policies or pertinent parts thereof, including endorsements affecting the coverage required by these specifications at any time.

2.8 SUBCONTRACTORS

- A. Subcontractors shall include the Contractor as additional insured under their policies. All coverage's for subcontractors shall be subject to all of the requirements stated herein. Contractor shall be responsible for the adequacy of required coverages for subcontractors, and compile related certificates of insurance and endorsements evidencing subcontractors' compliance.

2.9 PAYMENT AND PERFORMANCE BONDS

- A. Payment and performance bonds for 100% of the Contract Award Amount shall be furnished for the Work, using the Payment Bond and Performance Bond form AIA – form A312. Change order increases of cumulative 15% increments require revisions to the bond to match the new Contract Sum.

PART 3 - PERFORMANCE

3.1 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor shall be solely responsible for, and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, and shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- B. Contractor shall enforce strict discipline and good order among Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Owner may, by Notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- C. The Contractor shall perform on the site, and with its own organization, work equivalent to at least 12% of the total amount of work to be performed under the contract.
- D. Work Hours: The Contractor's allowable hours of operation shall be limited to those hours between 8:00 A.M. and 6:00 P.M. Monday to Friday excluding public holidays.

3.2 PERMITS, FEES, AND NOTICES

- A. Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and coordinate inspections necessary for proper execution and completion of the Work. Prior to final payment, the approved, signed permits shall be delivered to Owner.

3.3 PREVAILING WAGES

- A. Statutes of the State of Washington RCW 39.12 as amended shall apply to this contract. Requirements, in brief, are stated below:

GENERAL CONDITIONS

1. There shall be paid each laborer or mechanic of the Contractor or sub-Contractor engaged in work on the project under this contract in the trade or occupation listed in the schedule of Wage Rates, as determined by the Department of Labor and Industries, not less than the hourly wage rate listed therein, regardless of any contractual relationship which may be alleged to exist between the Contractor and any sub-contractor and such laborers and mechanics.
2. The "prevailing rate or wage" contained in the wage determination include health and welfare fund contributions and other fringe benefits collectively bargained for by the various management and labor organizations. Prevailing wages shall be paid based on the most recent semi-annual list as required by the Department of Labor and Industries (L&I).
3. In case any dispute arises as to what are the prevailing rates for wages of work of a similar nature, and such disputes cannot be resolved by the parties involved, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries of the State of Washington, and the Director's decision shall be final and conclusive and binding on all parties involved in the dispute.

B. Before commencing the Work, Contractor shall file a statement of "Intent to Pay Prevailing Wages."

C. After completion of the Work, Contractor shall file an "Affidavit of Wages Paid."

3.4 EQUAL EMPLOYMENT OPPORTUNITY

A. During performance of the Work:

1. Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, the presence of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status or political affiliation, nor commit any unfair practices as defined in RCW 49.60.
2. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status, or political affiliation.
3. The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and orders in regard to Equal Employment Opportunity including but not limited to Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and the rules, regulations, and orders of the Secretary of Labor. The Contractor shall include the terms of this Clause in every subcontract so that such term shall be binding on each Subcontractor.
4. Non-Discrimination R.C.W. 49.60: These special requirements establish minimum requirements for affirmative action and are intended to define and implement the basic discrimination provisions of these specifications. Failure to comply with these requirements may constitute grounds for application of contract default.

3.5 SAFETY PRECAUTIONS

A. In performing this contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoid work interruptions. For these purposes, the Contractor shall:

1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to the Owner's representative prior to the initial scheduled construction meeting.
2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

GENERAL CONDITIONS

3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
 4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
 5. Provide any additional measures that the Owner determines to be reasonable and necessary for ensuring a safe environment in areas open to the public. Nothing in this part shall be construed as imposing a duty upon the Owner to prescribe safety conditions relating to employees, public, or agents of the Contractors.
- B. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.
- C. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
 - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
 - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
 - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
 2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
 - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
 - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
 - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
- D. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored on the Project site.
 2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.

GENERAL CONDITIONS

- E. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- F. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- G. No duty of safety by Owner: Nothing provided in this section shall be construed as imposing any duty upon Owner with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

3.6 INDEPENDENT CONTRACTOR

- A. The Contractor and Owner agree the Contractor is an independent contractor with respect to the services provided pursuant to this Contract. Nothing in this Contract shall be considered to create a relationship of employer and employee between the parties hereto. Neither the Contractor nor any employee of the Contractor shall be entitled to any benefits accorded Owner employees by virtue of the services provided under this Contract. The Owner shall not be responsible for withholding or otherwise deducting federal income tax or social security or contributing to the State Industrial Insurance Program, or otherwise assuming the duties of an employer with respect to the Contractor, or any employees of the Contractor.

3.7 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

- A. Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
- B. Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site.
- C. Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Final Acceptance, and shall repair or replace without cost to Owner any damage or loss that may occur.

3.8 PRIOR NOTICE OF EXCAVATION

- A. Prior to any excavation Contractor shall engage a locate service for all underground facilities or utilities. Contractor shall pay all fees for locator services and pay for all damages caused by excavation.

3.9 UNFORESEEN PHYSICAL CONDITIONS

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than seven Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 5.

GENERAL CONDITIONS

3.10 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES, AND IMPROVEMENTS

- A. Contractor shall protect from damage all existing conditions, including soils, structures, equipment, improvements, utilities, and vegetation at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents, any defects of equipment, material, workmanship or design furnished by the Contractor, or failure by Contractor or subcontractor at any tier to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.
- B. New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the Specifications.

3.11 MATERIAL AND EQUIPMENT

- A. All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of Owner, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.
- B. Substitutions shall be considered where qualities and attributes including, but not limited to, cost, performance, weight, size, durability, visual effect, and specific features and requirements indicated are deemed equal or better by the Owner at the Owner's sole discretion. All requests for substitutions shall be made in writing to Owner and shall not be deemed to be approved unless approved in writing by Owner.

3.12 CORRECTION OF NONCONFORMING WORK

- A. Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Final Acceptance.
- B. If Contractor fails to correct nonconforming Work, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.

3.13 CLEAN UP

- A. Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

3.14 SUBCONTRACTORS AND SUPPLIERS

- A. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified.
- B. By appropriate written agreement, Contractor shall require each Subcontractor to be bound to Contractor by terms of those Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.

GENERAL CONDITIONS

- C. Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- D. It is the Contractor's responsibility to pay its Subcontractors and material suppliers on a timely basis. The Owner reserves the right to withhold a portion of the Contractor's payment if the Contractor fails to make timely payments to the Subcontractors and material suppliers.
- E. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and any Subcontractor; or any persons other than Owner and Contractor.
- F. The Contractor shall not enter into any subcontract with any subcontractor who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or by any state, territory, or municipality.

3.15 INDEMNIFICATION

- A. The Contractor hereby agrees to indemnify, defend, and hold harmless the Authority, its successors and assigns, director, officers, officials, employees, agents, partners and volunteers (all foregoing singly and collectively (Indemnities")) from a and against any and all claims, losses, harm costs, liabilities, damages and expenses, including, but not limited to, reasonable attorney's fees arising or resulting from the performance of the services, or the acts or omissions of the Contractor its successors, and assigns, employees, subcontractors or anyone acting on the contractor's behalf in connection with this Contract or its performance of this Contract.
- B. Provided, however, that the Contractor will not be required to indemnify, defend, or save harmless the indemnitee as provided in the preceding paragraphs of this section if the claim, suit, or action for injuries, death, or damages is caused by the sole negligence of the indemnitee. Where such claims, suites, or actions result from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the Contractor or the Contractor's agent or employee, the indemnity provisions provided in the proceeding paragraphs of this section shall be valid and enforceable only to the extent of the Contractor's negligence or the negligence of its agents and employees..
- C. The foregoing indemnity is specifically and expressly intended to constitute a waiver of the Contractor's immunity under Washington's Industrial Insurance act, RCW Title 51. The parties acknowledge that these provisions were specifically negotiated and agreed upon by them. If any portion of this indemnity clause is invalid or unenforceable, it shall be deemed excised and the remaining portions of the clause shall be given full force and effect.
- D. The Contractor hereby agrees to require all its Subcontractors or anyone acting under its direction or control or on its behalf in connection with or incidental to the performance of this Contract to execute an indemnity clause identical to the preceding clause, specifically naming the Owner as indemnity, and failure to do so shall constitute a material breach of this Contract by the Contractor.

3.16 PROHIBITION AGAINST LIENS

- A. The Contractor is prohibited from placing a lien on the Owner's property. This prohibition shall apply to all subcontractors of any tier and all materials suppliers, in accordance with RCW 35.82.190.

3.17 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

- A. Liquidated Damages
 - 1. Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. The liquidated damage amounts set forth will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from any payments to the Contractor.

GENERAL CONDITIONS

2. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed.

3.18 WAIVER AND SEVERABILITY

- A. The failure or delay of either party to insist on performance of any provision of the Contract, or to exercise any right or remedy available under the Contract, shall not be construed as a waiver of that provision, right, or remedy in any later instance. Waiver or breach of any provision of the Contract shall not be construed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Contract, unless the Contract is modified pursuant to the Clause entitled "Contract Modifications" herein.
- B. If any provision of the Contract is or becomes void or unenforceable by operation of law, the remaining provisions shall be valid and enforceable.

PART 4 - PAYMENTS AND COMPLETION

4.1 CONTRACT SUM

- A. The Contract Sum shall include all taxes imposed by law and properly chargeable to the Project, including sales tax. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.
- B. The retail sales tax does not apply to the gross contract price.
- C. Prime and subcontractors are required to pay retail sales tax upon all purchases of materials, including prefabricated and precast items, equipment, leases or rentals of tools, consumables, and other tangible personal property which is installed, applied, attached, or otherwise incorporated in their work.

4.2 APPLICATION FOR PAYMENT

- A. At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an Application for Payment for Work completed in accordance with the Contract Documents. Each application shall be supported by such substantiating data as Owner may require.
- B. Each invoice shall include the following statement: "I hereby certify that the items listed are proper charges for materials, merchandise or services provided to the King County Housing Authority, and that all goods and/or services have been provided; that prevailing wages have been paid in accordance with the approved statements of intent filed with the Department of Labor and Industries; and that sub-contractors and/or suppliers have been paid, less earned retainage, as their interest appears in the last payment received."
- C. Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule. Each Application for Payment shall be consistent with previous applications and payments.
- D. Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including releases by Washington State Employment Security Department and Washington State Department of Revenue, Department of Labor & Industries, and consent of surety to release of the retainage.
- E. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
 1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored;
 2. Facility or location within 50 miles of Project: The facility or location is located within a 50-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;
 3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set aside for the Project);

GENERAL CONDITIONS

4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;
 5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;
 6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;
 7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
 8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.
- F. Waivers of Lien: With each Application for Payment, submit conditional waivers lien from every entity who is lawfully entitled to file a lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- G. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.
- H. Approved payments shall be mailed to the Contractor within 30 days.

4.3 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

- A. The Owner shall make a final inspection of the Work on receipt of (1) written notice from the Contractor that the Work is ready for final inspection and (2) a final Application for Payment. When the Owner finds the Work acceptable and fully performed under the Contract Documents, and the Contractor has delivered to the Owner all warranties, permits, and operations manuals, the Owner will issue a Notice of Final Completion.
- B. Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in PART 7 - .

PART 5 - CHANGES

5.1 CHANGE IN THE WORK

- A. Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment shall be made as provided in 5.2 and 5.3.
- B. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's approval.
- C. The Contractor agrees that any change in the Contract Amount or Contract Time provided in a Change Order is full and complete compensation to the Contractor for the change(s) to the work, deleted work, modified work, direct or indirect impact on the Contractor's schedule, and for any equitable adjustment or time extension to which the Contractor may be entitled to in this Change Order, pursuant to the Contract between the Owner and Contractor.

GENERAL CONDITIONS

5.2 CHANGE IN THE CONTRACT SUM

- A. Change Order Pricing - Fixed Price: When the fixed price or time and materials method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:
1. Contractor's Change Order proposal, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets with documentation in a form approved by Owner.
 2. Any request for adjustment of Contract Sum shall include only the following items:
 - a. Craft labor costs for Contractors and Subcontractors.
 - 1) Basic wages and benefits: Hourly rates and benefits according to applicable prevailing wages.
 - 2) Direct supervision shall not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
 - 3) Worker's Insurance. Direct contributions to the State for industrial insurance, medical aid, and supplemental pension by the class and rates established by L&I.
 - 4) Federal Insurance. Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
 - 5) Safety and small tools: 4% of the sum of the amounts calculated in (1), (2), and (3) above.
 - b. Material Costs: Material costs and applicable sales tax shall be developed from actual known costs, supplier quotations or standard industry pricing guides and shall consider all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.
 - c. Equipment Costs: Itemization of the type of equipment and the estimated or actual length of time the equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for equipment and applicable sales tax only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. The Date Quest Rental Rate (Blue Book) shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed 50% of the applicable rate.
 - d. Allowance for Overhead: This allowance shall compensate Contractor for all noncraft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time and any other cost incidental to the change in the Work. This allowance shall be strictly limited in all cases an amount not to exceed the following:
 - 1) For Contractor, for any Work actually performed by Contractor's own forces, 16% of the cost.
 - 2) For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the cost.
 - 3) For Contractor, for any Work performed by its Subcontractor(s), 6% of the amount due each Subcontractor.
 - 4) For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 5% of the amount due the sub-Subcontractor.
 - e. Allowance for Profit:
 - 1) For Contractor or Subcontractor of any tier for work performed by their forces, 5% of the cost developed in accordance with subsections a, b & c above.
 - 2) For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 5% of the Subcontractor cost.
 - f. Insurance or Bond Premium: The costs of any change or additional premium of Contractor's liability insurance and public works bond arising directly from the changed Work. The costs of any change in insurance or bond premium shall be added after overhead and profit are calculated.
- B. Change Order Pricing - Unit Prices

GENERAL CONDITIONS

1. Work on a unit-price basis as stated in the Specifications and at the price submitted in the Bid Form or as subsequently modified.
 - a. Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead and profit, and bond and insurance costs; and
 - b. Quantities must be supported by field measurement verified by Owner.

5.3 CHANGE IN THE CONTRACT TIME

- A. The Contract Time shall only be changed by a Change Order. Contractor shall immediately notify Owner, and shall include any request for a change in the Contract Time in its Change Order proposal.
- B. If the time of Contractor's performance is changed due to an act of Force Majeure, Contractor shall request for an equitable adjustment in the Contract Time in writing within 24-hours of the occurrence.

PART 6 - CLAIMS AND DISPUTE RESOLUTION

6.1 CLAIMS PROCEDURE

- A. If the parties fail to reach agreement regarding any dispute arising from the Contract Documents, Contractor's only remedy shall be to file a Claim with Owner within 30 Days from Owner's final offer.
- B. The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented.
- C. After Contractor has submitted a fully-documented Claim, Owner shall respond, in writing, to Contractor with a decision within 30 Days from the date the Claim is received.
- D. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim.
- E. Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless timely made in accordance with the requirements of this section.

6.2 ARBITRATION

- A. If Contractor disagrees with Owner's decision rendered in accordance with paragraph 6.1C, Contractor shall provide Owner with a written demand for arbitration. No demand for arbitration of any such Claim shall be made later than 30 Days after the date of Owner's decision on such Claim; failure to demand arbitration within said 30 Day period shall result in Owner's decision being final and binding upon Contractor and its Subcontractors.
 1. Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Owner. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA, or mutually acceptable service.
- B. All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work shall be maintained.

6.3 CLAIMS AUDITS

- A. All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
 1. In support of Owner audit of any Claim, Contractor shall promptly make available to Owner all records relating to the Work.

GENERAL CONDITIONS

PART 7 - TERMINATION OF THE WORK

7.1 TERMINATION BY OWNER FOR CAUSE

- A. Owner may, upon a written Notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Completion of the Work within the Contract Time;
 2. Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
 3. Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
 4. Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
 5. Contractor repeatedly fails to make prompt payment due to Subcontractors, suppliers, or for labor;
 6. Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
 7. Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Upon termination, Owner may at its option:
1. Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
 2. Finish the Work by whatever other reasonable method it deems expedient.
- C. Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 7.2B, and shall not be entitled to receive further payment until the Work is accepted.
- E. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. Contractor shall also be liable for liquidated damages until such reasonable time as may be required for Completion. These obligations for payment shall survive termination.
- F. Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. If Owner terminates Contractor for cause, and it is later determined that none of the circumstances set forth in 7.1A exist, then such termination shall be deemed a termination for convenience pursuant to 7.2.

7.2 TERMINATION BY OWNER FOR CONVENIENCE

- A. Owner may, upon Notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Unless Owner directs otherwise, after receipt of a Notice of termination for either cause or convenience, Contractor shall promptly:
1. Stop performing Work on the date and as specified in the notice of termination;
 2. Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
 3. Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;

GENERAL CONDITIONS

PART 8 - MISCELLANEOUS PROVISIONS

8.1 RECORDS KEEPING AND REPORTING

- A. The Contractor and all Subcontractors shall maintain accounts and records in accordance with State Auditor's procedures, including personnel, property, financial and programmatic records which sufficiently and properly reflect all direct and indirect costs of any nature expended and services performed in the performance of this Contract and other such records as may be deemed necessary by the Owner to ensure proper accounting for all funds contributed by the Owner to the performance of this Contract and compliance with this Contract.
- B. The Contractor, and its Subcontractors, shall maintain these records for a period of six (6) years after the date of Final Acceptance.
- C. Payroll Records. RCW 39.12.120
 - (1) Each contractor, subcontractor, or employer shall keep accurate payroll records for three years from the date of acceptance of the public works project by the contract awarding agency, showing the employee's full name, address, social security number, trade or occupation, classification, straight and overtime rates, hourly rate of usual benefits, and hours worked each day and week, including any employee authorizations executed pursuant to RCW 49.28.065, and the actual gross wages, itemized deductions, withholdings, and net wages paid, for each laborer, worker, and mechanic employed by the contractor for work performed on a public works project.
 - (2) A contractor, subcontractor, or employer shall file a copy of its certified payroll records using the department of labor and industries' online system at least once per month. If the department of labor and industries' online system is not used, a contractor, subcontractor, or employer shall file a copy of its certified payroll records directly with the department of labor and industries in a format approved by the department of labor and industries at least once per month.
 - (3) The department of labor and industries shall provide, upon request, a copy of an employer's certified payroll records to an interested party. A joint labor-management cooperation committee may only use the information provided under this subsection for purposes of filing complaints under RCW 39.12.065 and may not use the information for any other purpose, including union organizing or commercial activity.
 - (4) A contractor, subcontractor, or employer's noncompliance with this section constitutes a violation of RCW 39.12.050.

8.2 AUDITS AND INSPECTIONS

- A. The records and documents with respect to all matters covered by this Contract shall be subject at all times to inspection, review or audit by the Owner or any other government agency so authorized by law during the performance of this Contract. The Owner shall have the right to an annual audit of the Contractor's financial statement and condition.

8.3 ORGANIZATION CONFLICTS OF INTEREST

- A. The Contractor warrants that to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under this Contract and the Contractor's organizational, financial, contractual or other interests are such that:
 - 1. Award of the Contract may result in an unfair competitive advantage; or
 - 2. The Contractor's objectivity in performing the Contract work may be impaired.
- B. The Contractor agrees that if after award they discover an organizational conflict of interest with respect to this Contract, they shall make an immediate and full disclosure in writing to the Contracting Officer, which shall include a description of the action, which the Contractor has taken or intends to take to eliminate or neutralize the conflict. The Owner may, however, terminate the Contract if it deems the action to be in the best interest of the Owner.
- C. In the event the Contractor was aware of an organizational conflict of interest before the award of this Contract and intentionally did not disclose the conflict to the Contracting Officer, the Owner may terminate the Contract for default.

GENERAL CONDITIONS

- D. The provisions of this Clause shall be included in all subcontracts and consulting agreements wherein the work to be performed is similar to the services provided by the Contractor. The Contractor shall include in such subcontracts and consulting agreements any necessary provisions to eliminate or neutralize conflicts of interest.

8.4 INTERESTS OF MEMBERS OF CONGRESS

- A. No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this Contract or to any benefit to arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

8.5 INTERESTS OF MEMBERS, OFFICERS, COMMISSIONERS AND EMPLOYEES, OR FORMER MEMBERS, OFFICERS AND EMPLOYEES

- A. No member, officer, or employee of the King County Housing Authority, no member of the governing body of the locality in which the project is situated, no member of the governing body in which the Owner was activated, and no other public official or such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this Contract or the proceeds thereof.

BID FORM

PROJECT NAME AND LOCATION:

**Exterior Renovations Building E
Carriage House Apartments**

Contract Number: AW2601831

The undersigned, Legal Name of Bidder: _____ on this date: _____, 2026, having familiarized him/herself with the contract documents, site conditions, and has field verified all measurements contained in the project manual as prepared by the Owner, hereby proposes to furnish labor, materials and necessary equipment – all including, but not limited to, demolition, disposal, new installation and the required applicable taxes and fees to complete the work for the following bid amounts:

BASE BID _____ (\$ _____)
(Including sales tax indicated in Instructions to Bidders)

UNIT PRICES - See Specification Section 01100, 1.7 – Unit Prices

Unit Price No. 1 – Gypsum Sheathing _____ (\$ _____)
Per square foot (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 2 – Batt Insulation _____ (\$ _____)
Per square foot (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 3 – Deck Joist _____ (\$ _____)
Per linear foot (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 4 – Bora-Care _____ (\$ _____)
Per square foot (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 5 – Head, Jamb and Sill Liners _____ (\$ _____)
Per hour (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 6 – Rough Opening Modifications _____ (\$ _____)
Per hour (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 7 – Hot Water Heater Replacement _____ (\$ _____)
Per unit (Including sales tax indicated in Instructions to Bidders)

Unit Price No. 8 – Performance Bond for 100% Contract _____ (\$ _____)
Per Contract Total (Including sales tax indicated in Instructions to Bidders)

BID FORM

ALLOWANCES - See Specification Section 01100, 1.9 – Allowances

Allowance No. 1 - Interior Repairs Of Nail Pops, Cracking From Construction _____ (\$60,000.00)
(Including sales tax indicated in Instructions to Bidders)

Allowance No. 2 – Repair and/or Replacement of Wall Framing _____ (\$20,000.00)
Ducting Vents (Including sales tax indicated in Instructions to Bidders)

ADDENDA _____
Acknowledge receipt of any addenda by inserting the number(s) above

ALTERNATES - See Specification Section 01100, 1.19 – Alternates

ALTERNATE 1 – Bid For Replacement of All Windows and SGD's @ S. Elevation (\$ _____)
South Elevation Windows (Including sales tax indicated in Instructions to Bidders)

ALTERNATE 2 – Perform Repairs to Electrical Room Per S2A Details (\$ _____)
S2A Details (Including sales tax indicated in Instructions to Bidders)

ALTERNATE 3 – Perform Repairs to Electrical Room Per S2B Details (\$ _____)
S2B Details (Including sales tax indicated in Instructions to Bidders)

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids. The undersigned hereby agrees that this proposal shall be a valid and firm offer for a period of Sixty (60) calendar days from the date of Bid Opening.

Bidder agrees that Work will be substantially complete and ready for final payment in accordance with the Contract Documents on or before the date, within the number of calendar days indicated.

The undersigned Bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date for this Project, the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Signature of Bidder

Print Your Name

Submitted on _____ day of _____ 2026

City

State

BIDDER INFORMATION

BIDDER INFORMATION

Name of Bidder (Company): _____

Address: _____

Contact Name: _____

Phone Number: _____ Email Address: _____

Business Type: General Contractor () Other () (Please specify): _____

Bidder is a(n): ☐ Individual ☐ Partnership ☐ Joint Venture ☐ Incorporated in the state of _____

List business names & associated UBI # used by Bidder during the past 5 years if different than above:

Bidder has been in business continuously from: _____
Month, Year

Business License #: _____ Federal ID #: _____

Current UBI #: _____ Dept. of L&I Worker's Comp. Acct. #: _____

Bidder has experience in work "Similar in Scope and Complexity" comparable to that required for this Project:

As a prime contractor for _____ years. As a subcontractor for _____ years.

OWNER(S) OF COMPANY (List all owners):	OWNER'S SOCIAL SECURITY NUMBER (only required if sole proprietorship):

No. of regular full-time employees other than owner(s): _____

Indicate clearly the kind of work your company will actually perform in this project:

Approximate % of work your company will actually perform: _____

List the supervisory personnel to be employed by the Bidder and available for, and intended to, work on this project:

<u>Name</u>	<u>Title</u>	<u>How Long With Bidder</u>
_____	_____	_____
_____	_____	_____

BIDDER INFORMATION

SUBCONTRACTORS

Do you intend to use Subcontractor(s) in this project? Yes ☐ No ☐ (If yes, you must show the name of the subcontractors. Attach additional pages as necessary.)

Subcontractors Name	Subcontractor's UBI#	Phone Number	Trade	Years in Business
1.				
2.				
3.				
4.				
5.				

BIDDER'S EXPERIENCE

Projects successfully supervised and completed by your company for work of similar scope and value as specified in bid documents in the last 5 years. Attach additional pages as necessary.

Name of Project	Completion Date	Duration (Months)	Nature of Work	Amount of Contract
1.				
2.				
3.				
4.				
5.				

Owner's Name (of project listed above)	Project Address	Contact Person	Phone Number
1.			
2.			
3.			
4.			
5.			

Has Bidder ever been found guilty of violating any State or Federal employment laws? ☐ No ☐ Yes

If yes, give details & attach additional pages as necessary: _____

Has Bidder ever filed for protection under any provision of the federal bankruptcy laws or state insolvency laws?

☐ No ☐ Yes If yes, give details & attach additional pages as necessary: _____

BIDDER INFORMATION

Has any lien, claim and/or adverse legal action related to construction been rendered against Bidder in the past five years? (i.e., open claims, lawsuits, warrants, judgements including but not limited to those that would show on the L&I website) ☐ No ☐ Yes If yes, give details & attach additional pages as necessary: _____

Has Bidder or any of its employees filed any claims with Washington State Worker's Compensation or other insurance company for accidents resulting in fatal injury or dismemberment in the past 5 years? ☐ No ☐ Yes

If yes, please state:

<u>Date</u>	<u>Type of Injury</u>	<u>Agency Receiving Claim</u>
_____	_____	_____
_____	_____	_____

Bidders current Experience Modification Rate (EMR): _____

(If Bidder is self-insured, attach proof of EMR stated, showing complete worksheet calculations)

The bidder hereby certifies that the information contained in this Bidder's Information is accurate, complete and current.

BY: _____ NAME: _____
(signature) (print)

TITLE: _____ DATE: _____

CONTRACT FORM

This Contract is entered into by and between the King County Housing Authority, hereinafter referred to as the “Owner” whose principal office is located at 600 Andover Park West, Tukwila, WA 98188 and [Name of Contractor], referred to as the “Contractor”, whose principal office is located at [Contractor’s Address].

IN CONSIDERATION OF the mutual benefits and conditions hereinafter contained, the parties hereto agree as follows:

1.1 Contract Documents

- A. The provisions set forth in the Contract Documents are hereby incorporated into and made part of the Contract. Contractor acknowledges receipt and review of all Contract Documents applicable to performance of the work. The Contract shall consist of the following component parts:

1. This Instrument
2. Addenda
3. Specifications
4. Plans
5. Bid Form
6. Pre-Bid Agenda
7. Instructions to Bidders
8. General Conditions
9. Hazardous Materials
10. Prevailing Wage Rates
11. Performance and Payment Bonds

1.2 Scope of Services to be Performed by the Contractor: The Contractor shall provide all labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete the work in accordance with the Contract Documents for:

Project: Carrigae House Siding & Exterior Trim Replacement

Contract No.: AW2601831

1.3 Compensation: The total amount of the Contract shall be [\$\$\$] dollars and [¢¢] cents (\$[\$\$\$.\$\$]) subject to additions and deductions provided therein.

1.4 Duration of Contract: The Contractor shall commence work after receipt of Notice to Proceed, follow the schedule specified in the contract documents, and all work must be completed within one hundred fifty (150) consecutive calendar days from the date of the Notice to Proceed unless sooner terminated pursuant to the General Conditions. Upon expiration of the original Contract term, the Contract, at the Owner’s sole discretion, may be extended for a period determined by the Owner.

1.5 Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. If Completion of the Work does not occur within the Contract Time, the Contractor agrees that Liquidated Damages in the amount of \$500.00 per day will be assessed for each calendar day that the Contractor exceeds the time for completion.

The individuals signing this Contract warrant and represent for themselves and for their respective organizations that they are duly authorized to sign this Contract and that upon such signing their respective organizations are bound thereby.

DATED this _____ day of _____, 2026

Contractor

Owner

President/Owner

Lauren Mathisen
Executive Vice President of Real Estate Development
KING COUNTY HOUSING AUTHORITY

CERTIFICATE OF INSURANCE						DATE(MM/DD/YY)	
						Issue Date	
PRODUCER Vendor's Insurance Agent Street Address City, State, Zip Phone Number			THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.				
			COMPANIES AFFORDING COVERAGE				
INSURED Vendor Name Street Address City, State, Zip			COMPANY A	ABC Insurance Company			
			COMPANY B	DEF Insurance Company			
			COMPANY C	GHI Insurance Company			
			COMPANY D				
COVERAGES THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH REPSECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.							
CO LTR	TYPE OF INSURANCE		POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY		XXX123	01/01/00	01/01/01	GENERAL AGGREGATE 2,000,000	
	☒ COMMERCIAL GENERAL LIABILITY	PRODUCTS-COMP/OP AGG 1,000,000					
	☐ CLAIMS MADE ☒ OCCUR	PERSONAL & ADV INJURY 1,000,000					
	☐ OWNER'S & CONTRACTOR'S PROT	EACH OCCURRENCE 1,000,000					
		FIRE DAMAGE (Any one fire) 50,000					
		MED EXP (Any one person) 5,000					
B	AUTOMOBILE LIABILITY		XXX456	01/01/00	01/01/01	COMBINED SINGLE LIMIT 1,000,000	
	☒ ANY AUTO	BODILY INJURY (Per person)					
	☐ ALL OWNED AUTOS	BODILY INJURY (Per accident)					
	☒ SCHEDULED AUTOS	PROPERTY DAMAGE					
	☒ HIRED AUTOS						
☐ NON-OWNED AUTOS							
	GARAGE LIABILITY					AUTO ONLY-EA ACCIDENT	
	☐ ANY AUTO	OTHER THAN AUTO ONLY:					
	☐	EACH ACCIDENT					
	☐	AGGREGATE					
	EXCESS LIABILITY					EACH OCCURRENCE	
	☐ UMBRELLA FORM	AGGREGATE					
	☐ OTHER THAN UMBRELLA FORM						
	☐						
C	WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY		XXX789	01/01/00	01/01/01	☒ STATUTORY LIMITS	
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: ☐ INCL ☐ EXCL					EACH ACCIDENT	1,000,000
						DISEASE-POLICY LIMIT	1,000,000
						DISEASE-EACH EMPLOYEE	1,000,000
	OTHER						
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS Allied Residential and King County Housing Authority are named as additional insureds with respect to above general liability and auto coverage. Re: Contract AW2601831 at Carriage House Apartments, Bldg D, 3602 S. 180 th St., SeaTac, WA 98188.							
CERTIFICATE HOLDER Allied Residential King County Housing Authority 600 Andover Park West Seattle, WA 98188-3326				CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.			
				AUTHORIZED REPRESENTATIVE Signature of Insured's Agent			
ACORD 25-S (3/93)				ACORD CORPORATION 1993			

PROVIDE

GENERAL LIABILITY
ENDORSEMENT

and

AUTO LIABILITY
ENDORSEMENT



Engineering +
Environmental

Limited Hazardous Materials Survey Report

**KCHA Carriage House Apartments
3602 South 180th Street
SeaTac, Washington**

Prepared for:
King County Housing Authority
700 Andover Park West, Suite E
Seattle, Washington 98188

PBS Project No. 40573.130
November 10, 2016

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2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
866.727.0140 Fax
www.pbsenv.com

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TABLE OF CONTENTS

SUMMARY OF FINDINGS.....	Tab 1
ASBESTOS BULK SAMPLE DATA.....	Tab 2
PLM Asbestos Sample Inventory	
PLM Laboratory Data Sheets	
Chain-of-Custody Documentation	
LEAD PAINT SAMPLE DATA.....	Tab 3
AAS Lead Paint Sample Inventory	
Lead (Pb) Laboratory Data Sheet	
Chain-of-Custody Documentation	
INSPECTOR CERTIFICATION.....	Tab 4
PRIOR SURVEY DATA	Tab 5

TAB 1
SUMMARY OF FINDINGS

BACKGROUND

PBS Engineering and Environmental, Inc. (PBS) performed a limited hazardous materials survey of the Carriage House Apartments located at 3602 South 180th Street in SeaTac, Washington. Accessible building areas were inspected for the presence of asbestos-containing materials (ACMs). PBS inspected (59) representative units at the site as part of this survey.

Carriage House Apartments is a residential apartment complex consisting of 5 multi-family apartment buildings totaling 236 studio type units. Typical interior finishes within the apartment units include tacked down carpeting in the living room/bedrooms, with of sheet vinyl flooring in kitchens and bathrooms. Walls and ceilings throughout consist of gypsum wallboard. Popcorn texture has been applied to most ceilings with the exception of kitchens and bathrooms. Orange peel texture has been applied to walls throughout, as well as to kitchen and bathroom ceilings. The exterior has wood composite siding with vinyl-framed windows. Attic spaces were insulated with fiberglass batt insulation.

SURVEY PROCESS

At the request of the client, this survey was limited to 59 of the 236 units throughout the complex. PBS also surveyed the building exteriors, laundry rooms and the clubhouse/office building. PBS accessed the following units as part of this survey.

▪ A-2	▪ B-14	▪ C-29	▪ D-48
▪ A-10	▪ B-23	▪ C-30	▪ E-1
▪ A-14	▪ B-25	▪ C-36	▪ E-4
▪ A-18	▪ B-29	▪ C-47	▪ E-5
▪ A-19	▪ B-32	▪ D-1	▪ E-6
▪ A-23	▪ B-36	▪ D-4	▪ E-9
▪ A-29	▪ B-47	▪ D-5	▪ E-14
▪ A-33	▪ C-1	▪ D-6	▪ E-23
▪ A-39	▪ C-3	▪ D-14	▪ E-24
▪ A-45	▪ C-5	▪ D-23	▪ E-29
▪ B-1	▪ C-6	▪ D-24	▪ E-30
▪ B-3	▪ C-12	▪ D-29	▪ E-36
▪ B-5	▪ C-14	▪ D-30	▪ E-37
▪ B-6	▪ C-16	▪ D-36	▪ E-48
▪ B-12	▪ C-23	▪ D-37	

Accessible building areas included in the scope of work were inspected by AHERA Certified Building Inspector Chuck Greeb (Cert. No. 154781 Exp. 12/30/2016) between October 27 and November 2, 2016. Inaccessible spaces are those requiring selective demolition (such as chases), fall protection, or confined-space entry protocols to gain access.

When observed, suspect ACMs were sampled, assigned a unique identification number, and transmitted for analysis to Seattle Asbestos Test (NVLAP #201057-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume.

While PBS has endeavored to identify or has presumed the presence and type of ACMs in concealed locations, additional unidentified ACMs may exist. Suspect ACMs that were not included in the scope of this investigation may exist.

In addition, PBS reviewed previous inspection data obtained from the project areas as available, and pertinent information is incorporated into this report and is attached. Previous inspection data reviewed included the following:

- NVL Labs Limited Good Faith Inspection of select units at Carriage House report dated March 21, 2016.

FINDINGS

Asbestos-Containing Materials (ACM)

The following materials were determined to contain **greater than 1% asbestos**:

- **Orange Peel Wall/Ceiling Texture** (NVL Labs Report) - walls throughout all units, kitchen and bathroom ceilings throughout all units, walls and ceiling throughout laundry rooms and the Building A office area (approx. 326,550 SF).
- **Popcorn Ceiling Texture** (confirmed >1% by point count analysis) – living room/bedroom areas throughout all units (approx. 88,000 SF).
- **Black Undercoating on Stainless Steel Kitchen Sinks** – various locations throughout the site (non-ACM at some locations - approx.160 Each)
- **Beige/White Sheet Vinyl Flooring** – Base layer of flooring in Building B and Building E Laundry Rooms (Approx. 375 SF).
- **Joint Compound associated with gypsum wallboard** (composite <1%) present throughout the site.

The following materials were determined to contain **less than 1% asbestos**:

- **Gray powdery flooring sub-layer** in Unit A-6 (confirmed <1% by point count analysis). This material was found only at this location.

The materials above may be present in units and building areas that were not accessed as part of this investigation and should be considered asbestos-containing when encountered in all units and building areas.

Non-Asbestos Containing Materials

The following materials were sampled and **did not** contain detectable asbestos.

- Gypsum wallboard (with asbestos joint compound);
- Vinyl covebase and associated mastics;
- Beige/tan sheet vinyl - 6" squares
- Beige/tan sheet vinyl - 8" squares
- Beige/tan sheet vinyl - 10" squares
- Brown sheet vinyl - 12" squares
- White and beige sheet vinyl sub-layers
- Cementitious flooring underlayment;
- Yellow sheet flooring and mastic – covered exterior 2nd floor walkways at unit entries throughout (current and prior NVL sampling)
- Caulk - floor/wall joints
- Carpet mastic – clubhouse/office building;
- Yellow carpet mastic – Mailbox Rooms (NVL Labs Report)

- Tan sheet vinyl and mastic beneath carpet – Mailbox Rooms throughout (NVL Labs Report)
- Carpet mastic – stairways throughout (NVL Labs Report)
- Beige sheet vinyl – Sensitive Files Room of Building A
- Gray cementitious walkway – throughout 2nd floor levels of Buildings A through E
- Window and door frame caulk;
- Asphalt roof shingles and felt base.

See the PLM Asbestos Bulk Sample Inventory and laboratory report included in Tab 2 for additional information.

Lead Containing Paint (LCP)

PBS collected 25 samples of representative paint coatings to be analyzed for lead content. The samples were assigned a unique identification number and transmitted to NVL Laboratories, Inc. (AIHA IH #101861) in Seattle, Washington under chain-of-custody protocols for lead analysis using Flame Atomic Absorption Spectrometry (FAAS).

Lead was detected in four (2) of the 25 samples. Lead was detected in the following paint coatings:

- White Paint on interior gypsum wallboard – Building A (0.0067%);
- Beige Paint – Building A exterior wood siding (0.0092%);
- Brown Paint – Building B exterior wood beam at stairs (0.0075%);
- Green Paint – Building C exterior wood siding (0.0084%);

See the FAAS Lead Paint Chip Sample Inventory included in Tab 3 for additional information including specific sample locations and results of paint sampling. Similar paint coatings to those identified above should be assumed to contain lead until sampled.

RECOMMENDATIONS

Asbestos-Containing Materials (ACM)

Regulations require various employee/worker compliance for all trades during activities impacting materials containing less than 1% of asbestos (gypsum wallboard assembly composite and Unit A6 sub-floor layer), which include and not limited to asbestos awareness training, initial air monitoring, worker and environmental protection, engineering controls (such as the use of wet methods and HEPA vacuums for debris cleanup), worker training and supervision by an asbestos “competent person”.

PBS recommends that ACMs to be impacted by renovation or demolition activities be removed prior to construction or only be impacted by properly trained and protected personnel in accordance with applicable local, state and federal regulations. A qualified asbestos abatement contractor licensed in the State of Washington should be employed for any removal and proper disposal of ACM in accordance with all applicable local, state and federal regulations.

The possibility exist that concealed suspect ACM may be present in wall and ceiling cavities, equipment and select areas of the building. These may include, but are not limited to ACM pipe insulation and hard-mudded fittings, other mechanical insulation, vibration joint cloth or sealants on ductwork, glued ceiling tiles, construction adhesives and wall mastics, flooring sub-layers, and vapor barriers or weatherproofing. Any suspect ACMs that were not included in this survey should be considered asbestos-containing until properly sampled by an AHERA-certified Asbestos Building Inspector.

Lead-Containing Paint (LCP)

Impact of paint with detectable concentrations of lead requires construction activities to be performed in accordance with the State of Washington Department of Labor and Industries regulation for Lead in Construction (WAC 296-155-176). All construction activities performed in pre-1978 residential buildings requires compliance with the EPA and State of Washington Renovation, Repair and Painting (RRP) program regulations.

Painted coatings may exist in inaccessible areas of the building or in secondary coatings on building components. Any previously unidentified painted coatings should be considered lead containing until sampled and proven otherwise.

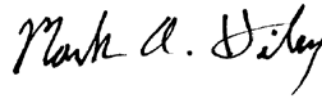
The paint sampling performed as part of this survey was not intended to meet the requirements of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint in Housing.

Report prepared by:



Chuck Greeb
AHERA Building Inspector
Cert. # 154781, Exp. 12/30/2016

Report reviewed by:



Mark Hiley
Senior Project Manager

TAB 2
ASBESTOS BULK SAMPLE DATA

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
Building - A					
40573.130 -A01	Black sink undercoat	Unit A2 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT
40573.130 -A02	Orange peel wall texture	Unit A2 - Kitchen	Layer 1: White powdery material with paint	NAD	SAT
40573.130 -A03	White caulk at floor/wall joint Beige sheet vinyl - 8" squares Backing and mastic Cementitious floor underlayment	Unit A2 - Bathroom	Layer 1: White soft/elastic material Layer 2: Beige sheet vinyl Layer 3: Gray fibrous material with mastic Layer 4: Gray sandy/brittle material	NAD NAD NAD NAD	SAT
40573.130 -A04	Joint compound Gypsum wallboard	Unit A10 - Kitchen	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -A05	Tan 4" covebase White mastic Brown vinyl Wood debris	Unit A10 - Kitchen	Layer 1: Tan rubbery material Layer 2: White mastic Layer 3: Brown vinyl Layer 4: Brown wood debris	NAD NAD NAD NAD	SAT
40573.130 -A06	Tan sheet vinyl - 6" squares Backing and mastic Tan sheet vinyl Backing Cementitious floor underlayment Gray powdery material	Unit A10 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Tan/beige sheet vinyl Layer 4: Gray fibrous material Layer 5: Gray sandy/brittle material Layer 6: Gray powdery material with fibrous material <i>Point count result layer 6</i>	NAD NAD NAD NAD NAD 2% Chrysotile 0.5% Ch.	SAT
40573.130 -A07	Sink undercoat	Unit A10 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT
40573.130 -A08	Sink undercoat	Unit A29 - Kitchen	Layer 1: Black soft/loose material Layer 2: Off-white powdery material	NAD NAD	SAT
40573.130 -A09	Joint compound Gypsum wallboard	Unit A14 - Closet	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -A10	Beige sheet vinyl - 6" squares Beige sheet vinyl Backing and mastic Beige sheet vinyl Backing and mastic	Unit A14 - Bathroom	Layer 1: Clear soft/elastic material Layer 2: Beige sheet vinyl Layer 3: Gray fibrous material with mastic Layer 4: Beige sheet vinyl Layer 5: gray fibrous material with mastic	NAD NAD NAD NAD NAD	SAT
40573.130 -A11	Ceiling texture	Unit A14 - Living room	Layer 1: White soft lumpy material with paint <i>Point count result</i>	3% Chrysotile 1.75% Ch.	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -A12	Texture on gypsum wallboard	Unit A29 - Living room	Layer 1: White powdery material with paint	2% Chrysotile	SAT
40573.130 -A13	Beige sheet vinyl - 10" squares Mastic Beige sheet vinyl Yellow mastic Beige sheet vinyl Backing and mastic Leveling compound Joint compound Yellow sheet vinyl Backing and mastic Joint compound	Unit A29 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Beige/tan sheet vinyl Layer 4: Yellow mastic Layer 5: Beige/gray sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: Gray brittle material Layer 8: White powdery material Layer 9: Yellow sheet vinyl Layer 10 Tan fibrous material with mastic Layer 11: White powdery material	NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD 2% Chrysotile	SAT
40573.130 -A14	Gray 4" vinyl covebase Mastic Joint compound Gypsum wallboard	Unit A33 - Bathroom	Layer 1: Gray rubbery material Layer 2: Off-white mastic Layer 3: White powdery material with paint Layer 4: White chalky material with paper	NAD NAD 2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -A15	Brown sheet vinyl - 12" squares Mastic Tan sheet vinyl Backing and mastic Brown sheet vinyl Backing and mastic Leveling compound Beige sheet vinyl Backing and mastic Unknown layer Off-white sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic	Unit A33 - Kitchen	Layer 1: Brown sheet vinyl Layer 2: Yellow mastic Layer 3: Tan/beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Brown/beige sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: Gray brittle material Layer 8: Beige sheet vinyl Layer 9: Gray fibrous material with mastic Layer 10: Brown brittle material Layer 11: Off-white sheet vinyl Layer 12: Gray fibrous material with mastic Layer 13: Off-white sheet vinyl Layer 14: Tan fibrous material with mastic	NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -A16	Wall texture Joint compound Gypsum wallboard	Unit A39 - Closet	Layer 1: White powdery material with paint Layer 2: White powdery material with paint Layer 3: White chalky material with paper	NAD 2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -A17	Tan sheet vinyl - 10" squares Mastic Joint compound Cementitious floor underlayment	Unit A39 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Yellow mastic Layer 3: White powdery material with paint Layer 4: Gray sandy/brittle material	NAD NAD 2% Chrysotile NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -A18	Caulk Beige sheet vinyl - 6" squares Mastic Paint Beige sheet vinyl Backing and mastic Unknown layer Off-white sheet vinyl Backing and mastic Unknown layer Paint	Unit A45 - Bathroom	Layer 1: White soft/elastic material Layer 2: Beige sheet vinyl Layer 3: Clear mastic Layer 4: White paint Layer 5: Beige sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: Trace brown brittle material Layer 8: Off-white sheet vinyl Layer 9: Tan fibrous material with mastic Layer 10: Brown brittle material Layer 11: White paint	NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -A19	Beige sheet vinyl - 6" squares Mastic Beige sheet vinyl Backing and mastic Unknown layer Off-white sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic	Unit A45 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Clear mastic Layer 3: Beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Brown brittle material Layer 6: Off-white sheet vinyl Layer 7: Tan fibrous material with mastic Layer 8: Off-white sheet vinyl Layer 9: Tan fibrous material with mastic	NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -A20	Texture Joint compound Gypsum wallboard	Unit A45 - Closet	Layer 1: White powdery material with paint Layer 2: White powdery material with paint Layer 3: White chalky material with paper	NAD 2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -A21	Caulk Beige sheet vinyl Mastic Leveling compound Mastic Paint	Unit A Laundry	Layer 1: White soft/elastic material Layer 2: Beige sheet vinyl Layer 3: White mastic Layer 4: Gray brittle material Layer 5: Tan mastic Layer 6: White paint	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -A22	Paint Beige sheet vinyl Mastic	Unit A Office - Sensitive Files Room	Layer 1: White paint Layer 2: Beige sheet vinyl Layer 3: Trace white mastic	NAD NAD NAD	SAT
40573.130 -A23	Carpet mastic Leveling compound Paint	Unit A Office	Layer 1: Tan mastic Layer 2: Gray brittle material Layer 3: White paint	NAD NAD NAD	SAT
40573.130 -A24	Window frame caulk	Unit A exterior, courtyard	Layer 1: Tan soft/elastic material Layer 2: White soft/elastic material	NAD NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -A25	Gray cementitious walkway	Unit A 2nd floor at stairs	Layer 1: Gray soft/elastic	NAD	SAT
	Mastic		Layer 2: Gray sandy/brittle material with paint	NAD	
			Layer 3: Trace tan mastic	NAD	
40573.130 -A26	Composition roof	Courtyard side	Layer 1: Black asphaltic material with sand	NAD	SAT
			Layer 2: Black asphaltic material	NAD	
			Layer 3: Black asphaltic material with sand	NAD	

Building - B

40573.130 -B01	Joint compound Gypsum wallboard	Unit B3 - Closet	Layer 1: White powdery material with paint Layer 2: Off-white chalky material with paper	2% Chrysotile NAD	SAT
40573.130 -B02	Tan sheet vinyl - 6" squares Backing and mastic Cementitious flooring underlayment	Unit B3 - Bath	Layer 1: Tan sheet vinyl Layer 2: Brown fibrous material with mastic Layer 3: Gray sandy/brittle material with paint	NAD NAD NAD	SAT
40573.130 -B03	Popcorn ceiling	Unit B3 - Living room	Layer 1: White soft lumpy material with paint	3% Chrysotile	SAT
40573.130 -B04	Wall texture Mastic Unknown layer	Unit B5 - Living room	Layer 1: Off-white powdery material Layer 2: Trace yellow/clear mastic Layer 3: Black soft material	NAD NAD NAD	SAT
40573.130 -B05	Tan sheet vinyl - 10" squares Mastic Joint compound Paper	Unit B5 - Kitchen	Layer 1: Yellow mastic Layer 2: White mastic Layer 3: Trace white powdery material with paint Layer 4: Trace brown paper	NAD NAD NAD NAD	SAT
40573.130 -B06	Tan sheet vinyl - 10" squares Mastic	Unit B12 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Yellow mastic	NAD NAD	SAT
40573.130 -B07	Wall texture	Unit B12 - Living room	Layer 1: White powdery material with paint	NAD	SAT
40573.130 -B08	Tan sheet vinyl - 10" squares Backing and mastic Sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic	Unit B14 - Kitchen (2 layer)	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: White sheet vinyl with paint Layer 4: Gray fibrous material with mastic Layer 5: Off-white sheet vinyl Layer 6: Gray fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B09	Gray 4" covebase Mastic Paper	Unit B14 - Kitchen	Layer 1: Gray rubbery material Layer 2: Yellow mastic Layer 3: Trace white paper	NAD NAD NAD	SAT
40573.130 -B10	Texture Joint compound Gypsum wallboard	Unit B14 - Closet	Layer 1: White powdery material with paint Layer 2: Off-white chalky material with paper	2% Chrysotile NAD	SAT
				<i>Composite result</i>	<1% Ch.

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -B11	Tan sheet vinyl - 10" squares Backing and mastic Leveling compound Beige sheet vinyl Backing and mastic Yellow sheet vinyl Backing and mastic Cementitious floor underlayment	Unit B47 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Gray brittle material Layer 4: Beige sheet vinyl with paint Layer 5: Gray fibrous material with mastic Layer 6: Yellow sheet vinyl Layer 7: Brown fibrous material with mastic Layer 8: Gray sandy/brittle material with paint	NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B12	Tan sheet vinyl - 10" squares Mastic Tan sheet vinyl Backing and mastic Yellow sheet vinyl Cementitious floor underlayment	Unit B23 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Off-white mastic Layer 3: Tan sheet vinyl with paint Layer 4: Gray fibrous material with mastic Layer 5: Yellow sheet vinyl Layer 6: Gray fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B13	Tan sheet vinyl - 12" squares Backing and mastic Floor leveling compound Off-white sheet vinyl Backing and mastic Cementitious floor underlayment	Unit B25 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Trace gray brittle material Layer 4: Off-white sheet vinyl with paint Layer 5: Gray fibrous material with mastic Layer 6: Gray sandy/brittle material with paint	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B14	Gray 4" covebase Mastic Joint compound Gypsum wallboard	Unit B25 - Kitchen	Layer 1: Gray rubbery material Layer 2: White mastic Layer 3: White powdery material with paint Layer 4: Off-white material with paper	NAD NAD 2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -B15	Sink undercoat	Unit B25 - Kitchen	Layer 1: Black sheet vinyl	2% Chrysotile	SAT
40573.130 -B16	Beige sheet vinyl - 6" squares Backing and mastic Leveling compound White sheet vinyl Backing and mastic Tan sheet vinyl Backing and mastic Cementitious floor underlayment	Unit B29 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: White fibrous material with mastic Layer 3: Trace gray brittle material Layer 4: White sheet vinyl with paint Layer 5: Gray fibrous material with mastic Layer 6: Tan sheet vinyl Layer 7: White fibrous material with mastic Layer 8: Gray sandy/brittle material	NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B17	Wall texture	Unit B29 - Living room	Layer 1: White powdery material with paint Layer 2: Trace brown paper	NAD NAD	SAT
40573.130 -B18	Popcorn ceiling	Unit B32 - Living room	Layer 1: White soft lumpy material with paint	3% Chrysotile	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -B19	Tan sheet vinyl - 10" squares Mastic Tan sheet vinyl Backing and mastic Leveling compound White sheet vinyl Backing and mastic Yellow sheet vinyl Backing and mastic Cementitious floor underlayment	Unit B32 - Bathroom	Layer 1: Tan sheet vinyl Layer 2: Off-white mastic Layer 3: Tan sheet vinyl with paint Layer 4: Gray fibrous material with mastic Layer 5: Trace gray brittle material Layer 6: White sheet vinyl Layer 7: Gray fibrous material with mastic Layer 8: Yellow sheet vinyl Layer 9: Brown fibrous material with mastic Layer 10: Gray sandy/brittle material with paint	NAD NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B20	Wall texture	Unit B32 - Living room	Layer 1: White powdery material with paint	NAD	SAT
40573.130 -B21	Tan sheet vinyl - 10" squares Mastic Tan sheet vinyl Backing and mastic Leveling compound White sheet vinyl Backing and mastic Yellow sheet vinyl Backing and mastic	Unit B36 - Bathroom	Layer 1: Tan sheet vinyl Layer 2: Off-white mastic Layer 3: Tan sheet vinyl with paint Layer 4: Gray fibrous material with mastic Layer 5: Trace gray brittle material Layer 6: White sheet vinyl Layer 7: Gray fibrous material with mastic Layer 8: Yellow sheet vinyl Layer 9: Brown fibrous material with mastic	NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -B22	Sink undercoat	Unit B36 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT
40573.130 -B23	Gray 4" vinyl covebase Mastic Joint compound	Unit B47 - Kitchen	Layer 1: Gray rubbery material Layer 2: White mastic Layer 3: White powdery material with paper	NAD NAD NAD	SAT
40573.130 -B24	Texture and joint compound Gypsum wallboard	Unit B47 - Kitchen	Layer 1: Trace white powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40573.130 -B25	Beige sheet vinyl Mastic White sheet vinyl Backing and mastic	Building B Laundry room	Layer 1: Beige sheet vinyl Layer 2: Off-white mastic Layer 3: White sheet vinyl Layer 4: Gray fibrous material with mastic	NAD NAD NAD 50% Chrysotile	SAT
40573.130 -B26	Composition roof	Unit B Courtyard side	Layer 1: Black asphaltic material with sand Layer 2: Black asphaltic material with sand	NAD NAD	SAT
40573.130 -B27	Window frame caulk	Unit B Courtyard side	Layer 1: Beige soft/elastic material with paint	NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
Building - C					
40573.130 -C01	Tan vinyl - 12" squares Mastic Cementitious floor underlayment	Unit C3 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Tan mastic Layer 3: Gray sandy/brittle material	NAD NAD NAD	SAT
40573.130 -C02	Gray 4" vinyl covebase Mastic	Unit C3 - Kitchen	Layer 1: Brown rubbery material Layer 2: White mastic	NAD NAD	SAT
40573.130 -C03	Joint compound Gypsum wallboard	Unit C3 - Kitchen	Layer 1: Off-white powdery material with paint Layer 2: White chalky material with paint	NAD NAD	SAT
40573.130 -C04	Popcorn ceiling	Unit C3 - Living room	Layer 1: White soft lumpy material with paint	NAD	SAT
40573.130 -C05	Caulk Brown sheet vinyl - 6" square Backing and mastic Cementitious floor underlayment	Unit C5 - Living room	Layer 1: Trace off-white soft/elastic material Layer 2: Brown sheet vinyl Layer 3: White fibrous material with mastic Layer 4: Trace gray brittle material	NAD NAD NAD NAD	SAT
40573.130 -C06	Wall texture	Unit C5 - Bathroom	Layer 1: Trace white powdery material with paint	NAD	SAT
40573.130 -C07	Beige 4" vinyl covebase Mastic Joint compound	Unit C12 - Bathroom	Layer 1: Beige rubbery material Layer 2: Off-white mastic Layer 3: Trace white powdery material with paint and paper	NAD NAD NAD	SAT
40573.130 -C08	Brown sheet vinyl - 6" square Backing and mastic White sheet vinyl Backing and mastic Yellow sheet vinyl Backing and mastic	Unit C12 - Bathroom	Layer 1: Brown sheet vinyl Layer 2: White fibrous material with mastic Layer 3: White sheet vinyl Layer 4: Brown fibrous material with mastic Layer 5: Yellow sheet vinyl Layer 6: Brown fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -C09	Sink undercoat	Unit C14 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT
40573.130 -C10	Tan sheet vinyl - 6" square Backing and mastic	Unit C14 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with trace mastic	NAD NAD	SAT
40573.130 -C11	Joint compound Gypsum wallboard	Unit C14 - Kitchen	Layer 1: Trace off-white powdery material with paint and paper Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile <1% Ch.	SAT
40573.130 -C12	Wall texture	Unit C23 - Living room	Layer 1: Trace white powdery material with paint Layer 2: Trace brown paper	NAD NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -C13	Tan sheet vinyl - 10" square Yellow mastic Cementitious floor underlayment Unknown material	Unit C23 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Yellow mastic Layer 3: Gray powdery material Layer 4: Trace white brittle material	NAD NAD NAD NAD	SAT
40573.130 -C14	Beige sheet vinyl - 6" square Backing and mastic Brown sheet vinyl Backing and mastic	Unit C29 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with trace mastic Layer 3: Brown sheet vinyl Layer 4: White fibrous material with trace mastic	NAD NAD NAD NAD	SAT
40573.130 -C15	Popcorn ceiling	Unit C29 - Living room	Layer 1: White soft lumpy material with paint	NAD	SAT
40573.130 -C16	Joint compound Gypsum wallboard	Unit C16 - Kitchen	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	NAD NAD	SAT
40573.130 -C17	Tan sheet vinyl - 10" square Mastic Off-white sheet vinyl Backing and mastic Cementitious floor underlayment	Unit C16 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Off-white sheet vinyl Layer 4: Brown fibrous material with mastic Layer 5: Gray brittle material	NAD NAD NAD NAD NAD	SAT
40573.130 -C18	Gray 4" covebase Mastic Paper	Unit C30 - Kitchen	Layer 1: Gray rubbery material Layer 2: Off-white mastic Layer 3: Brown paper with paint	NAD NAD NAD	SAT
40573.130 -C19	Brown sheet vinyl - 6" square Backing and mastic Off-white sheet vinyl Backing and mastic Tan sheet vinyl Backing and mastic	Unit C36 - Bathroom - 2 layer	Layer 1: Brown sheet vinyl Layer 2: Off-white fibrous material with mastic Layer 3: Off-white sheet vinyl Layer 4: Off-white fibrous material with mastic Layer 5: Tan sheet vinyl Layer 6: Brown fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -C20	Tan 4" vinyl covebase Mastic Joint compound	Unit C36 - Bathroom	Layer 1: Gray rubbery material Layer 2: Off-white mastic Layer 3: Trace white powdery material with paint and paper	NAD NAD 2% Chrysotile	SAT
40573.130 -C21	Wall texture	Unit C47 - Kitchen (ceiling)	Layer 1: Trace off-white powdery material with paint and paper	NAD	SAT
40573.130 -C22	Beige sheet vinyl - 6" square Backing and mastic	Unit C47 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: Off-white fibrous material with mastic	NAD NAD	SAT
40573.130 -C23	Beige sheet vinyl Cementitious underlayment	Building C - Laundry room	Layer 1: Beige sheet vinyl Layer 2: Gray powdery material with mastic	NAD NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -C24	Composition roof	Courtyard side	Layer 1: Black asphaltic material with sand	NAD	SAT
40573.130 -C25	Cementitious walkway	2nd floor at stairs	Layer 1: Gray hard sandy/brittle material with paint	NAD	SAT
40573.130 -C26	Yellow sheet flooring Mastic	2nd floor corridor to rooms 33-36	Layer 1: Yellow sheet vinyl Layer 2: Yellow mastic	NAD NAD	SAT
40573.130 -C27	Window frame sealant	2nd floor courtyard side	Layer 1: Gray soft/elastic material with paint	NAD	SAT

Building - D

40573.130 -D01	Tan vinyl - 12" square Backing and mastic	Unit D1 - Kitchen (1 layer)	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic	NAD NAD	SAT
40573.130 -D02	Tan vinyl - 12" square Backing and mastic Leveling compound Tan sheet vinyl Backing and mastic	Unit D1 - Bathroom (2 layer)	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Gray brittle material Layer 4: Light tan sheet vinyl Layer 5: Yellow fibrous material with mastic	NAD NAD NAD NAD NAD	SAT
40573.130 -D03	Joint compound Gypsum wallboard	Unit D1 - Kitchen	Layer 1: Off-white powdery material with paint Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -D04	Beige sheet vinyl - 12" square Backing and mastic	Unit D4	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic	NAD NAD	SAT
40573.130 -D05	Gray 4" vinyl covebase Mastic Joint compound	Unit D5	Layer 1: Gray rubbery material Layer 2: Brown mastic Layer 3: White powdery material with paint and paper	NAD NAD 2% Chrysotile	SAT
40573.130 -D06	Joint compound Gypsum wallboard	Unit D6	Layer 1: Off-white powdery material with paint Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -D07	Sink undercoat	Unit D6 - Kitchen	Layer 1: Black soft/loose material Layer 2: Off-white brittle material	NAD NAD	SAT
40573.130 -D08	Gray 4" vinyl covebase Mastic	Unit D6 - Kitchen	Layer 1: Gray rubbery material Layer 2: Off-white mastic	NAD NAD	SAT
40573.130 -D09	Tan sheet vinyl - 6" square Backing and mastic Cementitious floor underlayment	Unit D6 - Kitchen (1 layer)	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Gray sand/brittle material	NAD NAD NAD	SAT
40573.130 -D10	Popcorn ceiling	Unit D23 - Living room	Layer 1: Off-white soft lumpy material with paint	3% Chrysotile	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -D11	Texture Gypsum wallboard	Unit D23 - Closet	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40573.130 -D12	Sink undercoat	Unit D23 - Kitchen	Layer 1: Black soft/loose material	3% Chrysotile	SAT
40573.130 -D13	Popcorn ceiling	Unit D24	Layer 1: Off-white soft lumpy material with paint	3% Chrysotile	SAT
40573.130 -D14	Wall texture Gypsum wallboard	Unit D24	Layer 1: White powdery material with paint Layer 2: Trace white chalky material with paper	NAD NAD	SAT
40573.130 -D15	Tan sheet vinyl - 6" square Backing and mastic Off-white sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic	Unit D24 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Off-white sheet vinyl Layer 6: Gray fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -D16	Sink undercoat	Unit D24 - Kitchen	Layer 1: Black soft/loose material	3% Chrysotile	SAT
40573.130 -D17	Beige sheet vinyl - 12" square Backing and mastic Beige sheet vinyl Beige sheet vinyl Backing and mastic	Unit D29 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Gray sandy/brittle material	NAD NAD NAD NAD NAD	SAT
40573.130 -D18	Texture Joint compound Gypsum wallboard	Unit D29 - Closet	Layer 1: White powdery material with paint Layer 2: off-white powdery material with paint Layer 3: Pink chalky material with paper <i>Composite result</i>	NAD 2% Chrysotile NAD <1% Ch.	SAT
40573.130 -D19	Beige sheet vinyl - 12" square Backing and mastic Off-white sheet vinyl Backing and mastic	Unit D29 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white sheet vinyl Layer 4: Gray fibrous material with mastic	NAD NAD NAD NAD	SAT
40573.130 -D20	Wall texture	Unit D30 - Loft	Layer 1: White powdery material with paint	NAD	SAT
40573.130 -D21	Popcorn ceiling	Unit D30 - Loft	Layer 1: Off-white soft lumpy material with paint	3% Chrysotile	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -D22	Tan vinyl - 10" square Backing and mastic Yellow sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic Off-white sheet vinyl Backing and mastic Leveling compound	Unit D30 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Yellow sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Off-white sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: Off-white/black sheet vinyl Layer 8: Gray fibrous material with mastic Layer 9: Off-white brittle material	NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -D23	Tan vinyl - 10" square Mastic Cementitious floor underlayment	Unit D36 - Bathroom	Layer 1: Off-white sheet vinyl Layer 2: Clear/yellow mastic with wood debris Layer 3: Gray sandy/brittle material	NAD NAD NAD	SAT
40573.130 -D24	Texture, Joint compound Gypsum wallboard	Unit D24 - Kitchen	Layer 1: White powdery material with paint Layer 2: Trace white chalky material with paper	NAD NAD	SAT
40573.130 -D25	Gray 4" covebase Mastic Joint compound Gypsum wallboard	Unit D36 - Kitchen	Layer 1: Gray rubbery material Layer 2: Off-white mastic Layer 3: White powdery material with paint Layer 4: White chalky material with paper	NAD NAD NAD NAD	SAT
40573.130 -D26	Sink undercoat	Unit D37 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT
40573.130 -D27	Beige sheet vinyl - 8" square Backing and mastic Off-white sheet vinyl Backing and mastic	Unit D37 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white sheet vinyl Layer 4: Gray fibrous material with mastic	NAD NAD NAD NAD	SAT
40573.130 -D28	Beige sheet vinyl - 6" square Backing and mastic Yellow sheet vinyl Backing and mastic	Unit D48 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Yellow sheet vinyl Layer 4: Gray fibrous material with mastic	NAD NAD NAD NAD	SAT
40573.130 -D29	Green/yellow sheet vinyl flooring Yellow mastic	2nd floor corridor to Units D41-D44	Layer 1: Green/yellow sheet vinyl Layer 2: Yellow mastic	NAD NAD	SAT
40573.130 -D30	Gray cementitious walkway Mastic	Unit D, 2nd floor at stair	Layer 1: Gray hard sandy/brittle material with paint Layer 2: Tan mastic	NAD NAD	SAT
40573.130 -D31	Composition roof	Unit D, Courtyard side	Layer 1: Black asphaltic material with sand	NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
Building - E					
40573.130 -E01	Gray 4" covebase Mastic	Unit E1 - Kitchen	Layer 1: Gray rubbery material Layer 2: Tan mastic	NAD NAD	SAT
40573.130 -E02	Beige sheet vinyl - 12" squares	Unit E1 - Kitchen (2 layers)	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Beige/gray sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Gray brittle material Layer 6: Off-white sheet vinyl Layer 7: Gray fibrous material with mastic	NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E03	Texture Joint compound Gypsum wallboard	Unit E1 - Kitchen	Layer 1: Tan mastic Layer 2: Off-white powdery material with paint Layer 3: White powdery material with paint Layer 4: White chalky material with paper	NAD NAD 2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -E04	Beige sheet vinyl - 12" squares	Unit E5 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Beige/gray sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: White paint Layer 6: Off-white sheet vinyl Layer 7: Gray fibrous material with mastic Layer 8: White powdery material with paint	NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E05	Texture Joint compound Gypsum wallboard	Unit E5 - Closet	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -E06	Gray 4" covebase Mastic	Unit E6 - Bathroom	Layer 1: Gray rubbery material Layer 2: Off-white mastic Layer 3: White powdery material with paint	NAD NAD NAD	SAT
40573.130 -E07	Beige sheet vinyl - 8" squares	Unit E6 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Beige/off-white sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Off-white sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: White powdery material with paint	NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E08	Sink undercoat	Unit E6 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -E09	Sink undercoat	Unit E23 - Kitchen (new)	Layer 1: White powdery material Layer 2: Black soft/loose material	NAD NAD	SAT
40573.130 -E10	Beige sheet vinyl - 8" squares	Unit E23 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Tan sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: White paint	NAD NAD NAD NAD NAD	SAT
40573.130 -E11	Texture Joint compound Gypsum wallboard	Unit E23 - Kitchen	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -E12	Beige sheet vinyl - 8" squares	Unit E24 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Gray brittle material with mastic Layer 4: Tan fibrous material with mastic Layer 5: Gray sandy/brittle material	NAD NAD NAD NAD NAD	SAT
40573.130 -E13	Popcorn ceiling texture	Unit E24 - Living room	Layer 1: White soft lumpy material with paint	3% Chrysotile	SAT
40573.130 -E14	Sink undercoat	Unit E29 - Kitchen	Layer 1: Gray soft/loose material	NAD	SAT
40573.130 -E15	Joint compound Gypsum wallboard	Unit E29 - Kitchen	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper <i>Composite result</i>	2% Chrysotile NAD <1% Ch.	SAT
40573.130 -E16	Tan vinyl - 10" squares	Unit E29 - Kitchen	Layer 1: Tan sheet vinyl Layer 2: Yellow mastic Layer 3: Tan/beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Gray brittle material Layer 6: Beige sheet vinyl Layer 7: Gray fibrous material with mastic Layer 8: Gray fibrous material Layer 9: Gray sandy/brittle material	NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E17	Tan vinyl - 10" squares	Unit E30 - Bathroom	Layer 1: Tan sheet vinyl Layer 2: Yellow mastic Layer 3: Tan/beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Off-white sheet vinyl Layer 6: Gray fibrous material with mastic Layer 7: Gray sandy/brittle material	NAD NAD NAD NAD NAD NAD NAD	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -E18	Gray 4" covebase Mastic	Unit E30 - Bathroom	Layer 1: Gray rubbery material Layer 2: Yellow mastic Layer 3: Brown paper	NAD NAD NAD	SAT
40573.130 -E19	Tan vinyl - 8" squares	Unit E37 - Bathroom	Layer 1: Tan sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: White paint Layer 4: Beige sheet vinyl Layer 5: Gray fibrous material with mastic Layer 6: Gray brittle material Layer 7: Gray sandy/brittle material with paint	NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E20	Texture Joint compound Gypsum wallboard	Unit E37 - Closet	Layer 1: White powdery material with paint and paper Layer 2: White chalky material with paper	2% Chrysotile NAD <i>Composite result</i> <1% Ch.	SAT
40573.130 -E21	Beige vinyl - 8" squares	Unit E37 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white powdery material Layer 4: Gray sandy/brittle material	NAD NAD NAD NAD	SAT
40573.130 -E22	Texture on gypsum wallboard	Unit E37 - Closet	Layer 1: White powdery material with paint Layer 2: White chalky material with paper	NAD NAD	SAT
40573.130 -E23	Texture on gypsum wallboard	Unit E48 - Bathroom	Layer 1: White powdery material with paint	NAD	SAT
40573.130 -E24	Beige vinyl - 8" squares	Unit E48 - Bathroom	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white powdery material Layer 4: Off-white/beige sheet vinyl Layer 5: Gray fibrous material with mastic Layer 6: White powdery material Layer 7: Off-white sheet vinyl Layer 8: Tan fibrous material with mastic Layer 9: Gray sandy/brittle material with paint	NAD NAD NAD NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E25	Beige vinyl - 8" squares	Unit E48 - Kitchen	Layer 1: Beige sheet vinyl Layer 2: Gray fibrous material with mastic Layer 3: Off-white/beige sheet vinyl Layer 4: Gray fibrous material with mastic Layer 5: Off-white/beige sheet vinyl Layer 6: Tan fibrous material with mastic	NAD NAD NAD NAD NAD NAD	SAT
40573.130 -E26	Sink undercoat	Unit E48 - Kitchen	Layer 1: Black soft/loose material	2% Chrysotile	SAT

PLM ASBESTOS SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Material Type</u>	<u>Sample Location</u>	<u>Lab Description</u>	<u>Lab Result</u>	<u>Lab</u>
40573.130 -E27	Beige vinyl	Building E - Laundry Room	Layer 1: Beige sheet vinyl Layer 2: Yellow mastic Layer 3: Off-white/tan sheet vinyl Layer 4: Gray fibrous material with mastic	NAD NAD NAD 65% Chrysotile	SAT
40573.130 -E28	Window frame caulk	East side	Layer 1: Gray soft/elastic material Layer 2: Off-white soft/elastic material Layer 3: Brown wood debris	NAD NAD NAD	SAT
40573.130 -E29	Composition roof	Courtyard side	Layer 1: Black asphaltic material with sand	NAD	SAT

201613853

PBS

Project: KCHA- Carriage House Apts. Bldg. AProject# 40.573.130Analysis requested: PLMDate: 11/2/16Relinqu'd by/Signature: C. GreebDate/Time: 11/2/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30

Email results to:

Analyzed: Varren Osborn

11/7/16 10:45

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

- ☐ Harry Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3-4 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- A01	Sink Undercoat	A-2 Kitchen	
	- A02	Wall Texture	A2 Kitchen	
	- A03	Beige sht. vinyl - 8" sq.'s	A2 Bath	
	- A04	JC + GwB	A10 Kitchen	
	- A05	Tan 4" core base	A10 Kitchen	
	- A06	Tan sht. vinyl - 6" sq.'s	A10 Kitchen	
	- A07	Sink Undercoat	A10 Kitchen	
	- A08	Sink Undercoat	A29 Kitchen	
	- A09	JC + GwB	A14 Closet	
	- A10	Beige sht. vinyl - 6" sq.'s	A14 Bathroom (2 layer)	
	- A11	Ceiling Texture	A14 Living Rm.	
	- A12	Texture on GwB	A29 Living Rm.	
	- A13	Beige sht. vinyl - 10" sq.'s	A29 Bathroom (Multi-layer)	
	- A14	Gray 4" vinyl core base	A33 Bathroom	
	- A15	Brown sht. vinyl - 12" sq.'s	A33 Kitchen (Multi-layer)	

fasters\Office\Tech Forms & Templates\Lab Chain-of-Custody.doc

201613853

PBS

Project: KCH A - Carriage House Apts. Bldg. AProject# 40573.130Analysis requested: PLMDate: 11/2/16Relinquished by/Signature: C. GreebDate/Time: 11/2/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30

Email results to:

Analyzed: Wanda Osborn

11/7/16 10:45

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

- ☐ Harry Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	-A16	JC + GWB	A39 Closet	
	-A17	Transit. Vinyl - 10" sq's	A39 kitchen	
	-A18	Beige sh. vinyl - 6" sq's	A45 Bathroom	
	-A19	Beige sh. vinyl - 6" sq's	A45 kitchen	
	-A20	Texture, JC, GWB	A45 Closet	
	-A21	Beige sheet vinyl	Laundry	
	-A22	Beige sheet vinyl	Office - Sensitive Files Room	
	-A23	Carpet mastic	Office	
	-A24	Window Frame caulk	Exterior, courtyard	
	-A25	Gray cementitious walkway	2nd Fl. at stair	
	A26	Composition Roof	Courtyard side	

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613853

Date Received: 11/3/2016

Samples Rec'd: 26

Date Analyzed: 11/7/2016

Samples Analyzed: 26

Project Loc.: KCHA-Carriage House Apts.
Bldg. A

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-A01	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	3	Cellulose
2	-A02	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
3	-A03	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		3	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose, Glass fibers
		4	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
4	-A04 Composite result <1%	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	32	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
5	-A05	1	Tan rubbery material		None detected	Rubber/binder	2	Cellulose
		2	White mastic		None detected	Mastic/binder	2	Cellulose
		3	Brown vinyl		None detected	Vinyl/binder		None detected
		4	Brown wood debris		None detected	Wood debris	7	Cellulose
6	-A06	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose, Glass fibers
		3	Tan/beige sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		5	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
		6	Gray powdery material with fibrous material	2	Chrysotile	Filler, Fine particles	5	Cellulose
7	-A07	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	2	Cellulose
8	-A08	1	Black soft/loose material		None detected	Filler, Fine particles	4	Cellulose
		2	Off-white powdery material		None detected	Filler, Binder	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613853

Date Received: 11/3/2016

Samples Rec'd: 26

Date Analyzed: 11/7/2016

Samples Analyzed: 26

Project Loc.: KCHA-Carriage House Apts.
Bldg. A

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
9	-A09 Composite result <1%	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	30	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
10	-A10	1	Clear soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		3	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose, Glass fibers
		4	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	69	Cellulose, Glass fibers
11	-A11	1	White soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	3	Cellulose
12	-A12	1	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	3	Cellulose
13	-A13	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	5	Cellulose
		3	Beige/tan sheet vinyl		None detected	Vinyl/binder		None detected
		4	Yellow mastic		None detected	Mastic/binder	4	Cellulose
		5	Beige/gray sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose, Glass fibers
		7	Gray brittle material		None detected	Filler, Binder	2	Cellulose
		8	White powdery material		None detected	Filler, Binder	2	Cellulose
		9	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		10	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose, Glass fibers
		11	White powdery material	2	Chrysotile	Binder/filler	3	Cellulose
14	-A14	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	2	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613853

Date Received: 11/3/2016

Samples Rec'd: 26

Date Analyzed: 11/7/2016

Samples Analyzed: 26

Project Loc.: KCHA-Carriage House Apts.
Bldg. A

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
14	-A14 Composite result <1%	3	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	4	Cellulose
		4	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
15	-A15	1	Brown sheet vinyl		None detected	Vinyl/binder	4	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
		3	Tan/beige sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		5	Brown/beige sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose, Glass fibers
		7	Gray brittle material		None detected	Filler, Binder	4	Cellulose
		8	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		9	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	69	Cellulose, Glass fibers
		10	Brown brittle material		None detected	Filler, Binder	5	Cellulose
		11	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		12	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose, Glass fibers
		13	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		14	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose, Glass fibers
16	-A16 Composite result <1%	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		2	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	4	Cellulose
		3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
17	-A17	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613853

Date Received: 11/3/2016

Samples Rec'd: 26

Date Analyzed: 11/7/2016

Samples Analyzed: 26

Project Loc.: KCHA-Carriage House Apts.
Bldg. A

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
17	-A17	4	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
18	-A18	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Beige sheet vinyl		None detected	Vinyl/binder	4	Glass fibers
		3	Clear mastic		None detected	Mastic/binder	3	Cellulose
		4	White paint		None detected	Paint/binder	2	Cellulose
		5	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		7	Trace brown brittle material		None detected	Filler, Binder	4	Cellulose
		8	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		9	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose, Glass fibers
		10	Brown brittle material		None detected	Filler, Binder	3	Cellulose
		11	White paint		None detected	Paint/binder	2	Cellulose
19	-A19	1	Beige sheet vinyl		None detected	Vinyl/binder	5	Glass fibers
		2	Clear mastic		None detected	Mastic/binder	2	Cellulose
		3	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose, Glass fibers
		5	Brown brittle material		None detected	Filler, Binder	3	Cellulose
		6	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		7	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose, Glass fibers
		8	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		9	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose, Glass fibers
20	-A20 Composite result <1%	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613853

Date Received: 11/3/2016

Samples Rec'd: 26

Date Analyzed: 11/7/2016

Samples Analyzed: 26

Project Loc.: KCHA-Carriage House Apts.
Bldg. A

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
20	Composite result <1%	3	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
21	-A21	1	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		3	White mastic		None detected	Mastic/binder	2	Cellulose
		4	Gray brittle material		None detected	Filler, Binder	3	Cellulose
		5	Tan mastic		None detected	Mastic/binder	2	Cellulose
		6	White paint		None detected	Paint/binder	2	Cellulose
22	-A22	1	White paint		None detected	Paint/binder	3	Cellulose
		2	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		3	Trace white mastic		None detected	Mastic/binder	2	Cellulose
23	-A23	1	Tan mastic		None detected	Mastic/binder	5	Synthetic fibers, Cellulose
		2	Gray brittle material		None detected	Filler, Binder	4	Cellulose
		3	White paint		None detected	Paint/binder	2	Cellulose
24	-A24	1	Tan soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	White soft/elastic material		None detected	Binder, Filler	2	Cellulose
25	-A25	1	Gray soft/elastic material		None detected	Binder, Filler	2	Cellulose
		2	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	3	Cellulose
		3	Trace tan mastic		None detected	Mastic/binder	2	Cellulose
26	-A26	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	21	Glass fibers
		2	Black asphaltic material		None detected	Asphalt/binder	3	Cellulose
		3	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	25	Glass fibers

SEATTLE ASBESTOS TEST

NVLAP Accreditation Lab Codes: 200768 and 200876

19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel:425.673.9850, Fax:425.673.9810

12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel:425.861.1111, Fax:425.861.1118

Website:www.seattleasbestostest.com, Email:admin@seattleasbestostest.com

PLM by Point Count (400 points)

Attention: Mr. Chuck Greeb, Mr. Mark Hiley

Client: PBS Engineering and Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA 98102

Client Job #: 40573.130

Laboratory Batch #: 201613936

Date Received: 11/8/2016

Samples Received: 3

Date Analyzed: 11/8/2016

Project: KCHA-Carriage House Apts. Bldg. A

Sample Requested for Point Count-A06Previous Analytical Information

Previously Analyzed by: Warren Osborn

Previous Batch #: 201613853

Previous Lab ID: 6

Previous Description: Gray powdery material with fibrous material

Layer to be Point Counted: 6

Asbestos Type Found: Chrysotile

Asbestos Percentage Found: 2

Point Count Analytical Procedures

New Lab ID: 1

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	0	50	50
Slide 2	0	50	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	0	50	50
Slide 6	1	49	50
Slide 7	0	50	50
Slide 8	0	50	50
Total	2	398	400

Point Count Summary Results

Type of Asbestos: Chrysotile

Percentage of Asbestos: 0.5%

Analyzed By: Warren Osborn

Reviewed by: Steve Zhang, President



SEATTLE ASBESTOS TEST

NVLAP Accreditation Lab Codes: 200768 and 200876

19701 Scriber Lake Road, Suite 103, Lynnwood, WA 98036, Tel:425.673.9850, Fax:425.673.9810
12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel:425.861.1111, Fax:425.861.1118
Website: www.seattleasbestostest.com, Email: admin@seattleasbestostest.com

PLM by Point Count (400 points)

Attention: Mr. Chuck Greeb, Mr. Mark Hiley
Client: PBS Engineering and Environmental, Seattle
Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA 98102

Client Job #: 40573.130
Laboratory Batch #: 201613936
Date Received: 11/8/2016
Samples Received: 3
Date Analyzed: 11/8/2016

Project: KCHA-Carriage House Apts. Bldg. A

Sample Requested for Point Count-A11Previous Analytical Information

Previously Analyzed by: Warren Osborn
Previous Batch #: 201613853
Previous Lab ID: 11
Previous Description: White soft lumpy material with paint
Layer to be Point Counted: 1
Asbestos Type Found: Chrysotile
Asbestos Percentage Found: 3

Point Count Analytical Procedures

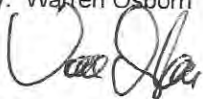
New Lab ID: 2

	Asbestos Points	Non-Asbestos Points	Total Points Counted
Slide 1	1	49	50
Slide 2	1	49	50
Slide 3	1	49	50
Slide 4	0	50	50
Slide 5	1	49	50
Slide 6	2	48	50
Slide 7	1	49	50
Slide 8	0	50	50
Total	7	393	400

Point Count Summary Results

Type of Asbestos: Chrysotile
Percentage of Asbestos: 1.75%

Analyzed By: Warren Osborn



Reviewed by: Steve Zhang, President

201613856

PBS

Project: KCHA - CarriageHouse Apts. Bldg. BProject# 40573.130Analysis requested: PLMDate: 11/2/16Relinqu'd by/Signature: C. GreebDate/Time: 11/2/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30Email results to: Carolyn Yeo SAT 11/4/16 12:00

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

- ☐ Harry Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3-5 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	-B01	JC + GWB	B3 closet	
	-B02	Tan shk. vinyl - 6" sq's	B3 Bath (1 layer)	
	-B03	Popcorn ceiling	B3 Living	
	-B04	wall texture	B5 Living Rm.	
	-B05	Tan shk. vinyl - 10" sq.	B5 Kitch.	
	-B06	Tan shk. vinyl - 10" sq.	B12 Kitchen	
	-B07	wall texture	B12 Living Rm.	
	-B08	Tan shk. vinyl - 10" sq.	B14 Kitchen (2 layer)	
	-B09	Gray 4" core	B14 Kitchen	
	-B10	Text., JC, GWB	B14 Closet	
	-B11	Tan shk. vinyl - 12" sq.	B47 Kitchen	
	-B12	Tan shk. vinyl - 10" sq.	B23 Kitchen	
	-B13	Tan shk. vinyl - 12" sq.	B25 Kitchen	
	-B14	Gray 4" core, JC, GWB	B25 Kitchen	
	-B15	Sink Undercoat	B25 Kitchen	

201613856

PBS

Project: KCHA - Carriage House Apts.Project# 40573130Analysis requested: PLMDate: 11/2/16Relinqu'd by/Signature: C. GrechDate/Time: 11/2/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30

Email results to:

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Grech
☐ Janet Murphy
☐ Willem Mager

- ☐ Harry Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3-5 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- B16	Beige sh. vinyl - 6" sq.'s	B29 Bath	
	- B17	Wall Texture	B29 Living Rm.	
	- B18	Popcorn Ceiling	B32 Living Rm.	
	- B19	Tan sh. vinyl - 10" sq.'s	B32 Bathroom	
	- B20	Wall Texture	B32 Living Rm.	
	- B21	Tan sh. vinyl - 10" sq.'s	B36 Bath room	
	- B22	Sink undercoating	B36 Kitchen	
	- B23	Gray 4" vinyl Covebase	B47 Kitchen	
	- B24	Texture, JG, GWB	B47 Kitchen	
	- B25	Beige sheet vinyl	Laundry Room	
	- B26	Composition Roof	Courtyard side	
	- B27	Window Frame Caulk	Courtyard side	
	- B28			

fasters\Office\Tech Forms & Templates\Lab Chain-of-Custody.doc

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613856

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-B01	1	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	5	Cellulose
	Composite result <1%	2	Off-white chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
2	-B02	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		3	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	3	Cellulose
3	-B03	1	White soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	4	Cellulose
4	-B04	1	Off-white powdery material		None detected	Filler, Binder	3	Cellulose
		2	Trace yellow/clear mastic		None detected	Mastic/binder	2	Cellulose
		3	Black soft material		None detected	Filler, Binder	3	Cellulose
5	-B05	1	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		2	White mastic		None detected	Mastic/binder	3	Cellulose
		3	Trace white powdery material with paint		None detected	Binder/filler, Paint	5	Cellulose
		4	Trace brown paper		None detected	Filler	72	Cellulose
6	-B06	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	4	Cellulose
7	-B07	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
8	-B08	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		3	White sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613856

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
9	-B09	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Trace white paper		None detected	Filler	70	Cellulose
10	-B10	1	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	3	Cellulose
	Composite result <1%	2	Off-white chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
11	-B11	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
		3	Gray brittle material		None detected	Filler, Binder	2	Cellulose
		4	Beige sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		6	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		7	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose
		8	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	3	Cellulose
12	-B12	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white mastic		None detected	Mastic/binder	4	Cellulose
		3	Tan sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose
		5	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
13	-B13	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613856

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		3	Trace gray brittle material		None detected	Filler, Binder	2	Cellulose
		4	Off-white sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose
		6	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	4	Cellulose
14	-B14	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	White mastic		None detected	Mastic/binder	3	Cellulose
	Composite result <1%	3	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	2	Cellulose
		4	Off-white chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
15	-B15	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	2	Cellulose
16	-B16	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		3	Trace gray brittle material		None detected	Filler, Binder	3	Cellulose
		4	White sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		6	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		7	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		8	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	2	Cellulose
17	-B17	1	White powdery material with paint		None detected	Binder/filler, Paint	5	Cellulose
		2	Trace brown paper		None detected	Filler	72	Cellulose
18	-B18	1	White soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613856

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
19	-B19	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	Tan sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		5	Trace gray brittle material		None detected	Filler, Binder	4	Cellulose
		6	White sheet vinyl		None detected	Vinyl/binder		None detected
		7	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		8	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		9	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		10	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	3	Cellulose
20	-B20	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
21	-B21	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white mastic		None detected	Mastic/binder	2	Cellulose
		3	Tan sheet vinyl with paint		None detected	Vinyl/binder, Paint		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		5	Trace gray brittle material		None detected	Filler, Binder	4	Cellulose
		6	White sheet vinyl		None detected	Vinyl/binder		None detected
		7	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
		8	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		9	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose
22	-B22	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	3	Cellulose

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613856

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.

Analyzed by: Cassie Huang

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
23	-B23	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	White mastic		None detected	Mastic/binder	3	Cellulose
		3	White powdery material with paint and paper		None detected	Binder/filler, Paint	35	Cellulose
24	-B24	1	Trace white powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
25	-B25	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	White sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic	50	Chrysotile	Binder/filler, Mastic/binder	35	Cellulose
26	-B26	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	25	Glass fibers
		2	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	23	Glass fibers
27	-B27	1	Beige soft/elastic material with paint		None detected	Binder, Filler, Paint	4	Cellulose

2016 13857

KCHA

PBS

Project: Carriage House Apts. Bldg. CProject# 40573.130Analysis requested: PLMDate: 11/1/16Relinq'd by/Signature: C. GreebDate/Time: 11/3/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30

Email results to:

☐ Brian Stanford☐ Prudy Stoudt-McRae☐ Harry Goren☐ Ernest Edwards☒ Chuck Greeb☐ Tim Ogden☐ Gregg Middaugh☐ Janet Murphy☐ Mike Smith☒ Mark Hiley

Willem Mager

☐ Other _____

TURN AROUND TIME:

☐ 1 Hour☐ 24 Hours☒ 3 Days☐ 2 Hours☐ 48 Hours☐ Other _____☐ 4 Hours

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	-C01	Tan vinyl - 12" sq's	Unit C3 Kitchen	
	-C02	Gray 4" vinyl cove	Unit C3 Kitchen	
	-C03	JCT GWSB	Unit C3 Kitchen	
	-C04	Popcorn ceiling	Unit C3 Living Rm.	
	-C05	Brown shd. vinyl - 6" sq's	Unit C5 Bathroom	
	-C06	Wall texture	Unit C5 Living Rm.	
	-C07	Beige 4" vinyl cove	Unit C12 Bathroom	
	-C08	Brown shd. vinyl - 6" sq's	Unit C12 Bathroom	
	-C09	Sink undercoat	Unit C-14 Kitchen	
	-C10	Tan shd. vinyl - 6" sq's	Unit C-14 Kitchen	
	-C11	JCT GWSB	Unit C-14 Kitchen	
	-C12	Wall texture	Unit C-23 Living Rm.	
	-C13	Tan shd. vinyl - 10" sq's	Unit C-23 Kitchen	
	-C14	Beige shd. vinyl - 6" sq's	Unit C-29 Kitchen	
	-C15	Popcorn ceiling	Unit C-29 Living Rm.	

201613857

PBS

2/2

Project: Carnage House Bldg. CProject# 40573.130Analysis requested: PLMDate: 11/1/16Relinqu'd by/Signature: C. GreebDate/Time: 11/3/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30

Email results to:

- | | | |
|--|---|--------------------------------------|
| ☐ Brian Stanford | ☐ Prudy Stoudt-McRae | ☐ Hany Goren |
| ☐ Ernest Edwards | ☒ Chuck Greeb | ☐ Tim Ogden |
| ☐ Gregg Middaugh | ☐ Janet Murphy | ☐ Mike Smith |
| ☒ Mark Hiley | ☐ Willem Mager | ☐ Other _____ |

TURN AROUND TIME:

- | | | |
|----------------------------------|-----------------------------------|--|
| ☐ 1 Hour | ☐ 24 Hours | ☒ 3-5 Days |
| ☐ 2 Hours | ☐ 48 Hours | ☐ Other _____ |
| ☐ 4 Hours | | |

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- C16	JC16UB	Unit C16 ^{Kitchen} Unit C16 Kitchen	
	- C17	Tan Vinyl - 10" sq's	Unit C16 Kitchen	
	- C18	Gray 4" Cove	Unit C30 Kitchen	
	- C19	Brown Shd. Vinyl - 6" sq's	Unit C36 Bathroom - 2 bdr	
	- C20	Tan 4" vinyl cove	Unit C36 Bathroom	
	- C21	Wall Texture	Unit C47 Kitchen (ceiling)	
	- C22	Beige Shd. Vinyl - 6" sq's	Unit C47 Bathroom	
	- C23	Beige Sheet Vinyl	Laundry Room	
	- C24	Composition Roof	Courtyard Side	
	- C25	Cementitious Walkway	2nd floor of stair	
	- C26	Yellow sheet flooring	2nd floor Corridor to Rooms 33-36	
	- C27	Window Frame Sealant	2nd Fl. Courtyard Side	
	<u>WGA</u>			

SEATTLE ASBESTOS TEST

Seattle Laboratory: 4500 9th Ave. NE, Suite 300, Seattle, WA 98105, Tel: 206.633.1111, Fax: 206.633.4747, NVLAP Lab Code: 201057-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb/
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613857

Date Received: 11/3/2016

Samples Rec'd: 27

Date Analyzed: 11/4/2016

Samples Analyzed: 27

Project Loc.: KCHA-Carriage House Apts.
Bldg. C

Analyzed by: Carolyn Yeo

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-C01	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Tan mastic		None detected	Mastic/binder	2	Cellulose
		3	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
2	-C02	1	Brown rubbery material		None detected	Rubber/binder	2	Cellulose
		2	White mastic		None detected	Mastic/binder	2	Cellulose
3	-C03	1	Off-white powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	29	Cellulose
4	-C04	1	White soft lumpy material with paint		None detected	Synthetic foam, Filler, Binder, Paint	2	Cellulose
5	-C05	1	Trace off-white soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Brown sheet vinyl		None detected	Vinyl/binder		None detected
		3	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		4	Trace gray brittle material		None detected	Filler, Binder	3	Cellulose
6	-C06	1	Trace white powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
7	-C07	1	Beige rubbery material		None detected	Rubber/binder	3	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	2	Cellulose
		3	Trace white powdery material with paint and paper		None detected	Binder/filler, Paint	35	Cellulose
8	-C08	1	Brown sheet vinyl		None detected	Vinyl/binder		None detected
		2	White fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
		3	White sheet vinyl		None detected	Vinyl/binder		None detected
		4	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose

		5	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		6	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose
9	-C09	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	2	Cellulose
10	-C10	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with trace mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
11	-C11	1	Trace off-white powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	32	Cellulose
	Composite result <1%	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	22	Cellulose
12	-C12	1	Trace white powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		2	Trace brown paper		None detected	Filler	72	Cellulose
13	-C13	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	4	Cellulose
		3	Gray powdery material		None detected	Filler, Binder	3	Cellulose
		4	Trace white brittle material		None detected	Filler, Binder	3	Cellulose
14	-C14	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with trace mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		3	Brown sheet vinyl		None detected	Vinyl/binder		None detected
		4	White fibrous material with trace mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
15	-C15	1	White soft lumpy material with paint		None detected	Synthetic foam, Filler, Binder, Paint	3	Cellulose
16	-C16	1	White powdery material with paint and paper		None detected	Binder/filler, Paint	32	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
17	-C17	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		5	Gray brittle material		None detected	Filler, Binder	2	Cellulose
18	-C18	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose

		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	Brown paper with paint		None detected	Filler, Paint	73	Cellulose
19	-C19	1	Brown sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Off-white fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		5	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		6	Brown fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
20	-C20	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	Trace white powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
21	-C21	1	Trace off-white powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
22	-C22	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Off-white fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose
23	-C23	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray powdery material with mastic		None detected	Filler, Binder, Mastic/binder	2	Cellulose
24	-C24	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	21	Glass fibers
25	-C25	1	Gray hard sandy/brittle material with paint		None detected	Sand, Filler, Cement/binder, Paint	3	Cellulose
26	-C26	1	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
27	-C27	1	Gray soft/elastic material with paint		None detected	Binder, Filler, Paint	4	Cellulose

201613854

PBS

Project: KCHA - Carriage House Apts. - Bldg. DProject# 40573.130Analysis requested: PLMDate: 10/28/16Relinqu'd by/Signature: C. GreebDate/Time: 11/3/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16 12:30Analyzed by: Kent Quicksted Ben Jon11/7/16 12:45

Email results to:

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

- ☐ Hany Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	-D01	Tan vinyl - 12" sq's	Unit D-1 Kitchen (1 later)	
	-D02	Tan vinyl - 12" sq's	Unit D-1 Bath (2 later)	
	-D03	JC+GWB	Unit D-1 Kitchen	
	-D04	Beige 12" vinyl - 12" sq's	Unit D04	
	-D05	Gray 4" vinyl cove	Unit D05	
	-D06	JC+GWB	Unit D06	
	-D07	Sink undercoat	Unit D6 Kitchen	
	-D08	Gray 4" cove	Unit D6 Kitchen	
	-D09	Sheet vinyl - Tan, 6" sq's	Unit D6 Kitchen (1 later)	
	-D10	Popcorn ceiling	Unit D23 Living Rm.	
	-D11	Texture on GWB	Unit D23 Closet	
	-D12	Sink undercoat	Unit D23 Kitchen	
	-D13	Popcorn ceiling	Unit D24	
	-D14	Wall Texture	Unit D24	
	-D15	Tan shg. vinyl - 6" sq's	Unit D24 Kitchen	

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201613854

PBS

Project: KCHA - Carriage House Bldg.Project# 40573.130Analysis requested: PLMDate: 10/28/16Relinquished by/Signature: C GrewDate/Time: 11/3/16Received by/Signature: Caryn Yeo Caryn YeoDate/Time: 11/3/16 12:30Analyzed by: Kent Quickstad Kim Jim11/7/16 1:45

Email results to:

☐ Brian Stanford☐ Prudy Stoudt-McRae☐ Hany Goren☐ Ernest Edwards☒ Chuck Greeb☐ Tim Ogden☐ Gregg Middaugh☐ Janet Murphy☐ Mike Smith☒ Mark Hiley☐ Willem Mager☐ Other _____

TURN AROUND TIME:

☐ 1 Hour☐ 24 Hours☒ 3-5 Days☐ 2 Hours☐ 48 Hours☐ Other _____☐ 4 Hours

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- D16	Sink Undercoat	D24 Kitchen	
	- D17	Beige sht. vinyl - 62" sq's	D29 Bath	
	- D18	Text. + JCT GWB	D29 Closet	
	- D19	Tan Beige sht. vinyl - 12" sq's	D29 Kitchen	
	- D20	Wall Texture	D30 Loft	
	- D21	Popcorn Loft	D30 Loft	
	- D22	Tan vinyl - 10" sq's	D30 Kitchen (Layard)	
	- D23	Tan vinyl - 10" sq's	D36 Bath	
	- D24	Text. + JCT GWB	D24 Kitchen	
	- D25	Gray 4" Cove + Mastic	D36 Kitchen	
	- D26	Sink Undercoat	D37 Kitchen	
	- D27	Beige sht. vinyl - 8" sq's	D37 Kitchen	
	- D28	Beige sht. vinyl - 6" sq's	D48 Kitchen	
	- D29	Green/Yellow Sheet Flooring	2nd Fl. Corridor to Rm's	D41-44
	- D30	Gray Cementitious Walkway	2nd Fl. at Stair	
	- D31	Composition Roof	Courtyard side	

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb /
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613854

Date Received: 11/3/2016

Samples Rec'd: 31

Date Analyzed: 11/7/2016

Samples Analyzed: 31

Project Loc.: KCHA-Carriage House Apts.
Bldg. D

Analyzed by: Kent Quickstad

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-D01	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
2	-D02	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		3	Gray brittle material		None detected	Filler, Binder	2	Cellulose
		4	Light tan sheet vinyl		None detected	Vinyl/binder		None detected
		5	Yellow fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
3	-D03 Composite result <1%	1	Off-white powdery material with paint	2	Chrysotile	Binder/filler, Paint	4	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose
4	-D04	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
5	-D05	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Brown mastic		None detected	Mastic/binder	3	Cellulose
		3	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	31	Cellulose
6	-D06 Composite result <1%	1	Off-white powdery material with paint	2	Chrysotile	Binder/filler, Paint	4	Cellulose
		2	Off-white chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
7	-D07	1	Black soft/loose material		None detected	Filler, Fine particles	5	Cellulose
		2	Off-white brittle material		None detected	Filler, Binder	2	Cellulose
8	-D08	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
9	-D09	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb /
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613854

Date Received: 11/3/2016

Samples Rec'd: 31

Date Analyzed: 11/7/2016

Samples Analyzed: 31

Project Loc.: KCHA-Carriage House Apts.
Bldg. D

Analyzed by: Kent Quickstad

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		3	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
10	-D10	1	Off-white soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	2	Cellulose
11	-D11	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
12	-D12	1	Black soft/loose material	3	Chrysotile	Filler, Fine particles	5	Cellulose
13	-D13	1	Off-white soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	3	Cellulose
14	-D14	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	Trace white chalky material with paper		None detected	Binder/filler, Gypsum/binder	23	Cellulose
15	-D15	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
16	-D16	1	Black soft/loose material	3	Chrysotile	Filler, Fine particles	4	Cellulose
17	-D17	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
		3	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		5	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb /
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613854

Date Received: 11/3/2016

Samples Rec'd: 31

Date Analyzed: 11/7/2016

Samples Analyzed: 31

Project Loc.: KCHA-Carriage House Apts.
Bldg. D

Analyzed by: Kent Quickstad

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
18	-D18 Composite result <1%	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	Off-white powdery material with paint	2	Chrysotile	Binder/filler, Paint	3	Cellulose
		3	Pink chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
19	-D19	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
20	-D20	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
21	-D21	1	Off-white soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	5	Cellulose
22	-D22	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
		3	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
		7	Off- white/black sheet vinyl		None detected	Vinyl/binder		None detected
		8	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
		9	Off-white brittle material		None detected	Filler, Binder	2	Cellulose
23	-D23	1	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		2	Clear/yellow mastic with wood debris		None detected	Mastic/binder, Wood debris	7	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb /
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613854

Date Received: 11/3/2016

Samples Rec'd: 31

Date Analyzed: 11/7/2016

Samples Analyzed: 31

Project Loc.: KCHA-Carriage House Apts.
Bldg. D

Analyzed by:  Kent Quickstad

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
		3	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
24	-D24	1	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	29	Cellulose
25	-D25	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	3	Cellulose
		3	White powdery material with paint		None detected	Binder/filler, Paint	2	Cellulose
		4	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
26	-D26	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	3	Cellulose
27	-D27	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
28	-D28	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose
		3	Yellow sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose
29	-D29	1	Green/yellow sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	3	Cellulose
30	-D30	1	Gray hard sandy/brittle material with paint		None detected	Sand, Filler, Cement/binder, Paint	2	Cellulose
		2	Tan mastic		None detected	Mastic/binder	3	Cellulose
31	-D31	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	24	Glass fibers

201613855

PBS

Project: KCHA Carriage HouseProject# 40573.130Analysis requested: PLMDate: 11/1/16Relinq'd by/Signature: C. GreebDate/Time: 11/3/16Received by/Signature: Carolyn Yeo Carolyn YeoDate/Time: 11/3/16

Email results to:

Analyzed: Warren OsbanJan Osh

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

- ☐ Harry Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3-5 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- E16	Tan Vinyl - 10" sq.'s	E29 Kitchen	
	- E17	Tan vinyl - 10" sq.'s	E30 Bath	
	- E18	Gray 4" Cove + Mastic	E30 Bath	
	- E19	Tan sbt. vinyl - 8" sq.'s	E37 Bath	
	- E20	Text. JC, GWB	E37 Closet	
	- E21	Beige Vinyl - 8" sq.'s	E37 Kitchen	
	- E22	Text. on GWB	E37 Closet	
	- E23	Text on GWB	E48 Bath	
	- E24	Beige Vinyl - 8" sq.'s	E48 Bath	
	- E25	Beige Vinyl - 8" sq.'s	E48 Kitchen	
	- E26	Sink U.C.	E48 Kitchen	
	- E27	Beige Vinyl	Unit E Laundry	
	- E28	window frame cast	East side	
	- E29	Composition Roof	Courtyard side	

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2016138585 4/11/16 PBS

Project: KCHA Carriage House Bldg. EAnalysis requested: PLMRelinq'd by/Signature: C. GreebReceived by/Signature: Carolyn Yeo Carolyn YeoEmail results to: Analyzed: Warren Osborn

- ☐ Brian Stanford
☐ Ernest Edwards
☐ Gregg Middaugh
☒ Mark Hiley

- ☐ Prudy Stoudt-McRae
☒ Chuck Greeb
☐ Janet Murphy
☐ Willem Mager

Project# 40573-130Date: 11/1/16Date/Time: 11/3/16Date/Time: 11/3/1611/8/16 9:30

- ☐ Hany Goren
☐ Tim Ogden
☐ Mike Smith
☐ Other _____

TURN AROUND TIME:

- ☐ 1 Hour
☐ 2 Hours
☐ 4 Hours

- ☐ 24 Hours
☐ 48 Hours

- ☒ 3 Days
☐ Other _____

Report composite results for GWB & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	- E01	Gray 4" core + mastic	E-1 Kitchen	
	- E02	Beige sht. vinyl - 12" sq's	E-1 Kitchen (2 hater)	
	- E03	Text, JC, GWB	E-1 Kitchen	
	- E04	Beige vinyl - 12" sq's	E-5 Kitchen (2 hater)	
	- E05	text, JC, GWB	E5 closet	
	- E06	Gray 4" core + mastic	E6 Bath	
	- E07	Beige sht. vinyl - 8" sq's	E6 Bath	
	- E08	Sink U.C.	E6 Kitchen	
	- E09	Sink U.C.	E 23 Kitchen (new)	
	- E10	Beige sht. vinyl - 8" sq's	E 23 Kitchen	
	- E11	Text, JC, GWB	E 23 Kitchen	
	- E12	Beige sht. vinyl - 8" sq's	E 24 Kitchen	
	- E13	Popcorn Ceiling Text.	E 24 Living Rm.	
	- E14	Sink U.C.	E 29 Kitchen	
	- E15	JC + GWB	E 29 Kitchen	

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SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
1	-E01	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Tan mastic		None detected	Mastic/binder	2	Cellulose
2	-E02	1	Beige sheet vinyl		None detected	Vinyl/binder	3	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Beige/gray sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose, Glass fibers
		5	Gray brittle material		None detected	Filler, Binder	5	Cellulose
		6	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		7	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
3	-E03	1	Tan mastic		None detected	Mastic/binder	2	Cellulose
		2	Off-white powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
		3	White powdery material with paint	2	Chrysotile	Binder/filler, Paint	5	Cellulose
		4	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	27	Cellulose
4	-E04	1	Beige sheet vinyl		None detected	Vinyl/binder	3	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Beige/gray sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose, Glass fibers
		5	White paint		None detected	Paint/binder	2	Cellulose
		6	Off-white/beige sheet vinyl		None detected	Vinyl/binder		None detected
		7	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose
		8	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
5	-E05 Composite result <1%	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	35	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	25	Cellulose
6	-E06	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Off-white mastic		None detected	Mastic/binder	2	Cellulose
		3	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
7	-E07	1	Beige sheet vinyl		None detected	Vinyl/binder	3	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Beige/off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose, Glass fibers
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose
		7	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose
8	-E08	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	3	Cellulose
9	-E09	1	White powdery material		None detected	Filler, Binder	2	Cellulose
		2	Black soft/loose material		None detected	Filler, Fine particles	4	Cellulose
10	-E10	1	Beige sheet vinyl		None detected	Vinyl/binder	3	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	59	Cellulose, Glass fibers
		5	White paint		None detected	Paint/binder	2	Cellulose
11	-E11	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	30	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
11	Composite result <1%	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	26	Cellulose, Glass fibers
12	-E12	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose, Glass fibers
		3	Gray brittle material		None detected	Filler, Binder	4	Cellulose
		4	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	69	Cellulose
		5	Gray sandy/brittle material		None detected	Sand, Filler, Binder	3	Cellulose
13	-E13	1	White soft lumpy material with paint	3	Chrysotile	Synthetic foam, Filler, Binder, Paint	3	Cellulose
14	-E14	1	Gray soft/loose material		None detected	Filler, Fine particles	4	Cellulose
15	-E15	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	31	Cellulose
	Composite result <1%	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	24	Cellulose
16	-E16	1	Tan sheet vinyl		None detected	Vinyl/binder	4	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Tan/beige sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	64	Cellulose, Glass fibers
		5	Gray brittle material		None detected	Filler, Binder	4	Cellulose
		6	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		7	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	68	Cellulose, Glass fibers
		8	Gray brittle material		None detected	Filler, Binder	3	Cellulose
		9	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
17	-E17	1	Tan sheet vinyl		None detected	Vinyl/binder	4	Glass fibers
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Tan/beige sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
17	-E17	4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose, Glass fibers
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		6	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	67	Cellulose
		7	Gray sandy/brittle material		None detected	Sand, Filler, Binder	2	Cellulose
18	-E18	1	Gray rubbery material		None detected	Rubber/binder	2	Cellulose
		2	Yellow mastic		None detected	Mastic/binder	4	Cellulose
		3	Brown paper		None detected	Filler	75	Cellulose
19	-E19	1	Tan sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		3	White paint		None detected	Paint/binder	2	Cellulose
		4	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose, Glass fibers
		6	Gray brittle material		None detected	Filler, Binder	5	Cellulose
		7	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	2	Cellulose
20	-E20 Composite result <1%	1	White powdery material with paint and paper	2	Chrysotile	Binder/filler, Paint	34	Cellulose
		2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
21	-E21	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		3	Off-white powdery material		None detected	Filler, Binder	4	Cellulose
		4	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	2	Cellulose
22	-E22	1	White powdery material with paint		None detected	Binder/filler, Paint	3	Cellulose

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT

PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
22	-E22	2	White chalky material with paper		None detected	Binder/filler, Gypsum/binder	28	Cellulose
23	-E23	1	White powdery material with paint		None detected	Binder/filler, Paint	4	Cellulose
24	-E24	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	62	Cellulose, Glass fibers
		3	Off-white powdery material		None detected	Filler, Binder	3	Cellulose
		4	Off-white/beige sheet vinyl		None detected	Vinyl/binder		None detected
		5	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	61	Cellulose, Glass fibers
		6	White powdery material		None detected	Filler, Binder	5	Cellulose
		7	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		8	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose, Glass fibers
		9	Gray sandy/brittle material with paint		None detected	Sand, Filler, Binder, Paint	2	Cellulose
25	-E25	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	63	Cellulose, Glass fibers
		3	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		4	Gray fibrous material with mastic		None detected	Binder/filler, Mastic/binder	65	Cellulose, Glass fibers
		5	Off-white sheet vinyl		None detected	Vinyl/binder		None detected
		6	Tan fibrous material with mastic		None detected	Binder/filler, Mastic/binder	66	Cellulose, Glass fibers
26	-E26	1	Black soft/loose material	2	Chrysotile	Filler, Fine particles	2	Cellulose
27	-E27	1	Beige sheet vinyl		None detected	Vinyl/binder		None detected
		2	Yellow mastic		None detected	Mastic/binder	2	Cellulose
		3	Off-white/tan sheet vinyl		None detected	Vinyl/binder		None detected

SEATTLE ASBESTOS TEST

Bellevue Laboratory: 12727 Northup Way, Suite 1, Bellevue, WA 98005, Tel: 425.861.1111, Fax: 425.861.1118, NVLAP Lab Code: 200876-0

ANALYTICAL LABORATORY REPORT PLM by Method EPA/600/R-93/116

Attn.: Mr. Chuck Greeb,
Mr. Mark Hiley

Client: PBS Engineering and
Environmental, Seattle

Address: 2517 Eastlake Ave. E., Suite 100, Seattle, WA
98102

Job#: 40573.130

Batch#: 201613855

Date Received: 11/3/2016

Samples Rec'd: 29

Date Analyzed: 11/8/2016

Samples Analyzed: 29

Project Loc.: KCHA-Carriage House Bldg. E

Analyzed by: Warren Osborn

Reviewed by: Steve (Fanyao) Zhang, President

Lab ID	Client Sample ID	Layer	Description	%	Asbestos Fibers	Non-fibrous Components	%	Non-asbestos Fibers
27	-E27	4	Gray fibrous material with mastic	55	Chrysotile	Binder/filler, Mastic/binder	31	Cellulose
28	-E28	1	Gray soft/elastic material		None detected	Binder, Filler	4	Cellulose
		2	Off-white soft/elastic material		None detected	Binder, Filler	2	Cellulose
		3	Brown wood debris		None detected	Wood debris	7	Cellulose
29	-E29	1	Black asphaltic material with sand		None detected	Asphalt/binder, Sand	20	Glass fibers

TAB 3
LEAD PAINT SAMPLE DATA

AA LEAD PAINT CHIP SAMPLE INVENTORY

<u>PBS Sample #</u>	<u>Paint Color / Component or Substrate</u>	<u>Sample Location</u>	<u>Results (mg/kg)</u>	<u>Results (%)</u>	<u>Lab</u>
Building - A					
40573.130 -A-L01	White / gypsum wallboard/ wall	A10 - Kitchen	67.0	0.0067	NVL
40573.130 -A-L02	Beige / wood / siding	Courtyard - Building A	92.0	0.0092	NVL
40573.130 -A-L03	Brown / wood / trim	Courtyard - Building A	<51.0	<0.0051	NVL
Building - B					
40573.130 -B-L01	White / gypsum wallboard / wall	B25 - Closet	<53.0	<0.0053	NVL
40573.130 -B-L02	White / gypsum wallboard / wall	B47 - Kitchen	<50.0	<0.0050	NVL
40573.130 -B-L03	White / gypsum wallboard / wall	B5 - At closet	<55.0	<0.0055	NVL
40573.130 -B-L04	Brown / wood / beam	Exterior at stair	75.0	0.0075	NVL
40573.130 -B-L05	Green / wood / siding	Exterior at stair	<54.0	<0.0054	NVL
Building - C					
40573.130 -C-L05	Gray / cementitious / walkway	2nd floor walkway - Building C	<52.0	<0.0052	NVL
40573.130 -C-L06	White / wood / soffit	Building C at stair 1st floor	<53.0	<0.0053	NVL
40573.130 -C-L07	Brown / wood / beam	Building C at stair	<51.0	<0.0051	NVL
40573.130 -C-L08	White / metal / handrail	Building C at stair	<160.0	<0.0160	NVL
40573.130 -C-L09	Green / wood / siding	Building C at stair	84.0	0.0084	NVL
Building - D					
40573.130 -D-L01	White / gypsum wallboard / wall	Unit D6 - Closet	<53.0	<0.0053	NVL

mg/kg = Milligrams per kilogram
< = Less than the Limit of Detection

**Carriage House Apartments
King County Housing Authority**

**PBS Engineering + Environmental
PBS Project #40573.130**

40573.130 -D-L02	White / gypsum wallboard / wall	Unit D24 - Living room	<55.0	<0.0055	NVL
40573.130 -D-L03	White / gypsum wallboard / wall	Unit D48 - Living room	<50.0	<0.0050	NVL
40573.130 -D-L04	White / gypsum wallboard / wall	Exterior hallway by D41-D44	<49.0	<0.0049	NVL

Building - E

40573.130 -E-L01	White / gypsum wallboard / wall	Unit E5	<52.0	<0.0052	NVL
40573.130 -E-L02	White / gypsum wallboard / wall	Unit E48	<51.0	<0.0051	NVL
40573.130 -E-L03	Brown / wood / beam	Building E - Exterior, by stairs	<53.0	<0.0053	NVL
40573.130 -E-L04	Beige / wood / beam	Building E - Courtyard	<52.0	<0.0052	NVL

November 4, 2016

Chuck Greeb

PBS Environmental (Seattle)

2517 Eastlake Ave E, Suite 100

Seattle, WA 98102



Laboratory | Management | Training

RE: Metals Analysis; NVL Batch # 1622261.00

Dear Mr. Greeb,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more details.

This report is considered highly confidential and will not be released without your approval. 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. if you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com



NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936

Analysis Report

Total Lead (Pb)

Client: PBS Environmental (Seattle)
Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Batch #: 1622261.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 40573.130
Date Received: 11/3/2016
Samples Received: 14
Samples Analyzed: 14

Attention: Mr. Chuck Greeb
Project Location: KCHA - Carriage House Apts.

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
16286592	40573.130-C-L01	0.1856	54.0	< 54.0	<0.0054
16286593	40573.130-C-L02	0.1844	54.0	< 54.0	<0.0054
16286594	40573.130-C-L03	0.1888	53.0	< 53.0	<0.0053
16286595	40573.130-C-L04	0.1813	55.0	< 55.0	<0.0055
16286596	40573.130-D-L01	0.1861	53.0	< 53.0	<0.0053
16286597	40573.130-D-L02	0.1805	55.0	< 55.0	<0.0055
16286598	40573.130-D-L03	0.1990	50.0	< 50.0	<0.0050
16286599	40573.130-E-L01	0.1896	52.0	< 52.0	<0.0052
16286600	40573.130-E-L02	0.1950	51.0	< 51.0	<0.0051
16286601	40573.130-E-L03	0.1886	53.0	< 53.0	<0.0053
16286602	40573.130-E-L04	0.1927	52.0	< 52.0	<0.0052
16286603	40573.130-A-L01	0.1806	55.0	67.0	0.0067
16286604	40573.130-A-L02	0.2013	49.0	92.0	0.0092
16286605	40573.130-A-L03	0.1933	51.0	< 51.0	<0.0051

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Nick Ly

Date Analyzed: 11/03/2016

Date Issued: 11/04/2016



Nick Ly, Technical Director

mg/ Kg = Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2016-1103-13

Company PBS Environmental (Seattle) **NVL Batch Number** **1622261.00**
Address 2517 Eastlake Ave E, Suite 100 **TAT** 3 Days **AH** No
 Seattle, WA 98102 **Rush TAT**
Project Manager Mr. Chuck Greeb **Due Date** 11/8/2016 **Time** 12:25 PM
Phone (206) 233-9639 **Email** Chuck.Greeb@pbsenv.com
Cell (206) 369-7767 **Fax** (866) 727-0140

Project Name/Number: 40573.130 **Project Location:** KCHA - Carriage House Apts.

Subcategory Flame AA (FAA)

Item Code FAA-02 **EPA 7000B Lead by FAA** <paint>

Total Number of Samples 14

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	16286592	40573.130-C-L01		A
2	16286593	40573.130-C-L02		A
3	16286594	40573.130-C-L03		A
4	16286595	40573.130-C-L04		A
5	16286596	40573.130-D-L01		A
6	16286597	40573.130-D-L02		A
7	16286598	40573.130-D-L03		A
8	16286599	40573.130-E-L01		A
9	16286600	40573.130-E-L02		A
10	16286601	40573.130-E-L03		A
11	16286602	40573.130-E-L04		A
12	16286603	40573.130-A-L01		A
13	16286604	40573.130-A-L02		A
14	16286605	40573.130-A-L03		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Gary Carpenter		NVL	11/3/16	1225
Analyzed by	Yasuyuki Hida		NVL	11/3/16	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 11/3/2016

Time: 12:51 PM

Entered By: Gary Carpenter

Project: KCHA - Carriage House Apts.

Project# 40573.130

Analysis requested: PMV FAA - Lead

Date: 10/28/16

Relinqu'd by/Signature: C. Greb

Date/Time: 11/3/16

Received by/Signature: Gary Carpenter

Date/Time: 11-3-16 1225 carrier

Email results to:

- | | | |
|--|--|--------------------------------------|
| ☐ Brian Stanford | ☐ Prudy Stoudt-McRae | ☐ Hany Goren |
| ☐ Ernest Edwards | ☒ Chuck Greb | ☐ Tim Ogden |
| ☐ Gregg Middaugh | ☐ Janet Murphy | ☐ Mike Smith |
| ☒ Mark Hiley | ☐ Willem Mager | ☐ Other _____ |

TURN AROUND TIME:

- | | | |
|----------------------------------|-----------------------------------|--|
| ☐ 1 Hour | ☐ 24 Hours | ☒ 3-5 Days |
| ☐ 2 Hours | ☐ 48 Hours | ☐ Other _____ |
| ☐ 4 Hours | | |

Report composite results for GWS & JC

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	C-L01	white/GWS/wall	Unit C-3 Living Rm.	
	C-L02	white/GWS/wall	Unit C-12 Kitchen	
	C-L03	white/GWS/wall	Unit C-23 Living Rm.	
	C-L04	white/GWS/wall	Unit C-47 Closet	
	D-L01	white/GWS/wall	Unit D-6 Closet	
	D-L02	white/GWS/wall	Unit D-24 Living Rm.	
	D-L03	white/GWS/wall	Unit D-48 Living Rm.	
	E-L01	white/GWS/wall	Unit E-5	
	E-L02	white/GWS/wall	Unit E-48	
	E-L03	Brown wood/Beam	Bldg. E Exterior, 67 Stair	
	E-L04	Beige/wood/siding	Bldg. E Cartyard	
	A-L01	white/GWS/wall	A10 Kitchen	
	A-L02	Beige/wood/siding	Cartyard Bldg. A	
	A-L03	Brown/wood/trim	Cartyard Bldg. A	

November 4, 2016

Chuck Greeb

PBS Environmental (Seattle)

2517 Eastlake Ave E, Suite 100

Seattle, WA 98102



Laboratory | Management | Training

RE: Metals Analysis; NVL Batch # 1622260.00

Dear Mr. Greeb,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more details.

This report is considered highly confidential and will not be released without your approval. 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. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com



NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936

Analysis Report

Total Lead (Pb)

Client: PBS Environmental (Seattle)
Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Batch #: 1622260.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: 40573.130
Date Received: 11/3/2016
Samples Received: 11
Samples Analyzed: 11

Attention: Mr. Chuck Greeb
Project Location: KCHA Carriage House Apts.

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
16286580	40573.130-B-L01	0.1861	53.0	< 53.0	<0.0053
16286581	40573.130-B-L02	0.1993	50.0	< 50.0	<0.0050
16286582	40573.130-B-L03	0.1798	55.0	< 55.0	<0.0055
16286583	40573.130-B-L04	0.1604	62.0	75.0	0.0075
16286584	40573.130-B-L05	0.1856	54.0	< 54.0	<0.0054
16286585	40573.130-D-L04	0.2038	49.0	< 49.0	<0.0049
16286586	40573.130-C-L05	0.1898	52.0	< 52.0	<0.0052
16286587	40573.130-C-L06	0.1895	53.0	< 53.0	<0.0053
16286588	40573.130-C-L07	0.1961	51.0	< 51.0	<0.0051
16286589	40573.130-C-L08	0.0635	160.0	< 160.0	<0.0160
16286590	40573.130-C-L09	0.1952	51.0	84.0	0.0084

Sampled by: Client

Analyzed by: Yasuyuki Hida

Reviewed by: Nick Ly

Date Analyzed: 11/03/2016

Date Issued: 11/04/2016



Nick Ly, Technical Director

mg/ Kg = Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Bench Run No: 2016-1103-12

Company PBS Environmental (Seattle) **NVL Batch Number** **1622260.00**
Address 2517 Eastlake Ave E, Suite 100 **TAT** 3 Days **AH** No
 Seattle, WA 98102 **Rush TAT**
Project Manager Mr. Chuck Greeb **Due Date** 11/8/2016 **Time** 12:25 PM
Phone (206) 233-9639 **Email** Chuck.Greeb@pbsenv.com
Cell (206) 369-7767 **Fax** (866) 727-0140

Project Name/Number: 40573.130 **Project Location:** KCHA Carriage House Apts.

Subcategory Flame AA (FAA)

Item Code FAA-02 **EPA 7000B Lead by FAA** <paint>

Total Number of Samples 11

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	16286580	40573.130-B-L01		A
2	16286581	40573.130-B-L02		A
3	16286582	40573.130-B-L03		A
4	16286583	40573.130-B-L04		A
5	16286584	40573.130-B-L05		A
6	16286585	40573.130-D-L04		A
7	16286586	40573.130-C-L05		A
8	16286587	40573.130-C-L06		A
9	16286588	40573.130-C-L07		A
10	16286589	40573.130-C-L08		A
11	16286590	40573.130-C-L09		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Courier				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Gary Carpenter		NVL	11/3/16	1225
Analyzed by	Yasuyuki Hida		NVL	11/3/16	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 11/3/2016

Time: 12:41 PM

Entered By: Mohammed Jamal

Project: KCHA - Carriage House Apts.

Project# 40573.130

Analysis requested: FAA - Lead

Date: 11/2/16

Relinqu'd by/Signature: C. Greeb

Date/Time: 11/3/16

Received by/Signature: Gary Carpenter

Date/Time: 11-3-16 1225 courier

Email results to:

- | | | |
|---|---|--------------------------------------|
| ☐ Brian Stanford | ☐ Prudy Stoudt-McRae | ☐ Hany Goren |
| ☐ Ernest Edwards | ☒ Chuck Greeb | ☐ Tim Ogden |
| ☐ Gregg Middaugh | ☐ Janet Murphy | ☐ Mike Smith |
| ☐ Mark Hiley | ☐ Willem Mager | ☐ Other _____ |

TURN AROUND TIME:

- | | | |
|----------------------------------|-----------------------------------|--------------------------------------|
| ☐ 1 Hour | ☐ 24 Hours | ☐ 3-5 Days |
| ☐ 2 Hours | ☐ 48 Hours | ☐ Other _____ |
| ☐ 4 Hours | | |

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	B-L01	White/GWB/wall	B25 Closet	
	B-L02	White/GWB/wall	B47 Kitchen	
	B-L03	White/GWB/wall	B 5 At closet	
	B-L04	Brown/wood/beam	Exterior at stair	
	B-L05	Green/wood/siding	Exterior at stair	
	D-L04	Green/GWB/wall	Exterior hallway b y D41-14	
	C-L05	Gray/Cement tiles/walkway	2nd Fl. walkway Bldg. C	
	C-L06	White/wood/soffit	Bldg. C at stair, 1st fl.	
	C-L07	Brown/wood/beam	Bldg. C at stair	
	C-L08	White/Metal/handrail	Bldg. C at stair	
	C-L09	Green/wood/siding	Bldg. C at stair	

Gary Carpenter

From: Chuck Greeb <Chuck.Greeb@pbsenv.com>
Sent: Thursday, November 03, 2016 12:27 PM
To: Gary Carpenter
Subject: RE: TAT project 40573.130

3 days, please.

Chuck Greeb
Industrial Hygienist
Chuck.Greeb@pbsenv.com
206-766-7624

PBS Engineering + Environmental
Engineering | Natural Resources | Environmental | Health and Safety
www.pbsenv.com
2517 Eastlake Ave E, Ste 100 Seattle WA, 98102
ph: 206.233.9639 : fax: 866.727.0140

From: Gary Carpenter [mailto:gary.c@nvlabs.com]
Sent: Thursday, November 03, 2016 12:26 PM
To: Chuck Greeb
Subject: TAT project 40573.130

Hello Chuck! Can you confirm for me the TAT you need for this batch?

Thanks and regards.

Gary Carpenter
Marketing Coordinator
NVL Laboratories, Inc.

Email: gary.c@nvlabs.com



4708 Aurora Ave N
Seattle, WA 98103
1.888.NVL.LABS (685.5227)
Tel: 206.547.0100
Fax: 206.634.1936
www.nvlabs.com

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TAB 4
INSPECTOR CERTIFICATIONS

Certificate of Completion

This is to certify that

Chuck D. Greeb

has satisfactorily completed
4 hours of refresher training as an

Asbestos Building Inspector

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

154781

Certificate #

Mary C. Zappa

Instructor

EPA Provider Certificate #1085



Dec 30, 2015

Date(s) of Training

Exam Score: NA

Expiration Date: Dec 29, 2016

TAB 5
PREVIOUS SURVEY REPORTS



Limited Good Faith Asbestos Inspection

"Carriage House Apartments"
3602 S. 180th Street
SeaTac, WA 98188



Prepared For
Mr. Hugh Watkinson
King County Housing Authority
600 Andover Park W
Seattle, WA 98188

Project Number:	2016-0206
Inspection Date:	March 9 thru 11, 2016
Report Date:	March 21, 2016
Inspected By	Tanveer Khan / Daniel Crownhart
AHERA Certification	# 151522 / # 152896
Expiration Date	May 19, 2016 / Aug 26, 2016

TABLE OF CONTENTS

1.0	SCOPE OF WORK	3
2.0	SURVEY METHOD	4-5
3.0	LABORATORY INFORMATION	6
4.0	BUILDING DESCRIPTION	7
5.0	FINDINGS	8-18
6.0	CONCLUSIONS AND RECOMMENDATIONS	19-20
7.0	LIMITATIONS OF SURVEY	21

APPENDICIES

- A** Laboratory Analysis Results
- B** AHERA Certifications & Laboratory Qualifications

1.0 SCOPE OF WORK

A Limited Good Faith Asbestos Inspection was conducted at "Carriage House Apartments" located at 3602 S. 180th Street, SeaTac, WA 98188 on March 9 thru 11, 2016.

Tanveer Khan and Dan Crownhart, AHERA Certified Building Inspectors, conducted this survey at the request of Mr. Hugh Watkinson of the King County Housing Authority.

This survey is limited to the suspect building materials that would be impacted by the planned installation of the fire alarm system in bldg. A thru bldg. E only. The building materials that would be impacted during the renovation include the GWB walls/ceilings and exterior flooring (hallways, corridors, stairways and mailbox room) of all the affected buildings. Representative samples of the walls/ceilings were collected from each of the buildings impacted by this project. Due to occupancy, destructive sampling techniques were not used to access any hidden materials. Please note that hidden materials may exist within the structures, and all suspect materials must be treated as asbestos containing until testing proves otherwise.

This survey constitutes a survey of accessible suspect ACM in the project area and was conducted in accordance with:

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61 requires a survey by an accredited asbestos inspector prior to demolition of a structure.

This asbestos survey also satisfies the requirements for "Good Faith" inspection outlined in Washington Administrative Code (WAC) 296-62-07221(2), *Identification*, which requires the owner of a structure to provide contractors with a written report identifying the asbestos-containing materials expected to be disturbed during renovation or demolition.

The asbestos survey section is written to comply with the AHERA asbestos sampling procedure as stated in 40 CFR 763.86. This protocol is required under the Puget Sound Clean Air Agency (PSCAA) Regulation III, Article IV, rev. March 26, 2009) for all asbestos surveys prior to a building demolition.

2.0 SURVEY METHOD

Asbestos Survey Method

The NVL Labs field inspector is an Asbestos Building Inspector, certified under the requirements of the United States Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) regulation 40 CFR 763, Subpart E. A copy of his certificate is provided in Appendix B.

The AHERA Guidelines dictate the following:

The inspector must determine *homogenous areas*, which are defined as an area of Thermal System Insulation, Surfacing Material, or Miscellaneous Material that is uniform in texture and color.

Once homogenous areas have been determined, the inspector must determine whether or not material is friable or non-friable. **Friable** is defined as a material, that when dry, can be crushed, pulverized, or reduced to dust using hand pressure, and **non-friable** material is defined as a material, that when dry, *cannot* be crushed pulverized or reduced to dust using hand pressure. Materials normally defined as non-friable can become friable by definition if sufficiently damaged.

Once friability has been determined, the materials suspected of containing asbestos are divided into one of three categories: Thermal System Insulation (TSI), Surfacing Material (SM), or Miscellaneous Material (MM). Generally speaking, TSI and SM are considered to be friable, with the exception of TSI where the structural integrity of the insulation is intact and the protective out wrap is undamaged.

Once materials are divided into one of the categories, samples are collected in the following manner:

Friable Thermal System Insulation:

1. Inspector shall collect three (3) randomly distributed samples;
2. Inspector shall collect a minimum of one sample of each TSI materials that appears to have been used as a patch, as long as the patch is less than 6 LF or 6 ft²;
3. Inspector shall collect in a manner sufficient, samples from areas of TSI applied to fittings, tees, and joints.

Friable Surfacing Material:

1. Inspector shall collect samples in random manner of surfacing materials as follows:
 - a. Collect three bulk samples from an area believed to be homogeneous (defined as a material that appears to be the same or similar and was installed at the same time) that is 1,000 square feet or less in size;
 - b. Collect five bulk samples from an area believed to be homogeneous that is greater than 1,000 square feet in size, but less than 5,000 square feet in size;
 - c. Collect seven bulk samples from an area believed to be homogeneous that is greater than 5,000 square feet.

2.0 SURVEY METHOD (continued)

Miscellaneous Materials:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos-containing or not.

All Materials Determined to Be Non Friable:

1. Inspector shall collect samples in a manner and number sufficient to determine if the material is asbestos containing or not.

In addition to these sampling requirements, the AHERA Building Inspector is required to assess the following of each material that is found to be positive for asbestos:

1. The condition of each material;
2. Accessibility;
3. Possibility for air erosion.

Once the samples have been collected, they must be analyzed by an accredited laboratory, and they must be analyzed using polarized light microscopy methods, commonly referred to as EPA Method 600/R-93/116.

NVL Labs collected samples and obtained analytical data for suspect asbestos-containing materials identified in the building. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody" tracking was followed to maintain sample integrity during handling and data reporting at NVL Labs.

A walk-through inspection of all accessible areas of this structure was performed to identify potential asbestos-containing materials. The walk-through inspection included a review of the internal and external aspects of this structure. The locations and types of potential asbestos-containing materials were noted.

Homogeneous Materials

Homogeneous materials are defined as an area of asbestos-containing material or presumed asbestos-containing material which appears similar throughout in terms of color, texture, and date of material application. The report listing for homogenous materials will appear as follows:

Sample Number	Material Description by Layer	Location	Asbestos	Quantity	Friable
#	Layer 1 is not asbestos-containing Layer 2 is asbestos-containing	Location description	1. % 2. %	"X" LF/ft ²	Yes/No

3.0 LABORATORY INFORMATION

Laboratory Analysis: Asbestos

In accordance with 40 CFR Chapter 1 (1-1-87 edition) Part 763, Subpart F, Appendix A, asbestos samples are analyzed at NVL Labs using polarized light microscopy (PLM) with dispersion staining. If samples are not homogeneous, then sub-samples of the components are analyzed separately. All bulk samples are analyzed using EPA Method 600/R-93/116 with the following measurement uncertainties for reported % asbestos: 1%=0-3%, 5%≥1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA, state, and local regulations.

Findings for samples containing more than one separable layer of materials are reported for each layer. The asbestos concentration in the sample is determined by visual estimation.

NVL Labs is accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis; *NVLAP Lab Code 102063-0*

Laboratory Accreditation

Professional accreditations for NVL Laboratories, Inc. include the following:

NVL Laboratories, Inc. is currently accredited by the National Institute of Standards and Technology (NIST) under the National Volunteer Laboratory Accreditation Program (NVLAP) program for bulk asbestos fiber analysis.

NVLAP Lab Code 102063-0

NVL Laboratories, Inc. is approved by the American Industrial Hygiene Association (AIHA) Asbestos Analysts Registry (AAR) program for airborne asbestos fiber analysis.

AAR Counter ID 7412

NVL Laboratories, Inc. is currently accredited by the American Industrial Hygiene Association (AIHA) under the Industrial Hygiene Laboratory Accreditation Program (IHLAP). The IHLAP program is designed specifically for laboratories involved in analyzing samples to evaluate workplace exposure.

IHLAP Certification Number 563

4.0 BUILDING DESCRIPTION

General Building Type	This is a multi-family apartment complex of traditional wood framed construction.
Primary External Components	The areas surveyed have drywall and wood siding.
Foundation Type	The foundation was not part of the area surveyed.
Roofing Material(s)	The roofing was not part of the area surveyed.
Window Type(s)	The windows were not part of the area surveyed.
Flooring	The areas surveyed have carpet, and coated concrete flooring.
Thermal Systems With Insulation	The thermal system insulation was not part of the area surveyed.
Finishing	The finishing of the apartment buildings consists of textured drywall and popcorn texture ceilings.

5.0 FINDINGS

Building A

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-A-1-1	Popcorn textured ceiling	Floor 1, Unit # 17, Entry closet	3%	7200 ft ²	Yes
2016-0206-A-1-2	Not Analyzed	Floor 1, Unit # 17, Living room	Not Analyzed		
2016-0206-A-1-3	Not Analyzed	Floor 1, Unit # 18, Entry closet	Not Analyzed		
2016-0206-A-1-4	Not Analyzed	Floor 1, Unit # 18, Living room	Not Analyzed		
2016-0206-A-1-5	Not Analyzed	Floor 1, Unit # 19, Entry hall	Not Analyzed		
2016-0206-A-1-6	Not Analyzed	Floor 1, Unit # 19, Living room	Not Analyzed		
2016-0206-A-1-7	Not Analyzed	Floor 1, Unit # 20, Entry closet	Not Analyzed		
2016-0206-A-1-8	Popcorn textured ceiling	Floor 2, Unit # 29, Entry closet	3%	9600 ft ²	Yes
2016-0206-A-1-9	Not Analyzed	Floor 2, Unit # 29, Living room	Not Analyzed		
2016-0206-A-1-10	Not Analyzed	Floor 2, Unit # 41, Entry closet	Not Analyzed		
2016-0206-A-1-11	Not Analyzed	Floor 2, Unit # 41, Living room	Not Analyzed		
2016-0206-A-1-12	Not Analyzed	Floor 2, Unit # 42, Entry closet	Not Analyzed		
2016-0206-A-1-13	Not Analyzed	Floor 2, Unit # 43, Entry closet	Not Analyzed		
2016-0206-A-1-14	Not Analyzed	Floor 2, Unit # 44, Entry closet	Not Analyzed		
2016-0206-A-1-15	1: Texture with paint 2: Drywall	Floor 1, Unit # 17, Entry closet	1: 2% 2: ND	8400 ft ² (footprint)	Yes
2016-0206-A-1-16	Not Analyzed	Floor 1, Unit # 17, Kitchen	Not Analyzed		
2016-0206-A-1-17	Not Analyzed	Floor 1, Unit # 18, Entry closet	Not Analyzed		
2016-0206-A-1-18	Not Analyzed	Floor 1, Unit # 18, Kitchen	Not Analyzed		
2016-0206-A-1-19	Not Analyzed	Floor 1, Unit # 19, Entry closet	Not Analyzed		
2016-0206-A-1-20	Not Analyzed	Floor 1, Unit # 20, Entry closet	Not Analyzed		
2016-0206-A-1-21	Not Analyzed	Floor 1, Unit # 20, Kitchen	Not Analyzed		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building A

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-A-1-22	1: Texture with paint 2: Drywall	Floor 2, Unit # 28, Entry closet	1: 2% 2: ND	10800 ft ² (footprint)	Yes
2016-0206-A-1-23	Not Analyzed	Floor 2, Unit # 28, Kitchen	Not Analyzed		
2016-0206-A-1-24	Not Analyzed	Floor 2, Unit # 41, Entry closet	Not Analyzed		
2016-0206-A-1-25	Not Analyzed	Floor 2, Unit # 42, Entry closet	Not Analyzed		
2016-0206-A-1-26	Not Analyzed	Floor 2, Unit # 43, Entry closet	Not Analyzed		
2016-0206-A-1-27	Not Analyzed	Floor 2, Unit # 44, Entry closet	Not Analyzed		
2016-0206-A-1-28	Not Analyzed	Floor 2, Unit # 44, Kitchen	Not Analyzed		
2016-0206-A-1-29	1: Texture with paint 2: Drywall	Floor 2, Hallway, Across unit # 44	1: 2% 2: ND	3500 ft ²	Yes
2016-0206-A-1-30	Not Analyzed	Floor 2, Hallway, Across unit # 37	Not Analyzed		
2016-0206-A-1-31	Not Analyzed	Floor 1, Hallway, Across unit # 9	Not Analyzed		
2016-0206-A-1-32	Not Analyzed	Floor 1, Hallway, Across unit # 20	Not Analyzed		
2016-0206-A-1-33	Not Analyzed	Mailbox room	Not Analyzed		
2016-0206-A-3-1	1: Carpet flooring 2: Padding 3: Yellow mastic 4: Tan sheet vinyl 5: Gray backing with mastic 6: Concrete	Mailbox room	1: ND 2: ND 3: ND 4: ND 5: ND 6: ND		
2016-0206-A-3-2	Carpet flooring with mastic	Floor 1, East stairway	ND		
2016-0206-A-3-3	Carpet flooring with mastic	Floor 1, Hallway, Across unit # 5	ND		
2016-0206-A-3-4	1: Gray floor coating 2: Yellow mastic	Floor 2, Stairway landings	1: ND 2: ND		
2016-0206-A-3-5	Gray floor coating	Floor 2, Main corridors	ND		
2016-0206-A-3-6	Yellow floor coating	Floor 2, Hallway, Across unit # 37	ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

NVL Laboratories, Inc.
 4708 Aurora Ave N
 Seattle, WA 98103

Phone (206) 547-0100 • Fax (206) 634-1936

5.0 FINDINGS (continued)

Building B

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-B-1-1	Popcorn textured ceiling	Floor 1, Unit # 21, Entry closet	3%	7200 ft ²	Yes
2016-0206-B-1-2	Not Analyzed	Floor 1, Unit # 21, Living room	Not Analyzed		
2016-0206-B-1-3	Not Analyzed	Floor 1, Unit # 22, Entry closet	Not Analyzed		
2016-0206-B-1-4	Not Analyzed	Floor 1, Unit # 22, Living room	Not Analyzed		
2016-0206-B-1-5	Not Analyzed	Floor 1, Unit # 23, Entry closet	Not Analyzed		
2016-0206-B-1-6	Not Analyzed	Floor 1, Unit # 23, Living room	Not Analyzed		
2016-0206-B-1-7	Not Analyzed	Floor 1, Unit # 24, Entry closet	Not Analyzed		
2016-0206-B-1-8	Popcorn textured ceiling	Floor 2, Unit # 44, Entry closet	4%	9600 ft ²	Yes
2016-0206-B-1-9	Not Analyzed	Floor 2, Unit # 44, Living room	Not Analyzed		
2016-0206-B-1-10	Not Analyzed	Floor 2, Unit # 45, Entry closet	Not Analyzed		
2016-0206-B-1-11	Not Analyzed	Floor 2, Unit # 45, Living room	Not Analyzed		
2016-0206-B-1-12	Not Analyzed	Floor 2, Unit # 46, Entry closet	Not Analyzed		
2016-0206-B-1-13	Not Analyzed	Floor 2, Unit # 47, Entry closet	Not Analyzed		
2016-0206-B-1-14	Not Analyzed	Floor 2, Unit # 48, Entry closet	Not Analyzed		
2016-0206-B-1-15	1: Texture with paint 2: Drywall	Floor 1, Unit # 21, Entry closet	1: 2% 2: ND	8400 ft ² (footprint)	Yes
2016-0206-B-1-16	Not Analyzed	Floor 1, Unit # 21, Kitchen	Not Analyzed		
2016-0206-B-1-17	Not Analyzed	Floor 1, Unit # 22, Entry closet	Not Analyzed		
2016-0206-B-1-18	Not Analyzed	Floor 1, Unit # 22, Kitchen	Not Analyzed		
2016-0206-B-1-19	Not Analyzed	Floor 1, Unit # 23, Entry closet	Not Analyzed		
2016-0206-B-1-20	Not Analyzed	Floor 1, Unit # 24, Entry closet	Not Analyzed		
2016-0206-B-1-21	Not Analyzed	Floor 1, Unit # 23, Kitchen	Not Analyzed		
2016-0206-B-1-22	1: Texture with paint 2: Drywall	Floor 2, Unit # 44, Entry closet	1: 3% 2: ND	10800 ft ² (footprint)	Yes

ND

None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building B

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-B-1-23	Not Analyzed	Floor 2, Unit # 44, Kitchen	Not Analyzed		
2016-0206-B-1-24	Not Analyzed	Floor 2, Unit # 45, Entry closet	Not Analyzed		
2016-0206-B-1-25	Not Analyzed	Floor 2, Unit # 46, Entry closet	Not Analyzed		
2016-0206-B-1-26	Not Analyzed	Floor 2, Unit # 47, Entry closet	Not Analyzed		
2016-0206-B-1-27	Not Analyzed	Floor 2, Unit # 45, Kitchen	Not Analyzed		
2016-0206-B-1-28	Not Analyzed	Floor 2, Unit # 48, Entry closet	Not Analyzed		
2016-0206-B-1-29	1: Texture with paint 2: Drywall	Floor 1, Hallway, Across unit # 13	1: 3% 2: ND	3500 ft ²	Yes
2016-0206-B-1-30	Not Analyzed	Floor 1, Hallway, Across unit # 23	Not Analyzed		
2016-0206-B-1-31	Not Analyzed	Floor 2, Hallway, Across unit # 37	Not Analyzed		
2016-0206-B-1-32	Not Analyzed	Floor 2, Hallway, Across unit # 48	Not Analyzed		
2016-0206-B-1-33	Not Analyzed	Mailbox room	Not Analyzed		
2016-0206-B-3-1	1: Carpet flooring 2: Yellow mastic with concrete	Mailbox room	1: ND 2: ND		
2016-0206-B-3-2	1: Carpet flooring 2: Yellow mastic 3: Concrete	Floor 1, East stairway	1: ND 2: ND 3: ND		
2016-0206-B-3-3	1: Carpet flooring 2: White mastic with woven backing 3: Yellow mastic with concrete	Floor 1, Hallway, Across unit # 9	1: ND 2: ND 3: ND		
2016-0206-B-3-4	Gray floor coating	Floor 2, Stairway landings	ND		
2016-0206-B-3-5	1: Gray floor coating 2: Brown wood debris	Floor 2, Main corridors	1: ND 2: ND		
2016-0206-B-3-6	1: Yellow floor coating/mastic 2: Black mastic	Floor 2, Hallway, Across unit # 41	1: ND 2: ND		

ND None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building C

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-C-1-1	Popcorn textured ceiling	Floor 1, Unit # 1, Entry closet	3%	6900 ft ²	Yes
2016-0206-C-1-2	Not Analyzed	Floor 1, Unit # 1, Living room	Not Analyzed		
2016-0206-C-1-3	Not Analyzed	Floor 1, Unit # 2, Entry closet	Not Analyzed		
2016-0206-C-1-4	Not Analyzed	Floor 1, Unit # 2, Living room	Not Analyzed		
2016-0206-C-1-5	Not Analyzed	Floor 1, Unit # 4, Entry closet	Not Analyzed		
2016-0206-C-1-6	Not Analyzed	Floor 1, Unit # 4, Living room	Not Analyzed		
2016-0206-C-1-7	Not Analyzed	Floor 1, Unit # 4, Living room	Not Analyzed		
2016-0206-C-1-8	Popcorn textured ceiling	Floor 2, Unit # 25, Entry closet	5%	9200 ft ²	Yes
2016-0206-C-1-9	Not Analyzed	Floor 2, Unit # 25, Living room	Not Analyzed		
2016-0206-C-1-10	Not Analyzed	Floor 2, Unit # 26, Entry closet	Not Analyzed		
2016-0206-C-1-11	Not Analyzed	Floor 2, Unit # 26, Living room	Not Analyzed		
2016-0206-C-1-12	Not Analyzed	Floor 2, Unit # 27, Entry closet	Not Analyzed		
2016-0206-C-1-13	Not Analyzed	Floor 2, Unit # 28, Entry closet	Not Analyzed		
2016-0206-C-1-14	Not Analyzed	Floor 2, Unit # 29, Entry closet	Not Analyzed		
2016-0206-C-1-15	1: Texture with paint 2: Drywall	Floor 1, Unit # 1, Entry closet	1: 2% 2: ND	8050 ft ² (footprint)	Yes
2016-0206-C-1-16	Not Analyzed	Floor 1, Unit # 1, Kitchen	Not Analyzed		
2016-0206-C-1-17	Not Analyzed	Floor 1, Unit # 2, Entry closet	Not Analyzed		
2016-0206-C-1-18	Not Analyzed	Floor 1, Unit # 2, Kitchen	Not Analyzed		
2016-0206-C-1-19	Not Analyzed	Floor 1, Unit # 3, Entry closet	Not Analyzed		
2016-0206-C-1-20	Not Analyzed	Floor 1, Unit # 3, Kitchen	Not Analyzed		
2016-0206-C-1-21	Not Analyzed	Floor 1, Unit # 4, Entry closet	Not Analyzed		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building C

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-C-1-22	1: Texture with paint 2: Drywall	Floor 2, Unit # 25, Entry closet	1: 3% 2: ND	10350 ft ² (footprint)	Yes
2016-0206-C-1-23	Not Analyzed	Floor 2, Unit # 25, Kitchen	Not Analyzed		
2016-0206-C-1-24	Not Analyzed	Floor 2, Unit # 26, Entry closet	Not Analyzed		
2016-0206-C-1-25	Not Analyzed	Floor 2, Unit # 26, Kitchen	Not Analyzed		
2016-0206-C-1-26	Not Analyzed	Floor 2, Unit # 27, Entry closet	Not Analyzed		
2016-0206-C-1-27	Not Analyzed	Floor 2, Unit # 28, Kitchen	Not Analyzed		
2016-0206-C-1-28	Not Analyzed	Floor 2, Unit # 29, Entry closet	Not Analyzed		
2016-0206-C-1-29	1: Texture with paint 2: Drywall	Floor 2, Hallway, Across unit # 32	1: 2% 2: ND	3500 ft ²	Yes
2016-0206-C-1-30	Not Analyzed	Floor 2, Hallway, Across unit # 42	Not Analyzed		
2016-0206-C-1-31	Not Analyzed	Floor 1, Hallway, Across unit # 24	Not Analyzed		
2016-0206-C-1-32	Not Analyzed	Floor 1, Hallway, Across unit # 10	Not Analyzed		
2016-0206-C-1-33	Not Analyzed	Mailbox room	Not Analyzed		
2016-0206-C-3-1	1: Carpet flooring 2: Yellow mastic 3: Gray sheet vinyl 4: Gray backing with mastic	Mailbox room	1: ND 2: ND 3: ND 4: ND		
2016-0206-C-3-2	1: Carpet flooring 2: Yellow mastic 3: Concrete	Floor 1, East stairway	1: ND 2: ND 3: ND		
2016-0206-C-3-3	1: Carpet flooring 2: White mastic 3: Yellow mastic with concrete	Floor 1, Hallway, Across unit # 5	1: ND 2: ND 3: ND		
2016-0206-C-3-4	1: Carpet flooring 2: Trace gray mastic 3: Yellow mastic	Floor 1, Hallway, Across unit # 13 & # 17	1: ND 2: ND 3: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building C

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-C-3-5	Gray floor coating	Floor 2, Stairway landings	ND		
2016-0206-C-3-6	1: Gray floor coating 2: Yellow mastic	Floor 2, Main corridors	1: ND 2: ND		
2016-0206-C-3-7	1: Yellow mastic 2: Yellow floor coating with mastic	Floor 2, Hallway, Across unit # 42	1: ND 2: ND		

Building D

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-D-1-1	Popcorn textured ceiling	Floor 1, Unit # 5, Entry closet	5%	6900 ft ²	Yes
2016-0206-D-1-2	Not Analyzed	Floor 1, Unit # 5, Living room	Not Analyzed		
2016-0206-D-1-3	Not Analyzed	Floor 1, Unit # 6, Entry closet	Not Analyzed		
2016-0206-D-1-4	Not Analyzed	Floor 1, Unit # 6, Living room	Not Analyzed		
2016-0206-D-1-5	Not Analyzed	Floor 1, Unit # 7, Entry closet	Not Analyzed		
2016-0206-D-1-6	Not Analyzed	Floor 1, Unit # 7, Living room	Not Analyzed		
2016-0206-D-1-7	Not Analyzed	Floor 1, Unit # 8, Entry closet	Not Analyzed		
2016-0206-D-1-8	Popcorn textured ceiling	Floor 2, Unit # 28, Entry closet	4%	9200 ft ²	Yes
2016-0206-D-1-9	Not Analyzed	Floor 2, Unit # 28, Living room	Not Analyzed		
2016-0206-D-1-10	Not Analyzed	Floor 2, Unit # 29, Living room	Not Analyzed		
2016-0206-D-1-11	Not Analyzed	Floor 2, Unit # 29, Living room	Not Analyzed		
2016-0206-D-1-12	Not Analyzed	Floor 2, Unit # 30, Entry closet	Not Analyzed		
2016-0206-D-1-13	Not Analyzed	Floor 2, Unit # 31, Entry hall	Not Analyzed		
2016-0206-D-1-14	Not Analyzed	Floor 2, Unit # 32, Entry closet	Not Analyzed		

ND

None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building D

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-D-1-15	1: Texture with paint 2: Drywall	Floor 1, Unit # 5, Entry closet	1: 4% 2: ND	8050 ft ² (footprint)	Yes
2016-0206-D-1-16	Not Analyzed	Floor 1, Unit # 5, Kitchen	Not Analyzed		
2016-0206-D-1-17	Not Analyzed	Floor 1, Unit # 6, Entry closet	Not Analyzed		
2016-0206-D-1-18	Not Analyzed	Floor 1, Unit # 6, Kitchen	Not Analyzed		
2016-0206-D-1-19	Not Analyzed	Floor 1, Unit # 7, Entry closet	Not Analyzed		
2016-0206-D-1-20	Not Analyzed	Floor 1, Unit # 7, Kitchen	Not Analyzed		
2016-0206-D-1-21	Not Analyzed	Floor 1, Unit # 8, Entry closet	Not Analyzed		
2016-0206-D-1-22	1: Texture with paint 2: Drywall	Floor 2, Unit # 28, Entry closet	1: 3% 2: ND	10350 ft ² (footprint)	Yes
2016-0206-D-1-23	Not Analyzed	Floor 2, Unit # 28, Kitchen	Not Analyzed		
2016-0206-D-1-24	Not Analyzed	Floor 2, Unit # 29, Entry closet	Not Analyzed		
2016-0206-D-1-25	Not Analyzed	Floor 2, Unit # 29, Kitchen	Not Analyzed		
2016-0206-D-1-26	Not Analyzed	Floor 2, Unit # 30, Entry closet	Not Analyzed		
2016-0206-D-1-27	Not Analyzed	Floor 2, Unit # 31, Entry closet	Not Analyzed		
2016-0206-D-1-28	Not Analyzed	Floor 2, Unit # 32, Entry closet	Not Analyzed		
2016-0206-D-1-29	1: Texture with paint 2: Drywall	Floor 2, Hallway, Across unit # 32	1: 3% 2: ND	3500 ft ²	Yes
2016-0206-D-1-30	Not Analyzed	Floor 2, Hallway, Across unit # 42	Not Analyzed		
2016-0206-D-1-31	Not Analyzed	Floor 1, Hallway, Across unit # 4	Not Analyzed		
2016-0206-D-1-32	Not Analyzed	Floor 1, Hallway, Across unit # 13	Not Analyzed		
2016-0206-D-1-33	Not Analyzed	Mailbox room	Not Analyzed		
2016-0206-D-3-1	1: Carpet flooring with mastic 2: Padding with tan mastic 3: Concrete	Floor 1, West stairway & Mailbox room	1: ND 2: ND 3: ND		

ND None Detected

* The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

** These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

NVL Laboratories, Inc.
 4708 Aurora Ave N
 Seattle, WA 98103

Phone (206) 547-0100 • Fax (206) 634-1936

5.0 FINDINGS (continued)

Building D

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-D-3-2	Gray floor coating	Floor 1, East stairway	ND		
2016-0206-D-3-3	1: Yellow floor coating 2: Gray floor coating with mastic	Floor 1, Hallway, Across unit # 17	1: ND 2: ND		
2016-0206-D-3-4	1: Beige floor coating 2: Off-white material with tan mastic and paint	Floor 2, Main corridors	1: ND 2: ND		
2016-0206-D-3-5	1: Yellow floor coating 2: Yellow mastic 3: Off-white material	Floor 2, Hallway, Across unit # 42	1: ND 2: ND 3: ND		
2016-0206-D-3-6	1: Gray floor coating 2: Yellow mastic with paint	Floor 2, Stairway landings	1: ND 2: ND		

Building E

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-E-1-1	Popcorn textured ceiling	Floor 1, Unit # 21, Entry closet	2%	7200 ft ²	Yes
2016-0206-E-1-2	Not Analyzed	Floor 1, Unit # 21, Living room	Not Analyzed		
2016-0206-E-1-3	Not Analyzed	Floor 1, Unit # 22, Entry closet	Not Analyzed		
2016-0206-E-1-4	Not Analyzed	Floor 1, Unit # 22, Living room	Not Analyzed		
2016-0206-E-1-5	Not Analyzed	Floor 1, Unit # 23, Entry closet	Not Analyzed		
2016-0206-E-1-6	Not Analyzed	Floor 1, Unit # 23, Living room	Not Analyzed		
2016-0206-E-1-7	Not Analyzed	Floor 1, Unit # 24, Entry closet	Not Analyzed		
2016-0206-E-1-8	Popcorn textured ceiling	Floor 2, Unit # 44, Entry closet	3%	9600 ft ²	Yes
2016-0206-E-1-9	Not Analyzed	Floor 2, Unit # 44, Living room	Not Analyzed		
2016-0206-E-1-10	Not Analyzed	Floor 2, Unit # 45, Entry closet	Not Analyzed		
2016-0206-E-1-11	Not Analyzed	Floor 2, Unit # 45, Living room	Not Analyzed		
2016-0206-E-1-12	Not Analyzed	Floor 2, Unit # 46, Entry closet	Not Analyzed		

ND None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

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 Seattle, WA 98103

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5.0 FINDINGS (continued)

Building E

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-E-1-13	Not Analyzed	Floor 2, Unit # 47, Entry closet	Not Analyzed		
2016-0206-E-1-14	Not Analyzed	Floor 2, Unit # 48, Entry closet	Not Analyzed		
2016-0206-E-1-15	1: Texture with paint 2: Drywall	Floor 1, Unit # 21, Entry closet	1: 2% 2: ND	8400 ft ² (footprint)	Yes
2016-0206-E-1-16	Not Analyzed	Floor 1, Unit # 21, Kitchen	Not Analyzed		
2016-0206-E-1-17	Not Analyzed	Floor 1, Unit # 22, Entry closet	Not Analyzed		
2016-0206-E-1-18	Not Analyzed	Floor 1, Unit # 22, Kitchen	Not Analyzed		
2016-0206-E-1-19	Not Analyzed	Floor 1, Unit # 23, Entry closet	Not Analyzed		
2016-0206-E-1-20	Not Analyzed	Floor 1, Unit # 23, Kitchen	Not Analyzed		
2016-0206-E-1-21	Not Analyzed	Floor 1, Unit # 24, Entry closet	Not Analyzed		
2016-0206-E-1-22	1: Texture with paint 2: Drywall	Floor 2, Unit # 44, Entry closet	1: 2% 2: ND	10800 ft ² (footprint)	Yes
2016-0206-E-1-23	Not Analyzed	Floor 2, Unit # 44, Kitchen	Not Analyzed		
2016-0206-E-1-24	Not Analyzed	Floor 2, Unit # 45, Entry closet	Not Analyzed		
2016-0206-E-1-25	Not Analyzed	Floor 2, Unit # 45, Kitchen	Not Analyzed		
2016-0206-E-1-26	Not Analyzed	Floor 2, Unit # 46, Entry closet	Not Analyzed		
2016-0206-E-1-27	Not Analyzed	Floor 2, Unit # 47, Entry closet	Not Analyzed		
2016-0206-E-1-28	Not Analyzed	Floor 2, Unit # 48, Entry closet	Not Analyzed		
2016-0206-E-1-29	1: Texture with paint 2: Drywall	Floor 1, Hallway, Across unit # 1	1: 2% 2: ND	3500 ft ²	Yes
2016-0206-E-1-30	Not Analyzed	Floor 1, Hallway, Across unit # 13	Not Analyzed		
2016-0206-E-1-31	Not Analyzed	Floor 2, Hallway, Across unit # 28	Not Analyzed		
2016-0206-E-1-32	Not Analyzed	Floor 2, Hallway, Across unit # 44	Not Analyzed		
2016-0206-E-1-33	Not Analyzed	Mailbox room	Not Analyzed		

ND None Detected

*

The friability of this material was determined at the time of this inspection. Subsequent activities such as demolition, renovation, or abatement may affect the friability of this material.

**

These quantities are only an estimate of the asbestos containing material discovered on site. Accuracy of these estimates must be verified by the asbestos abatement contractor on site.

5.0 FINDINGS (continued)

Building E

Sample Number	Material Description by Layer	Location	Asbestos	Quantity **	Friable*
2016-0206-E-3-1	1: Carpet flooring 2: Padding 3: Tan sheet vinyl 4: Gray backing with mastic	Mailbox room	1: ND 2: ND 3: ND 4: ND		
2016-0206-E-3-2	1: Carpet flooring 2: Concrete with mastic	Floor 1, West stairway	1: ND 2: ND		
2016-0206-E-3-3	Yellow floor coating with mastic	Floor 1, Hallway, Across unit # 5	ND		
2016-0206-E-3-4	Gray floor coating	Floor 1, East stairway	ND		
2016-0206-E-3-5	Gray floor coating	Floor 2, Stairway landings	ND		
2016-0206-E-3-6	Gray floor coating	Floor 2, Main corridors	ND		
2016-0206-E-3-7	Yellow floor coating with mastic	Floor 2, Hallway, Across unit # 45	ND		

ND None Detected

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. The suspect material must be treated as asbestos-containing until testing proves otherwise.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following is an inventory of asbestos-containing building materials identified during the Limited Good Faith Asbestos Inspection conducted at "Carriage House Apartments" 3602 S. 180th Street, SeaTac, WA 98188.

Building A thru building E

1. **Popcorn textured ceiling (Friable)**

Sample number: 2016-0206-(A/B/C/D/E)-1-1 thru 1-14



There is approximately 82,600 square feet of asbestos containing popcorn textured ceiling located in all the units of bldg. A thru bldg. E.

2. **Texture with paint (Friable)**

Sample number: 2016-0206-(A/B/C/D/E)-1-15 thru 1-28



There is approximately 94,400 square feet (footprint) of asbestos containing texture with paint associated with the interior GWB walls/ceilings of all the units in bldg. A thru bldg. E.

3. **Texture with paint (Friable)**

Sample number: 2016-0206-(A/B/C/D/E)-1-29 thru 1-33



There is a total of approximately 17,500 square feet (3500 square feet per bldg.) of asbestos containing texture with paint associated with the GWB walls/ceilings of the mailbox room and all the exterior hallways (by the unit's entrances) of bldg. A thru bldg. E.

6.0 CONCLUSIONS AND RECOMMENDATIONS (continued)

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during the course of demolition or renovation work. Contractors should have contingency plans that include stopping work, evacuation of the immediate area and sampling by a certified AHERA Building Inspector whenever these materials are found. Concealed suspect materials may include, but are not limited to: non-fiberglass pipe or roof drain insulation; spray-applied coatings; cement board; asphalt or paper vapor barriers; floorings and adhesives.

If discovered, all asbestos-containing materials that will be disturbed as a natural part of renovation and/or demolition are required to be removed and disposed of in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA require that the abatement be performed using Certified Asbestos Workers under the direct on site supervision by a Certified Asbestos Supervisor. Further, NVL suggests that an AHERA inspector review this property after abatement to ensure all asbestos-containing materials have been removed by the contractor.

NVL Labs, Inc. is making the following recommendations regarding asbestos:

1. A copy of this inspection report should be maintained at the site during any renovations.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation project.
3. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the renovations.

7.0 LIMITATIONS OF SURVEY

The purpose of this Limited Good Faith Asbestos Inspection report is to document asbestos-containing building materials discovered at "Carriage House Apartments" 3602 S. 180th Street, SeaTac, WA 98188.

This survey is limited to the suspect building materials that would be impacted by the planned installation of the fire alarm system in bldg. A thru bldg. E only. The building materials that would be impacted during the renovation include the GWB walls/ceilings and exterior flooring (hallways, corridors, stairways and mailbox room) of all the affected buildings. Representative samples of the walls/ceilings were collected from each of the buildings impacted by this project. Due to occupancy, destructive sampling techniques were not used to access any hidden materials. Please note that hidden materials may exist within the structures, and all suspect materials must be treated as asbestos containing until testing proves otherwise.

This site visit consisted of a thorough visual walk-through of the building for the purpose of viewing and sampling potential asbestos-containing material. As hazardous material surveys are non-comprehensive by nature, NVL Laboratories, Inc. cannot be held liable for materials which require destructive means to access, materials which are hidden from sight (e.g. materials hidden behind walls), materials which cannot be found due to their obscure nature, or which otherwise cannot be discovered with reasonable diligence.

This document is the sole property of NVL Laboratories and the client, or his agent, authorizing this survey.

Inspected By



Tanveer Khan
AHERA Building Inspector
Certification # 151522
Expiration Date: May 19, 2016

Reviewed By



Syed Hasan
Manager Field Services
AHERA Certification # 153226
Expiration Date: September 30, 2016

Inspected By



Daniel Crownhart
AHERA Building Inspector
Certification # 152896
Expiration Date: August 26, 2016



Appendix A

Laboratory Analysis Results

March 15, 2016

Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1605463.00

Client Project: 2016-0206

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 39 sample(s) submitted to our laboratory for analysis on 3/11/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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, appearing to read "Nick Ly".

Nick Ly, Technical Director



Lab Code: 102063-0

1.888.NVL.LABS Enc.: Sample Results
1.888.(685.5227)
www.nvllabs.com

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p 206.547.0100 | f 206.634.1936

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: **Mr. Tanveer Khan**
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 39
Samples Analyzed: 11
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188263 **Client Sample #: 2016-0206-A-1-1**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188
Layer 1 of 1 **Description:** White lumpy foamy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Calcareous binder, Synthetic foam, Paint	Cellulose 3%	Chrysotile 3%

Lab ID: 16188264	Client Sample #: 2016-0206-A-1-2	Sample Status:	Not Analyzed
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Lab ID: 16188265	Client Sample #: 2016-0206-A-1-3	Sample Status:	Not Analyzed
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Lab ID: 16188266	Client Sample #: 2016-0206-A-1-4	Sample Status:	Not Analyzed
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Lab ID: 16188267	Client Sample #: 2016-0206-A-1-5	Sample Status:	Not Analyzed
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Lab ID: 16188268	Client Sample #: 2016-0206-A-1-6	Sample Status:	Not Analyzed
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Lab ID: 16188269	Client Sample #: 2016-0206-A-1-7	Sample Status:	Not Analyzed
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Lab ID: 16188270 **Client Sample #: 2016-0206-A-1-8**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188
Layer 1 of 1 **Description:** Beige lumpy foamy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Calcareous binder, Synthetic foam, Paint	Cellulose 2%	Chrysotile 3%

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Lab ID: 16188271	Client Sample #: 2016-0206-A-1-9	Sample Status:	Not Analyzed
Lab ID: 16188272	Client Sample #: 2016-0206-A-1-10	Sample Status:	Not Analyzed
Lab ID: 16188273	Client Sample #: 2016-0206-A-1-11	Sample Status:	Not Analyzed
Lab ID: 16188274	Client Sample #: 2016-0206-A-1-12	Sample Status:	Not Analyzed
Lab ID: 16188275	Client Sample #: 2016-0206-A-1-13	Sample Status:	Not Analyzed
Lab ID: 16188276	Client Sample #: 2016-0206-A-1-14	Sample Status:	Not Analyzed
Lab ID: 16188277	Client Sample #: 2016-0206-A-1-15		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: Beige powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 32%	None Detected ND
Lab ID: 16188278	Client Sample #: 2016-0206-A-1-16	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Fiona Chui

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016


Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188279	Client Sample #: 2016-0206-A-1-17	Sample Status:	Not Analyzed
Lab ID: 16188280	Client Sample #: 2016-0206-A-1-18	Sample Status:	Not Analyzed
Lab ID: 16188281	Client Sample #: 2016-0206-A-1-19	Sample Status:	Not Analyzed
Lab ID: 16188282	Client Sample #: 2016-0206-A-1-20	Sample Status:	Not Analyzed
Lab ID: 16188283	Client Sample #: 2016-0206-A-1-21	Sample Status:	Not Analyzed
Lab ID: 16188284	Client Sample #: 2016-0206-A-1-22		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous binder, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 35%	None Detected ND
Lab ID: 16188285	Client Sample #: 2016-0206-A-1-23	Sample Status:	Not Analyzed
Lab ID: 16188286	Client Sample #: 2016-0206-A-1-24	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Fiona Chui

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016


Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 39
Samples Analyzed: 11
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188287	Client Sample #: 2016-0206-A-1-25	Sample Status:	Not Analyzed
Lab ID: 16188288	Client Sample #: 2016-0206-A-1-26	Sample Status:	Not Analyzed
Lab ID: 16188289	Client Sample #: 2016-0206-A-1-27	Sample Status:	Not Analyzed
Lab ID: 16188290	Client Sample #: 2016-0206-A-1-28	Sample Status:	Not Analyzed
Lab ID: 16188291	Client Sample #: 2016-0206-A-1-29		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: Beige powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 34%	None Detected ND
Lab ID: 16188292	Client Sample #: 2016-0206-A-1-30	Sample Status:	Not Analyzed
Lab ID: 16188293	Client Sample #: 2016-0206-A-1-31	Sample Status:	Not Analyzed
Lab ID: 16188294	Client Sample #: 2016-0206-A-1-32	Sample Status:	Not Analyzed

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188295	Client Sample #: 2016-0206-A-1-33	Sample Status:	Not Analyzed
-------------------------	--	-----------------------	---------------------

Lab ID: 16188296 **Client Sample #: 2016-0206-A-3-1**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 6	Description: Black/beige woven fibrous material	Non-Fibrous Materials: Binder/Filler	Other Fibrous Materials:% Synthetic fibers 85%	Asbestos Type: % None Detected ND
Layer 2 of 6	Description: Black/gray foamy material	Non-Fibrous Materials: Synthetic foam	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 3 of 6	Description: Yellow mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials:% Cellulose 2%	Asbestos Type: % None Detected ND
Layer 4 of 6	Description: Tan sheet vinyl	Non-Fibrous Materials: Vinyl/Binder, Synthetic foam	Other Fibrous Materials:% None Detected ND	Asbestos Type: % None Detected ND
Layer 5 of 6	Description: Gray fibrous backing with mastic	Non-Fibrous Materials: Binder/Filler, Mastic/Binder	Other Fibrous Materials:% Cellulose 31% Glass fibers 20%	Asbestos Type: % None Detected ND
Layer 6 of 6	Description: Gray sandy brittle material	Non-Fibrous Materials: Binder/Filler, Sand	Other Fibrous Materials:% Cellulose 1%	Asbestos Type: % None Detected ND

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188297 Client Sample #: 2016-0206-A-3-2**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Beige/black woven fibrous material with mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Mastic/Binder	Cellulose 2%
	Synthetic fibers 83%

Asbestos Type: %
None Detected ND**Lab ID: 16188298 Client Sample #: 2016-0206-A-3-3**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Red/white/blue woven fibrous material with mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Mastic/Binder	Cellulose 1%
	Synthetic fibers 72%

Asbestos Type: %
None Detected ND**Lab ID: 16188299 Client Sample #: 2016-0206-A-3-4**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: Gray vinyl with sand

Non-Fibrous Materials:	Other Fibrous Materials:%
Vinyl/Binder, Sand	None Detected ND

Asbestos Type: %
None Detected ND**Layer 2 of 2 Description:** Yellow mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder	Cellulose 2%

Asbestos Type: %
None Detected ND**Lab ID: 16188300 Client Sample #: 2016-0206-A-3-5**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605463.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Layer 1 of 1** **Description:** Gray elastic material with wood

Non-Fibrous Materials:

Binder/Filler, Wood

Other Fibrous Materials: %

Cellulose 1%

Synthetic fibers 23%

Wood fibers 6%

Asbestos Type: %**None Detected ND****Lab ID: 16188301** **Client Sample #: 2016-0206-A-3-6**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 **Description:** Gray elastic material with paint

Non-Fibrous Materials:

Binder/Filler, Paint

Other Fibrous Materials: %

Cellulose 2%

Asbestos Type: %**None Detected ND****Sampled by:** Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605463.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 **EPA 600/R-93-116 Asbestos by PLM <bulk>****Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	16188263	2016-0206-A-1-1	Stop @ 1st Positive	A
2	16188264	2016-0206-A-1-2	"	A
3	16188265	2016-0206-A-1-3	"	A
4	16188266	2016-0206-A-1-4	"	A
5	16188267	2016-0206-A-1-5	"	A
6	16188268	2016-0206-A-1-6	"	A
7	16188269	2016-0206-A-1-7	"	A
8	16188270	2016-0206-A-1-8	Stop @ 1st Positive	A
9	16188271	2016-0206-A-1-9	"	A
10	16188272	2016-0206-A-1-10	"	A
11	16188273	2016-0206-A-1-11	"	A
12	16188274	2016-0206-A-1-12	"	A
13	16188275	2016-0206-A-1-13	"	A
14	16188276	2016-0206-A-1-14	"	A
15	16188277	2016-0206-A-1-15	Stop @ 1st Positive	A
16	16188278	2016-0206-A-1-16	"	A
17	16188279	2016-0206-A-1-17	"	A
18	16188280	2016-0206-A-1-18	"	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/14/16	9:06 AM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:44 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605463.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
19	16188281	2016-0206-A-1-19	"	A
20	16188282	2016-0206-A-1-20	"	A
21	16188283	2016-0206-A-1-21	"	A
22	16188284	2016-0206-A-1-22	Stop @ 1st Positive	A
23	16188285	2016-0206-A-1-23	"	A
24	16188286	2016-0206-A-1-24	"	A
25	16188287	2016-0206-A-1-25	"	A
26	16188288	2016-0206-A-1-26	"	A
27	16188289	2016-0206-A-1-27	"	A
28	16188290	2016-0206-A-1-28	"	A
29	16188291	2016-0206-A-1-29	Stop @ 1st Positive	A
30	16188292	2016-0206-A-1-30	"	A
31	16188293	2016-0206-A-1-31	"	A
32	16188294	2016-0206-A-1-32	"	A
33	16188295	2016-0206-A-1-33	"	A
34	16188296	2016-0206-A-3-1		A
35	16188297	2016-0206-A-3-2		A
36	16188298	2016-0206-A-3-3		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/14/16	9:06 AM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:44 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605463.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
37	16188299	2016-0206-A-3-4		A
38	16188300	2016-0206-A-3-5		A
39	16188301	2016-0206-A-3-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/14/16	9:06 AM
Results Called by					
☐ Faxed ☐ Emailed					
Special Instructions:					

Date: 3/11/2016

Time: 2:44 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**


B S

1605463

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number _____

Client Job Number 2016-0206

Total Samples 39

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-A-1-1	STOP AT FIRST POSITIVE	
2		1-2	↓	
3		1-3	↓	
4		1-4	↓	
5		1-5	↓	
6		1-6	↓	
7		1-7	↓	
8		1-8	STOP AT FIRST POSITIVE	
9		1-9	↓	
10		1-10	↓	
11		1-11	↓	
12		1-12	↓	
13		1-13	↓	
14		1-14	↓	
15		1-15	STOP AT FIRST POSITIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Javeer Khan	NVL	3-9-16	9:00 AM
Relinquished by	TAN KHAN	Javeer Khan	NVL	3-11-16	2:00 PM
Received by	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to TAN

Page 193

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**CHAIN of CUSTODY
SAMPLE LOG**
1605463

5

Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Carriage House" 3602 S. 180th Street
 SeaTac, WA 98188

NVL Batch Number _____
Client Job Number 2016-0206
Total Samples 39
Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
Email address hughw@kcha.org

Phone: (206) 574-1230 **Fax:** (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-A-1-16		
2		1-17		
3		1-18		
4		1-19		
5		1-20		
6		1-21		
7		1-22	STOP AT FIRST POSITIVE	
8		1-23		
9		1-24		
10		1-25		
11		1-26		
12		1-27		
13		1-28		
14		1-29	STOP AT FIRST POSITIVE	
15		1-30		

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jamveer Khan	NVL	3-9-16	9:00 AM
Relinquished by	TAN KHAN	Jamveer Khan	NVL	3-11-16	2:00 PM
Received by	Max R		N	3/11/16	1:00
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 293

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1605463

5

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Sved Hasan

Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number

Client Job Number 2016-0206

Total Samples 39

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-A-1-31		
2		1-32		
3		1-33		
4		3-1		
5		3-2		
6		3-3		
7		3-4		
8		3-5		
9		3-6		
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Samveer Khan	NVL	3-9-16	9:00 AM
Relinquished by	TAN KHAN	Samveer Khan	NVL	3-11-16	2:00 PM
Received by	Maya		NVL	3/11/16	1:00 PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 393

March 15, 2016

Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1605461.00

Client Project: 2016-0206

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 39 sample(s) submitted to our laboratory for analysis on 3/11/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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, appearing to read "Nick Ly".

Nick Ly, Technical Director



Lab Code: 102063-0

1.888.NVL.LABS Enc.: Sample Results
1.888.(685.5227)
www.nvllabs.com

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4708 Aurora Ave N, Seattle, WA 98103
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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188184 Client Sample #: 2016-0206-B-1-1**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: White lumpy foamy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Calcareous particles, Synthetic foam, Paint	Cellulose 2%	Chrysotile 3%

Lab ID: 16188185 Client Sample #: 2016-0206-B-1-2 Sample Status: Not Analyzed**Lab ID: 16188186 Client Sample #: 2016-0206-B-1-3 Sample Status: Not Analyzed****Lab ID: 16188187 Client Sample #: 2016-0206-B-1-4 Sample Status: Not Analyzed****Lab ID: 16188188 Client Sample #: 2016-0206-B-1-5 Sample Status: Not Analyzed****Lab ID: 16188189 Client Sample #: 2016-0206-B-1-6 Sample Status: Not Analyzed****Lab ID: 16188190 Client Sample #: 2016-0206-B-1-7 Sample Status: Not Analyzed****Lab ID: 16188191 Client Sample #: 2016-0206-B-1-8****Layer 1 of 1 Description:** White lumpy foamy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Calcareous particles, Synthetic foam, Paint	Cellulose 3%	Chrysotile 4%

Lab ID: 16188192 Client Sample #: 2016-0206-B-1-9 Sample Status: Not Analyzed**Sampled by:** Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188193	Client Sample #: 2016-0206-B-1-10	Sample Status:	Not Analyzed
Lab ID: 16188194	Client Sample #: 2016-0206-B-1-11	Sample Status:	Not Analyzed
Lab ID: 16188195	Client Sample #: 2016-0206-B-1-12	Sample Status:	Not Analyzed
Lab ID: 16188196	Client Sample #: 2016-0206-B-1-13	Sample Status:	Not Analyzed
Lab ID: 16188197	Client Sample #: 2016-0206-B-1-14	Sample Status:	Not Analyzed
Lab ID: 16188198	Client Sample #: 2016-0206-B-1-15		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White thin compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Synthetic foam, Paint	Cellulose 2%	Chrysotile 2%
Layer 2 of 2	Description: Peach chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 26%	None Detected ND
Lab ID: 16188199	Client Sample #: 2016-0206-B-1-16	Sample Status:	Not Analyzed
Lab ID: 16188200	Client Sample #: 2016-0206-B-1-17	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: **Mr. Tanveer Khan**
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 39
Samples Analyzed: 11
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188201	Client Sample #: 2016-0206-B-1-18	Sample Status:	Not Analyzed
Lab ID: 16188202	Client Sample #: 2016-0206-B-1-19	Sample Status:	Not Analyzed
Lab ID: 16188203	Client Sample #: 2016-0206-B-1-20	Sample Status:	Not Analyzed
Lab ID: 16188204	Client Sample #: 2016-0206-B-1-21	Sample Status:	Not Analyzed
Lab ID: 16188205	Client Sample #: 2016-0206-B-1-22		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint, Binder/Filler	Cellulose 3%	Chrysotile 3%
Layer 2 of 2	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 26%	None Detected ND
Lab ID: 16188206	Client Sample #: 2016-0206-B-1-23	Sample Status:	Not Analyzed
Lab ID: 16188207	Client Sample #: 2016-0206-B-1-24	Sample Status:	Not Analyzed
Lab ID: 16188208	Client Sample #: 2016-0206-B-1-25	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188209	Client Sample #: 2016-0206-B-1-26	Sample Status:	Not Analyzed
Lab ID: 16188210	Client Sample #: 2016-0206-B-1-27	Sample Status:	Not Analyzed
Lab ID: 16188211	Client Sample #: 2016-0206-B-1-28	Sample Status:	Not Analyzed
Lab ID: 16188212	Client Sample #: 2016-0206-B-1-29		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 3%
Layer 2 of 2	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 26%	None Detected ND
Lab ID: 16188213	Client Sample #: 2016-0206-B-1-30	Sample Status:	Not Analyzed
Lab ID: 16188214	Client Sample #: 2016-0206-B-1-31	Sample Status:	Not Analyzed
Lab ID: 16188215	Client Sample #: 2016-0206-B-1-32	Sample Status:	Not Analyzed
Lab ID: 16188216	Client Sample #: 2016-0206-B-1-33	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188217 Client Sample #: 2016-0206-B-3-1**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: Gray/off-white woven fibrous carpet material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Synthetic foam	Synthetic fibers 56%
	Glass fibers 12%

Asbestos Type: %
None Detected ND**Layer 2 of 2 Description:** Yellow soft mastic with sandy/brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder, Binder/Filler, Sand	Cellulose 3%
Mineral grains	Synthetic fibers 2%

Asbestos Type: %
None Detected ND**Lab ID: 16188218 Client Sample #: 2016-0206-B-3-2**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 3 Description: Tan/gray woven fibrous carpet material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler	Synthetic fibers 63%

Asbestos Type: %
None Detected ND**Layer 2 of 3 Description:** Yellow brittle mastic

Non-Fibrous Materials:	Other Fibrous Materials:%
Mastic/Binder	Cellulose 4%

Asbestos Type: %
None Detected ND**Layer 3 of 3 Description:** Gray brittle material

Non-Fibrous Materials:	Other Fibrous Materials:%
Binder/Filler, Calcareous particles	Cellulose 2%

Asbestos Type: %
None Detected ND**Lab ID: 16188219 Client Sample #: 2016-0206-B-3-3**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Sampled by: Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 1 of 3	Description: Red/white/green woven fibrous carpet material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	Synthetic fibers 61%	
Layer 2 of 3	Description: White soft mastic with woven fibrous backing	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Binder/Filler	Synthetic fibers 33%	
			Cellulose 3%	
Layer 3 of 3	Description: Trace yellow brittle mastic with sandy/brittle material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder, Binder/Filler, Sand	Cellulose 2%	

Lab ID: 16188220 Client Sample #: 2016-0206-B-3-4

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: White soft material with brittle paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Paint, Binder/Filler, Fine particles	Cellulose 2%	

Lab ID: 16188221 Client Sample #: 2016-0206-B-3-5

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2	Description: Gray soft material with paint and interwoven fibrous material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Paint	Synthetic fibers 15%	
			Cellulose 1%	
Layer 2 of 2	Description: Brown wood debris	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Wood flakes	Wood fibers 33%	

Sampled by: Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605461.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188222 Client Sample #: 2016-0206-B-3-6**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: Yellow soft mastic with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Mastic/Binder, Paint

Cellulose 3%

None Detected ND**Layer 2 of 2 Description:** Gray soft material with mastic and granules

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mastic/Binder, Granules

Cellulose 3%

None Detected ND**Sampled by:** Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016

A handwritten signature in black ink, appearing to read 'Nick Ly'.

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605461.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	16188184	2016-0206-B-1-1	Stop @ 1st Positive	A
2	16188185	2016-0206-B-1-2	"	A
3	16188186	2016-0206-B-1-3	"	A
4	16188187	2016-0206-B-1-4	"	A
5	16188188	2016-0206-B-1-5	"	A
6	16188189	2016-0206-B-1-6	"	A
7	16188190	2016-0206-B-1-7	"	A
8	16188191	2016-0206-B-1-8	Stop @ 1st Positive	A
9	16188192	2016-0206-B-1-9	"	A
10	16188193	2016-0206-B-1-10	"	A
11	16188194	2016-0206-B-1-11	"	A
12	16188195	2016-0206-B-1-12	"	A
13	16188196	2016-0206-B-1-13	"	A
14	16188197	2016-0206-B-1-14	"	A
15	16188198	2016-0206-B-1-15	Stop @ 1st Positive	A
16	16188199	2016-0206-B-1-16	"	A
17	16188200	2016-0206-B-1-17	"	A
18	16188201	2016-0206-B-1-18	"	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	9:15 AM
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 3/11/2016

Time: 2:36 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605461.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 **EPA 600/R-93-116 Asbestos by PLM <bulk>****Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
19	16188202	2016-0206-B-1-19	"	A
20	16188203	2016-0206-B-1-20	"	A
21	16188204	2016-0206-B-1-21	"	A
22	16188205	2016-0206-B-1-22	Stop @ 1st Positive	A
23	16188206	2016-0206-B-1-23	"	A
24	16188207	2016-0206-B-1-24	"	A
25	16188208	2016-0206-B-1-25	"	A
26	16188209	2016-0206-B-1-26	"	A
27	16188210	2016-0206-B-1-27	"	A
28	16188211	2016-0206-B-1-28	"	A
29	16188212	2016-0206-B-1-29	Stop @ 1st Positive	A
30	16188213	2016-0206-B-1-30	"	A
31	16188214	2016-0206-B-1-31	"	A
32	16188215	2016-0206-B-1-32	"	A
33	16188216	2016-0206-B-1-33	"	A
34	16188217	2016-0206-B-3-1		A
35	16188218	2016-0206-B-3-2		A
36	16188219	2016-0206-B-3-3		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	9:15 AM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:36 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605461.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
37	16188220	2016-0206-B-3-4		A
38	16188221	2016-0206-B-3-5		A
39	16188222	2016-0206-B-3-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	9:15 AM
Results Called by					
☐ Faxed ☐ Emailed					
Special Instructions:					

Date: 3/11/2016

Time: 2:36 PM

Entered By: Maxwell Raymond

NVL Laboratories, Inc.

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**CHAIN of CUSTODY
SAMPLE LOG**
1605461

Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Carriage House" 3602 S. 180th Street
 SeaTac, WA 98188

NVL Batch Number _____
Client Job Number 2016-0206
Total Samples 39
Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-B-1-1	STOP AT FIRST POSITIVE	
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8	STOP AT FIRST POSITIVE	
9		1-9		
10		1-10		
11		1-11		
12		1-12		
13		1-13		
14		1-14		
15		1-15	STOP AT FIRST POSITIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Danveer Khan	NVL	3-9-16	9:00 AM
Relinquished by	TAN KHAN	Danveer Khan	NVL	3-11-16	2:00 PM
Received by			NV	3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to **TAN**

Page 19 3

NVL Laboratories, Inc.

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CHAIN of CUSTODY SAMPLE LOG

1605461

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Sved Hasan

Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number

Client Job Number 2016-0206

Total Samples 39

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify)		☐ Zinc (Zn)
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-B-1-16		
2		1-17		
3		1-18		
4		1-19		
5		1-20		
6		1-21		
7		1-22	STOP AT FIRST POSITIVE	
8		1-23		
9		1-24		
10		1-25		
11		1-26		
12		1-27		
13		1-28		
14		1-29	STOP AT FIRST POSITIVE	
15		1-30		

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jamveer Khan	NVL	3-9-16	9:00AM
Relinquished by	TAN KHAN	Jamveer Khan	NVL	3-9-16	2:00 PM
Received by	Mary A		NVL	3/16/16	1:50
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 293

NVL Laboratories, Inc.

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**CHAIN of CUSTODY
SAMPLE LOG**
1605461

5

 Client **NVL Laboratories Inc**

 Street **4708 Aurora Ave N
Seattle, WA 98103**

 Project Manager **Syed Hasan**

 Project Location **"Carriage House" 3602 S. 180th Street
SeaTac, WA 98188**

NVL Batch Number _____

 Client Job Number **2016-0206**

 Total Samples **39**

 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

 Email address **hughw@kcha.org**

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

 Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-B-1-31		
2		1-32		
3		1-33		
4		3-1		
5		3-2		
6		3-3		
7		3-4		
8		3-5		
9		3-6		
10		A		
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jamveer Khan	NVL	3-9-16	9:00 AM
Relinquished by	TAN KHAN	Jamveer Khan	NVL	3-9-16	2:00 PM
Received by				3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

 Results report to **TAN**

Page 393

March 14, 2016

Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1605462.00

Client Project: 2016-0206

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 40 sample(s) submitted to our laboratory for analysis on 3/11/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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, appearing to read "Nick Ly".

Nick Ly, Technical Director



Lab Code: 102063-0

1.888.NVL.LABS Enc.: Sample Results
1.888.(685.5227)
www.nvllabs.com

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Lab ID: 16188223 Client Sample #: 2016-0206-C-1-1

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: White lumpy foamy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Synthetic foam, Paint

Cellulose 2%

Chrysotile 3%**Lab ID: 16188224 Client Sample #: 2016-0206-C-1-2 Sample Status: Not Analyzed****Lab ID: 16188225 Client Sample #: 2016-0206-C-1-3 Sample Status: Not Analyzed****Lab ID: 16188226 Client Sample #: 2016-0206-C-1-4 Sample Status: Not Analyzed****Lab ID: 16188227 Client Sample #: 2016-0206-C-1-5 Sample Status: Not Analyzed****Lab ID: 16188228 Client Sample #: 2016-0206-C-1-6 Sample Status: Not Analyzed****Lab ID: 16188229 Client Sample #: 2016-0206-C-1-7 Sample Status: Not Analyzed****Lab ID: 16188230 Client Sample #: 2016-0206-C-1-8**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: White lumpy foamy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Synthetic foam, Paint

Cellulose 2%

Chrysotile 5%**Sampled by:** Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/14/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 40
Samples Analyzed: 12
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188231	Client Sample #: 2016-0206-C-1-9	Sample Status:	Not Analyzed
Lab ID: 16188232	Client Sample #: 2016-0206-C-1-10	Sample Status:	Not Analyzed
Lab ID: 16188233	Client Sample #: 2016-0206-C-1-11	Sample Status:	Not Analyzed
Lab ID: 16188234	Client Sample #: 2016-0206-C-1-12	Sample Status:	Not Analyzed
Lab ID: 16188235	Client Sample #: 2016-0206-C-1-13	Sample Status:	Not Analyzed
Lab ID: 16188236	Client Sample #: 2016-0206-C-1-14	Sample Status:	Not Analyzed
Lab ID: 16188237	Client Sample #: 2016-0206-C-1-15		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 2%	Chrysotile 2%
Layer 2 of 2	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 26%	None Detected ND
Lab ID: 16188238	Client Sample #: 2016-0206-C-1-16	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/14/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 40
Samples Analyzed: 12
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188239	Client Sample #: 2016-0206-C-1-17	Sample Status:	Not Analyzed
Lab ID: 16188240	Client Sample #: 2016-0206-C-1-18	Sample Status:	Not Analyzed
Lab ID: 16188241	Client Sample #: 2016-0206-C-1-19	Sample Status:	Not Analyzed
Lab ID: 16188242	Client Sample #: 2016-0206-C-1-20	Sample Status:	Not Analyzed
Lab ID: 16188243	Client Sample #: 2016-0206-C-1-21	Sample Status:	Not Analyzed
Lab ID: 16188244	Client Sample #: 2016-0206-C-1-22		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 2%	Chrysotile 3%
Layer 2 of 2	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 24%	None Detected ND
Lab ID: 16188245	Client Sample #: 2016-0206-C-1-23	Sample Status:	Not Analyzed
Lab ID: 16188246	Client Sample #: 2016-0206-C-1-24	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/14/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Lab ID: 16188247	Client Sample #: 2016-0206-C-1-25	Sample Status:	Not Analyzed
Lab ID: 16188248	Client Sample #: 2016-0206-C-1-26	Sample Status:	Not Analyzed
Lab ID: 16188249	Client Sample #: 2016-0206-C-1-27	Sample Status:	Not Analyzed
Lab ID: 16188250	Client Sample #: 2016-0206-C-1-28	Sample Status:	Not Analyzed
Lab ID: 16188251	Client Sample #: 2016-0206-C-1-29		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White thin compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 2%	Chrysotile 2%
Layer 2 of 2	Description: White chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Binder/Filler, Gypsum/Binder	Cellulose 27%	None Detected ND
Lab ID: 16188252	Client Sample #: 2016-0206-C-1-30	Sample Status:	Not Analyzed
Lab ID: 16188253	Client Sample #: 2016-0206-C-1-31	Sample Status:	Not Analyzed
Lab ID: 16188254	Client Sample #: 2016-0206-C-1-32	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/14/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188255 Client Sample #: 2016-0206-C-1-33 Sample Status: Not Analyzed

Lab ID: 16188256 Client Sample #: 2016-0206-C-3-1

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 4 Description: Gray/brown/off-white woven fibrous carpet material with foam

Non-Fibrous Materials:	Other Fibrous Materials: %
Synthetic foam, Binder/Filler	Synthetic fibers 55%
	Glass fibers 12%

**Asbestos Type: %
None Detected ND****Layer 2 of 4 Description:** Yellow soft mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Mastic/Binder	Synthetic fibers 3%
	Cellulose 2%

**Asbestos Type: %
None Detected ND****Layer 3 of 4 Description:** Gray sheet vinyl

Non-Fibrous Materials:	Other Fibrous Materials: %
Vinyl/Binder, Synthetic foam	None Detected ND

**Asbestos Type: %
None Detected ND****Layer 4 of 4 Description:** Gray fibrous backing with mastic

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler, Mastic/Binder	Synthetic fibers 55%
	Cellulose 2%

**Asbestos Type: %
None Detected ND**

Lab ID: 16188257 Client Sample #: 2016-0206-C-3-2

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 3 Description: Brown/white woven fibrous carpet material

Non-Fibrous Materials:	Other Fibrous Materials: %
Binder/Filler	Synthetic fibers 57%

**Asbestos Type: %
None Detected ND****Sampled by:** Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/14/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Layer 2 of 3** **Description:** Yellow brittle mastic

Non-Fibrous Materials:

Mastic/Binder

Other Fibrous Materials:%

Synthetic fibers 2%

Cellulose 1%

Asbestos Type: %**None Detected ND****Layer 3 of 3** **Description:** Gray brittle material

Non-Fibrous Materials:

Binder/Filler, Calcareous binder

Other Fibrous Materials:%

Cellulose 1%

Asbestos Type: %**None Detected ND****Lab ID: 16188258** **Client Sample #: 2016-0206-C-3-3**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 3 **Description:** White/green/red woven fibrous carpet material

Non-Fibrous Materials:

Binder/Filler

Other Fibrous Materials:%

Synthetic fibers 61%

Asbestos Type: %**None Detected ND****Layer 2 of 3** **Description:** White soft mastic

Non-Fibrous Materials:

Mastic/Binder

Other Fibrous Materials:%

Cellulose 3%

Synthetic fibers 2%

Asbestos Type: %**None Detected ND****Layer 3 of 3** **Description:** Yellow soft mastic with sandy/brittle material

Non-Fibrous Materials:

Mastic/Binder, Binder/Filler, Sand

Other Fibrous Materials:%

Synthetic fibers 4%

Mineral grains

Cellulose 3%

Asbestos Type: %**None Detected ND****Lab ID: 16188259** **Client Sample #: 2016-0206-C-3-4**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Sampled by: Client**Analyzed by:** Lori Tseng**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/14/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 1 of 3	Description: Red/white/gray woven fibrous carpet material	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler	Synthetic fibers 66%	
Layer 2 of 3	Description: Trace gray soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	Cellulose 2%	
Layer 3 of 3	Description: Yellow soft mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	Synthetic fibers 2%	
			Cellulose 1%	

Lab ID: 16188260 Client Sample #: 2016-0206-C-3-5

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: Gray soft material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Paint, Fine particles	Cellulose 2%	

Lab ID: 16188261 Client Sample #: 2016-0206-C-3-6

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2	Description: Gray soft material with paint	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Binder/Filler, Paint, Fine particles	Cellulose 3%	
Layer 2 of 2	Description: Yellow brittle mastic	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: % None Detected ND
		Mastic/Binder	Synthetic fibers 2%	
			Cellulose 1%	

Sampled by: Client**Analyzed by: Lori Tseng****Reviewed by: Nick Ly****Date: 03/14/2016****Date: 03/14/2016**
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605462.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188262 Client Sample #: 2016-0206-C-3-7**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Comments: Unsure of correct layer sequence.

Layer 1 of 2 Description: Yellow soft mastic

Non-Fibrous Materials:

Mastic/Binder

Other Fibrous Materials:%

Cellulose 2%

Asbestos Type: %**None Detected ND****Layer 2 of 2 Description: Gray soft material with paint and mastic**

Non-Fibrous Materials:

Mastic/Binder, Paint, Binder/Filler

Other Fibrous Materials:%

Synthetic fibers 3%

Cellulose 1%

Asbestos Type: %**None Detected ND****Sampled by: Client****Analyzed by: Lori Tseng****Reviewed by: Nick Ly****Date: 03/14/2016****Date: 03/14/2016**

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605462.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	16188223	2016-0206-C-1-1	Stop @ 1st Pos.	A
2	16188224	2016-0206-C-1-2	***	A
3	16188225	2016-0206-C-1-3	***	A
4	16188226	2016-0206-C-1-4	***	A
5	16188227	2016-0206-C-1-5	***	A
6	16188228	2016-0206-C-1-6	***	A
7	16188229	2016-0206-C-1-7	***	A
8	16188230	2016-0206-C-1-8	Stop @ 1st Pos.	A
9	16188231	2016-0206-C-1-9	***	A
10	16188232	2016-0206-C-1-10	***	A
11	16188233	2016-0206-C-1-11	***	A
12	16188234	2016-0206-C-1-12	***	A
13	16188235	2016-0206-C-1-13	***	A
14	16188236	2016-0206-C-1-14	***	A
15	16188237	2016-0206-C-1-15	Stop @ 1st Pos.	A
16	16188238	2016-0206-C-1-16	***	A
17	16188239	2016-0206-C-1-17	***	A
18	16188240	2016-0206-C-1-18	***	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	8:28 PM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:38 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605462.00**TAT** 2 Days**AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
19	16188241	2016-0206-C-1-19	***	A
20	16188242	2016-0206-C-1-20	***	A
21	16188243	2016-0206-C-1-21	***	A
22	16188244	2016-0206-C-1-22	Stop @ 1st Pos.	A
23	16188245	2016-0206-C-1-23	***	A
24	16188246	2016-0206-C-1-24	***	A
25	16188247	2016-0206-C-1-25	***	A
26	16188248	2016-0206-C-1-26	***	A
27	16188249	2016-0206-C-1-27	***	A
28	16188250	2016-0206-C-1-28	***	A
29	16188251	2016-0206-C-1-29	Stop @ 1st Pos.	A
30	16188252	2016-0206-C-1-30	***	A
31	16188253	2016-0206-C-1-31	***	A
32	16188254	2016-0206-C-1-32	***	A
33	16188255	2016-0206-C-1-33	***	A
34	16188256	2016-0206-C-3-1		A
35	16188257	2016-0206-C-3-2		A
36	16188258	2016-0206-C-3-3		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	8:28 PM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:38 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

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ASBESTOS LABORATORY SERVICES

Company NVL Field Services Division	NVL Batch Number 1605462.00
Address 4708 Aurora Ave. N. Seattle, WA 98103	TAT 2 Days AH No
Project Manager Mr. Tanveer Khan	Rush TAT
Phone (206) 547-0100	Due Date 3/15/2016 Time 2:00 PM
Cell (206) 799-2916	Email tanveer.k@nvllabs.com
	Fax (206) 634-1936

Project Name/Number: 2016-0206	Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188
---------------------------------------	---

Subcategory PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
37	16188259	2016-0206-C-3-4		A
38	16188260	2016-0206-C-3-5		A
39	16188261	2016-0206-C-3-6		A
40	16188262	2016-0206-C-3-7		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Lori Tseng		NVL	3/14/16	8:28 PM
Results Called by					
☐ Faxed ☐ Emailed					
Special Instructions:					

Date: 3/11/2016

Time: 2:38 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**CHAIN of CUSTODY
SAMPLE LOG**
1605462

S

Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Carriage House" 3602 S. 180th Street
 SeaTac, WA 98188

NVL Batch Number _____
Client Job Number 2016-0206
Total Samples 40
Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
Email address hughw@kcha.org

Phone: (206) 574-1230 **Fax:** (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-C-1-1	STOP AT FIRST POSITIVE	
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8	STOP AT FIRST POSITIVE	
9		1-9		
10		1-10		
11		1-11		
12		1-12		
13		1-13		
14		1-14		
15		1-15	STOP AT FIRST POSITIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jaweer Khan	NVL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Jaweer Khan	NVL	3-11-16	2:00 PM
Received by	[Signature]	[Signature]	[Signature]	3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 19 3

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**CHAIN of CUSTODY
SAMPLE LOG**
1605462

5

Client **NVL Laboratories Inc**

Street **4708 Aurora Ave N
Seattle, WA 98103**

Project Manager **Syed Hasan**

Project Location **"Carriage House" 3602 S. 180th Street
SeaTac, WA 98188**

NVL Batch Number _____

Client Job Number **2016-0206**

Total Samples **40**

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address **hughw@kcha.org**

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-C-1-16		
2		1-17		
3		1-18		
4		1-19		
5		1-20		
6		1-21		
7		1-22	STOP AT FIRST POSITIVE	
8		1-23		
9		1-24		
10		1-25		
11		1-26		
12		1-27		
13		1-28		
14		1-29	STOP AT FIRST POSITIVE	
15		1-30		

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Javeer Khan	NUL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Javeer Khan	NUL	3-11-16	2:00 PM
Received by	Maple			3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 2 of 3

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**CHAIN of CUSTODY
SAMPLE LOG**
1605462

Client NVL Laboratories Inc
 Street 4708 Aurora Ave N
Seattle, WA 98103
 Project Manager Syed Hasan
 Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number _____
 Client Job Number 2016-0206
 Total Samples 40
 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
 Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-C-1-31		
2		1-32		
3		1-33		
4		3-1		
5		3-2		
6		3-3		
7		3-4		
8		3-5		
9		3-6		
10		3-7		
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Danveer Khan	NVL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Danveer Khan	NVL	3-11-16	2:00 PM
Received by	Mueh		NVL	3/11/16	1:00 PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to TAN

Page 3 of 3

March 15, 2016

Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1605460.00

Client Project: 2016-0206

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 39 sample(s) submitted to our laboratory for analysis on 3/11/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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, appearing to read "Nick Ly".

Nick Ly, Technical Director

1.888.NVL.LABS Enc.: Sample Results
1.888.(685.5227)
www.nvllabs.com



Lab Code: 102063-0

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936

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p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Lab ID: 16188145 Client Sample #: 2016-0206-D-1-1

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: White lumpy foamy material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Binder/Filler, Synthetic foam

None Detected ND

Chrysotile 5%**Lab ID: 16188146 Client Sample #: 2016-0206-D-1-2 Sample Status: Not Analyzed****Lab ID: 16188147 Client Sample #: 2016-0206-D-1-3 Sample Status: Not Analyzed****Lab ID: 16188148 Client Sample #: 2016-0206-D-1-4 Sample Status: Not Analyzed****Lab ID: 16188149 Client Sample #: 2016-0206-D-1-5 Sample Status: Not Analyzed****Lab ID: 16188150 Client Sample #: 2016-0206-D-1-6 Sample Status: Not Analyzed****Lab ID: 16188151 Client Sample #: 2016-0206-D-1-7 Sample Status: Not Analyzed****Lab ID: 16188152 Client Sample #: 2016-0206-D-1-8**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: White lumpy foamy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Binder/Filler, Synthetic foam

None Detected ND

Chrysotile 4%**Sampled by:** Client**Analyzed by:** Nadezhda Prysyzhnyuk**Date:** 03/14/2016**Reviewed by:** Nick Ly**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Paint**

Lab ID: 16188153	Client Sample #: 2016-0206-D-1-9	Sample Status:	Not Analyzed
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Lab ID: 16188154	Client Sample #: 2016-0206-D-1-10	Sample Status:	Not Analyzed
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Lab ID: 16188155	Client Sample #: 2016-0206-D-1-11	Sample Status:	Not Analyzed
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Lab ID: 16188156	Client Sample #: 2016-0206-D-1-12	Sample Status:	Not Analyzed
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Lab ID: 16188157	Client Sample #: 2016-0206-D-1-13	Sample Status:	Not Analyzed
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Lab ID: 16188158	Client Sample #: 2016-0206-D-1-14	Sample Status:	Not Analyzed
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Lab ID: 16188159	Client Sample #: 2016-0206-D-1-15
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Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 **Description:** White textured compacted powdery material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Binder/Filler, Paint

Cellulose 1%

Chrysotile 4%**Layer 2 of 2** **Description:** Light pink chalky material with paper

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Fine particles, Gypsum/Binder

Cellulose 13%

None Detected ND

Lab ID: 16188160	Client Sample #: 2016-0206-D-1-16	Sample Status:	Not Analyzed
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Sampled by: Client**Analyzed by:** Nadezhda Prysyazhnyuk**Date:** 03/14/2016**Reviewed by:** Nick Ly**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188161	Client Sample #: 2016-0206-D-1-17	Sample Status:	Not Analyzed
Lab ID: 16188162	Client Sample #: 2016-0206-D-1-18	Sample Status:	Not Analyzed
Lab ID: 16188163	Client Sample #: 2016-0206-D-1-19	Sample Status:	Not Analyzed
Lab ID: 16188164	Client Sample #: 2016-0206-D-1-20	Sample Status:	Not Analyzed
Lab ID: 16188165	Client Sample #: 2016-0206-D-1-21	Sample Status:	Not Analyzed
Lab ID: 16188166	Client Sample #: 2016-0206-D-1-22		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White textured compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Binder/Filler, Paint	Cellulose 2%	Chrysotile 3%
Layer 2 of 2	Description: Off-white chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Fine particles, Gypsum/Binder	Cellulose 16%	None Detected ND
Lab ID: 16188167	Client Sample #: 2016-0206-D-1-23	Sample Status:	Not Analyzed
Lab ID: 16188168	Client Sample #: 2016-0206-D-1-24	Sample Status:	Not Analyzed

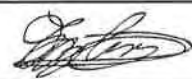
Sampled by: Client

Analyzed by: Nadezhda Prysazhnyuk

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016


Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188169	Client Sample #: 2016-0206-D-1-25	Sample Status:	Not Analyzed
Lab ID: 16188170	Client Sample #: 2016-0206-D-1-26	Sample Status:	Not Analyzed
Lab ID: 16188171	Client Sample #: 2016-0206-D-1-27	Sample Status:	Not Analyzed
Lab ID: 16188172	Client Sample #: 2016-0206-D-1-28	Sample Status:	Not Analyzed
Lab ID: 16188173	Client Sample #: 2016-0206-D-1-29		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: White textured compacted powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Calcareous particles, Binder/Filler, Paint	None Detected ND	Chrysotile 3%
Layer 2 of 2	Description: Light pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
	Fine particles, Gypsum/Binder	Cellulose 12%	None Detected ND
Lab ID: 16188174	Client Sample #: 2016-0206-D-1-30	Sample Status:	Not Analyzed
Lab ID: 16188175	Client Sample #: 2016-0206-D-1-31	Sample Status:	Not Analyzed
Lab ID: 16188176	Client Sample #: 2016-0206-D-1-32	Sample Status:	Not Analyzed

Sampled by: Client

Analyzed by: Nadezhda Prysazhnyuk

Reviewed by: Nick Ly

Date: 03/14/2016

Date: 03/15/2016


Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188177 Client Sample #: 2016-0206-D-1-33 Sample Status: Not Analyzed****Lab ID: 16188178 Client Sample #: 2016-0206-D-3-1**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 3 Description: Brown/black woven fibrous material with mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Fine particles, Mastic/Binder

Synthetic fibers 90%

None Detected ND**Layer 2 of 3 Description:** Black soft material with tan soft mastic

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous particles, Binder/Filler, Mastic/Binder

Glass fibers 10%

None Detected ND**Layer 3 of 3 Description:** Light gray brittle material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains

None Detected ND

None Detected ND**Lab ID: 16188179 Client Sample #: 2016-0206-D-3-2**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Gray textured material (on wood)

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains

Cellulose 2%

None Detected ND**Lab ID: 16188180 Client Sample #: 2016-0206-D-3-3**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: Gray with light gray surface textured material

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Binder/Filler, Mineral grains

None Detected ND

None Detected ND**Sampled by:** Client**Analyzed by:** Nadezhda Prysazhnyuk**Date:** 03/14/2016**Reviewed by:** Nick Ly**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 2	Description: Light gray hard brittle material with thin mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Gravel	None Detected	ND	None Detected ND
	Mastic/Binder			

Lab ID: 16188181 **Client Sample #: 2016-0206-D-3-4**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2	Description: Gray textured material with brown paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Paint	None Detected	ND	None Detected ND
Layer 2 of 2	Description: Off-white brittle material with tan mastic and layered paint			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Gravel	None Detected	ND	None Detected ND
	Mastic/Binder, Paint			

Lab ID: 16188182 **Client Sample #: 2016-0206-D-3-5**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 3	Description: Gray with light green surface textured material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains	None Detected	ND	None Detected ND
Layer 2 of 3	Description: Yellow mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	Cellulose	1%	None Detected ND
Layer 3 of 3	Description: Off-white brittle material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Mineral grains, Gravel	None Detected	ND	None Detected ND

Sampled by: Client**Analyzed by:** Nadezhda Prysyazhnyuk**Reviewed by:** Nick Ly**Date:** 03/14/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605460.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 39

Samples Analyzed: 11

Method: EPA/600/R-93/116
& EPA/600/M4-82-020**Lab ID: 16188183 Client Sample #: 2016-0206-D-3-6**

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: White /black material

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Calcareous particles, Binder/Filler

None Detected ND

None Detected ND**Layer 2 of 2 Description: Yellow mastic with layered paint**

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Mastic/Binder, Paint

None Detected ND

None Detected ND**Sampled by: Client****Analyzed by: Nadezhda Prisyazhnyuk****Date: 03/14/2016****Reviewed by: Nick Ly****Date: 03/15/2016**

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605460.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	16188145	2016-0206-D-1-1	Stop @ 1st Pos.	A
2	16188146	2016-0206-D-1-2	***	A
3	16188147	2016-0206-D-1-3	***	A
4	16188148	2016-0206-D-1-4	***	A
5	16188149	2016-0206-D-1-5	***	A
6	16188150	2016-0206-D-1-6	***	A
7	16188151	2016-0206-D-1-7	***	A
8	16188152	2016-0206-D-1-8	Stop @ 1st Pos.	A
9	16188153	2016-0206-D-1-9	***	A
10	16188154	2016-0206-D-1-10	***	A
11	16188155	2016-0206-D-1-11	***	A
12	16188156	2016-0206-D-1-12	***	A
13	16188157	2016-0206-D-1-13	***	A
14	16188158	2016-0206-D-1-14	***	A
15	16188159	2016-0206-D-1-15	Stop @ 1st Pos.	A
16	16188160	2016-0206-D-1-16	***	A
17	16188161	2016-0206-D-1-17	***	A
18	16188162	2016-0206-D-1-18	***	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Nadezhda		NVL	3/14/16	9:09 AM
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 3/11/2016

Time: 2:34 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605460.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
19	16188163	2016-0206-D-1-19	***	A
20	16188164	2016-0206-D-1-20	***	A
21	16188165	2016-0206-D-1-21	***	A
22	16188166	2016-0206-D-1-22	Stop @ 1st Pos.	A
23	16188167	2016-0206-D-1-23	***	A
24	16188168	2016-0206-D-1-24	***	A
25	16188169	2016-0206-D-1-25	***	A
26	16188170	2016-0206-D-1-26	***	A
27	16188171	2016-0206-D-1-27	***	A
28	16188172	2016-0206-D-1-28	***	A
29	16188173	2016-0206-D-1-29	Stop @ 1st Pos.	A
30	16188174	2016-0206-D-1-30	***	A
31	16188175	2016-0206-D-1-31	***	A
32	16188176	2016-0206-D-1-32	***	A
33	16188177	2016-0206-D-1-33	***	A
34	16188178	2016-0206-D-3-1		A
35	16188179	2016-0206-D-3-2		A
36	16188180	2016-0206-D-3-3		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Nadezhda		NVL	3/14/16	9:09 AM
Results Called by					
☐ Faxed ☐ Emailed					

**Special
Instructions:**

Date: 3/11/2016

Time: 2:34 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605460.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 39**Rush Samples**

	Lab ID	Sample ID	Description	A/R
37	16188181	2016-0206-D-3-4		A
38	16188182	2016-0206-D-3-5		A
39	16188183	2016-0206-D-3-6		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Nadezhda		NVL	3/14/16	9:09 AM
Results Called by					
☐ Faxed ☐ Emailed					
Special Instructions:					

Date: 3/11/2016

Time: 2:34 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

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**CHAIN of CUSTODY
SAMPLE LOG**
1605460


Client NVL Laboratories Inc
Street 4708 Aurora Ave N
 Seattle, WA 98103
Project Manager Syed Hasan
Project Location "Carriage House" 3602 S. 180th Street
 SeaTac, WA 98188

NVL Batch Number _____
Client Job Number 2016-0206
Total Samples 39

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address hughw@kcha.org

Phone: (206) 574-1230 **Fax:** (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS ☐ Total Metals ☐ TCLP ☐ Cr 6	Det. Limit ☐ FAA (ppm) ☐ ICP (ppm) ☐ GFAA (ppb)	Matrix ☐ Air Filter ☐ Drinking water ☐ Dust/wipe (Area)	☐ Soil ☐ Paint Chips in % ☐ Paint Chips in crr	RCRA Metals ☐ Arsenic (As) ☐ Barium (Ba) ☐ Cadmium (Cd)	☐ All 8 ☐ Chromium (Cr) ☐ Lead (Pb) ☐ Mercury (Hg)
				Other Metals ☐ All 3 ☐ Copper (Cu) ☐ Nickel (Ni) ☐ Zinc (Zn)	
☐ Other Types of Analysis		☐ Fiberglass ☐ Nuisance Dust ☐ Other (Specify) _____ ☐ Silica ☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-D-1-1	STOP AT FIRST POSITIVE	
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8	STOP AT FIRST POSITIVE	
9		1-9		
10		1-10		
11		1-11		
12		1-12		
13		1-13		
14		1-14		
15		1-15	STOP AT FIRST POSITIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Danveer Khan	NVL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Danveer Khan	NVL	3-10-16	2:00 PM
Received by	[Signature]	[Signature]	me	3/14/16	noon
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 1 of 3

CHAIN of CUSTODY
SAMPLE LOG

1605460



Client NVL Laboratories Inc
 Street 4708 Aurora Ave N
 Seattle, WA 98103
 Project Manager Syed Hasan
 Project Location "Carriage House" 3602 S. 180th Street
 SeaTac, WA 98188

NVL Batch Number _____
 Client Job Number 2016-0206
 Total Samples 39
 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
 Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-D-1-16		
2		1-17		
3		1-18		
4		1-19		
5		1-20		
6		1-21		
7		1-22	STOP AT FIRST POSITIVE	
8		1-23		
9		1-24		
10		1-25		
11		1-26		
12		1-27		
13		1-28		
14		1-29	STOP AT FIRST POSITIVE	
15		1-30		

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Danver Khan	NVL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Danver Khan	NVL	3-11-16	2:00 PM
Received by	Wap R		NVL	3/11/16	1:00 PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 2 of 3

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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**CHAIN of CUSTODY
SAMPLE LOG**
1605460

Client **NVL Laboratories Inc**

Street **4708 Aurora Ave N
Seattle, WA 98103**

Project Manager **Syed Hasan**

Project Location **"Carriage House" 3602 S. 180th Street
SeaTac, WA 98188**

NVL Batch Number _____

Client Job Number **2016-0206**

Total Samples **39**

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address **hughw@kcha.org**

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-D-1-31		
2		1-32		
3		1-33		
4		3-1		
5		3-2		
6		3-3		
7		3-4		
8		3-5		
9		3-6		
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jawveer Khan	NVL	3-10-16	9:00 AM
Relinquished by	TAN KHAN	Jawveer Khan	NVL	3-11-16	2:00 PM
Received by	Waseem		NVL	3/11/16	14:00
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

March 15, 2016

Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1605459.00

Client Project: 2016-0206

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 40 sample(s) submitted to our laboratory for analysis on 3/11/2016.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, 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, appearing to read 'Nick Ly', is written over a horizontal line.

Nick Ly, Technical Director



Lab Code: 102063-0

1.888.NVL.LABS Enc.: Sample Results
1.888.(685.5227)
www.nvllabs.com

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p 206.547.0100 | f 206.634.1936

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 1605459.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Lab ID: 16188105 Client Sample #: 2016-0206-E-1-1

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Beige lumpy foamy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous binder, Synthetic foam, Paint

Cellulose 3%

Chrysotile 2%

Lab ID: 16188106	Client Sample #: 2016-0206-E-1-2	Sample Status:	Not Analyzed
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Lab ID: 16188107	Client Sample #: 2016-0206-E-1-3	Sample Status:	Not Analyzed
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Lab ID: 16188108	Client Sample #: 2016-0206-E-1-4	Sample Status:	Not Analyzed
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Lab ID: 16188109	Client Sample #: 2016-0206-E-1-5	Sample Status:	Not Analyzed
-------------------------	---	-----------------------	---------------------

Lab ID: 16188110	Client Sample #: 2016-0206-E-1-6	Sample Status:	Not Analyzed
-------------------------	---	-----------------------	---------------------

Lab ID: 16188111	Client Sample #: 2016-0206-E-1-7	Sample Status:	Not Analyzed
-------------------------	---	-----------------------	---------------------

Lab ID: 16188112 Client Sample #: 2016-0206-E-1-8

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Beige lumpy foamy material with paint

Non-Fibrous Materials:

Other Fibrous Materials: %

Asbestos Type: %

Calcareous binder, Synthetic foam, Paint

Cellulose 3%

Chrysotile 3%**Sampled by:** Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: **Mr. Tanveer Khan**
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 40
Samples Analyzed: 12
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188113	Client Sample #: 2016-0206-E-1-9	Sample Status:	Not Analyzed
Lab ID: 16188114	Client Sample #: 2016-0206-E-1-10	Sample Status:	Not Analyzed
Lab ID: 16188115	Client Sample #: 2016-0206-E-1-11	Sample Status:	Not Analyzed
Lab ID: 16188116	Client Sample #: 2016-0206-E-1-12	Sample Status:	Not Analyzed
Lab ID: 16188117	Client Sample #: 2016-0206-E-1-13	Sample Status:	Not Analyzed
Lab ID: 16188118	Client Sample #: 2016-0206-E-1-14	Sample Status:	Not Analyzed
Lab ID: 16188119	Client Sample #: 2016-0206-E-1-15		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: Beige textured powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 35%	None Detected ND
Lab ID: 16188120	Client Sample #: 2016-0206-E-1-16	Sample Status:	Not Analyzed

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 40
Samples Analyzed: 12
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188121	Client Sample #: 2016-0206-E-1-17	Sample Status:	Not Analyzed
Lab ID: 16188122	Client Sample #: 2016-0206-E-1-18	Sample Status:	Not Analyzed
Lab ID: 16188123	Client Sample #: 2016-0206-E-1-19	Sample Status:	Not Analyzed
Lab ID: 16188124	Client Sample #: 2016-0206-E-1-20	Sample Status:	Not Analyzed
Lab ID: 16188125	Client Sample #: 2016-0206-E-1-21	Sample Status:	Not Analyzed
Lab ID: 16188126	Client Sample #: 2016-0206-E-1-22		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: Beige textured powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 34%	None Detected ND
Lab ID: 16188127	Client Sample #: 2016-0206-E-1-23	Sample Status:	Not Analyzed
Lab ID: 16188128	Client Sample #: 2016-0206-E-1-24	Sample Status:	Not Analyzed

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Attention: Mr. Tanveer Khan
Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00
Client Project #: 2016-0206
Date Received: 3/11/2016
Samples Received: 40
Samples Analyzed: 12
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188129	Client Sample #: 2016-0206-E-1-25	Sample Status:	Not Analyzed
Lab ID: 16188130	Client Sample #: 2016-0206-E-1-26	Sample Status:	Not Analyzed
Lab ID: 16188131	Client Sample #: 2016-0206-E-1-27	Sample Status:	Not Analyzed
Lab ID: 16188132	Client Sample #: 2016-0206-E-1-28	Sample Status:	Not Analyzed
Lab ID: 16188133	Client Sample #: 2016-0206-E-1-29		
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188			
Layer 1 of 2	Description: Beige textured powdery material with paint		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Calcareous particles, Paint	Cellulose 3%	Chrysotile 2%
Layer 2 of 2	Description: Pink chalky material with paper		
	Non-Fibrous Materials:	Other Fibrous Materials: %	Asbestos Type: %
	Gypsum/Binder, Binder/Filler	Cellulose 35%	None Detected ND
Lab ID: 16188134	Client Sample #: 2016-0206-E-1-30	Sample Status:	Not Analyzed
Lab ID: 16188135	Client Sample #: 2016-0206-E-1-31	Sample Status:	Not Analyzed
Lab ID: 16188136	Client Sample #: 2016-0206-E-1-32	Sample Status:	Not Analyzed

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 16188137 Client Sample #: 2016-0206-E-1-33 Sample Status: Not Analyzed

Lab ID: 16188138 Client Sample #: 2016-0206-E-3-1

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 4 Description: Beige/black woven fibrous material

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler

Synthetic fibers 81%

None Detected ND**Layer 2 of 4 Description: Black/gray foamy material**

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Synthetic foam

None Detected ND

None Detected ND**Layer 3 of 4 Description: Tan sheet vinyl**

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Vinyl/Binder, Synthetic foam

None Detected ND

None Detected ND**Layer 4 of 4 Description: Gray fibrous backing with mastic**

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler, Mastic/Binder

Cellulose 32%

None Detected ND

Glass fibers 20%

Lab ID: 16188139 Client Sample #: 2016-0206-E-3-2

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 2 Description: Beige/black woven fibrous material

Non-Fibrous Materials:

Other Fibrous Materials:%

Asbestos Type: %

Binder/Filler

Synthetic fibers 82%

None Detected ND**Sampled by: Client****Analyzed by: Fiona Chui****Date: 03/15/2016****Reviewed by: Nick Ly****Date: 03/15/2016**
Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.

Seattle, WA 98103

Attention: Mr. Tanveer Khan

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116

& EPA/600/M4-82-020

Layer 2 of 2	Description: Gray brittle material with mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Cellulose 3%		None Detected ND

Lab ID: 16188140 **Client Sample #: 2016-0206-E-3-3**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: Gray elastic material with mastic			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mastic/Binder	Cellulose 2%		None Detected ND

Lab ID: 16188141 **Client Sample #: 2016-0206-E-3-4**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: Gray elastic material with wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Wood	Cellulose 2%		None Detected ND
		Wood fibers 4%		

Lab ID: 16188142 **Client Sample #: 2016-0206-E-3-5**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: Gray/white vinyl with sand and paint			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Vinyl/Binder, Sand, Paint	None Detected ND		None Detected ND

Lab ID: 16188143 **Client Sample #: 2016-0206-E-3-6**
Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1	Description: Gray elastic material with wood			
	Non-Fibrous Materials:	Other Fibrous Materials: %		Asbestos Type: %
	Binder/Filler, Mineral grains, Wood	Cellulose 2%		None Detected ND

Sampled by: Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

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**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

Client: NVL Field Services Division

Address: 4708 Aurora Ave. N.
Seattle, WA 98103**Attention: Mr. Tanveer Khan**

Project Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Batch #: 1605459.00

Client Project #: 2016-0206

Date Received: 3/11/2016

Samples Received: 40

Samples Analyzed: 12

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Wood fibers 5%

Lab ID: 16188144 Client Sample #: 2016-0206-E-3-7

Location: "Carriage House" 3602 S. 180th Street SeaTac, WA 98188

Layer 1 of 1 Description: Gray elastic material with masticNon-Fibrous Materials:
Binder/Filler, Mastic/BinderOther Fibrous Materials:%
Cellulose 3%**Asbestos Type: %**
None Detected ND**Sampled by:** Client**Analyzed by:** Fiona Chui**Reviewed by:** Nick Ly**Date:** 03/15/2016**Date:** 03/15/2016

Nick Ly, Technical Director

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 600/M4-82-020 Methods 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

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.
Seattle, WA 98103**Project Manager** Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605459.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 **EPA 600/R-93-116 Asbestos by PLM <bulk>****Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
1	16188105	2016-0206-E-1-1	Stop @ 1st Pos.	A
2	16188106	2016-0206-E-1-2	***	A
3	16188107	2016-0206-E-1-3	***	A
4	16188108	2016-0206-E-1-4	***	A
5	16188109	2016-0206-E-1-5	***	A
6	16188110	2016-0206-E-1-6	***	A
7	16188111	2016-0206-E-1-7	***	A
8	16188112	2016-0206-E-1-8	Stop @ 1st Pos.	A
9	16188113	2016-0206-E-1-9	***	A
10	16188114	2016-0206-E-1-10	***	A
11	16188115	2016-0206-E-1-11	***	A
12	16188116	2016-0206-E-1-12	***	A
13	16188117	2016-0206-E-1-13	***	A
14	16188118	2016-0206-E-1-14	***	A
15	16188119	2016-0206-E-1-15	Stop @ 1st Pos.	A
16	16188120	2016-0206-E-1-16	***	A
17	16188121	2016-0206-E-1-17	***	A
18	16188122	2016-0206-E-1-18	***	A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/15/16	10:13 AM
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 3/11/2016

Time: 2:27 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605459.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
19	16188123	2016-0206-E-1-19	***	A
20	16188124	2016-0206-E-1-20	***	A
21	16188125	2016-0206-E-1-21	***	A
22	16188126	2016-0206-E-1-22	Stop @ 1st Pos.	A
23	16188127	2016-0206-E-1-23	***	A
24	16188128	2016-0206-E-1-24	***	A
25	16188129	2016-0206-E-1-25	***	A
26	16188130	2016-0206-E-1-26	***	A
27	16188131	2016-0206-E-1-27	***	A
28	16188132	2016-0206-E-1-28	***	A
29	16188133	2016-0206-E-1-29	Stop @ 1st Pos.	A
30	16188134	2016-0206-E-1-30	***	A
31	16188135	2016-0206-E-1-31	***	A
32	16188136	2016-0206-E-1-32	***	A
33	16188137	2016-0206-E-1-33	***	A
34	16188138	2016-0206-E-3-1		A
35	16188139	2016-0206-E-3-2		A
36	16188140	2016-0206-E-3-3		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/15/16	10:13 AM
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 3/11/2016

Time: 2:27 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

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ASBESTOS LABORATORY SERVICES**Company** NVL Field Services Division**Address** 4708 Aurora Ave. N.

Seattle, WA 98103

Project Manager Mr. Tanveer Khan**Phone** (206) 547-0100**Cell** (206) 799-2916**NVL Batch Number** 1605459.00**TAT** 2 Days **AH** No**Rush TAT****Due Date** 3/15/2016 **Time** 2:00 PM**Email** tanveer.k@nvllabs.com**Fax** (206) 634-1936**Project Name/Number:** 2016-0206**Project Location:** "Carriage House" 3602 S. 180th Street SeaTac, WA 98188**Subcategory** PLM Bulk**Item Code** ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>**Total Number of Samples** 40**Rush Samples**

	Lab ID	Sample ID	Description	A/R
37	16188141	2016-0206-E-3-4		A
38	16188142	2016-0206-E-3-5		A
39	16188143	2016-0206-E-3-6		A
40	16188144	2016-0206-E-3-7		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				
Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Maxwell Raymond		NVL	3/11/16	1400
Analyzed by	Fiona Chui		NVL	3/15/16	10:13 AM
Results Called by					
☐ Faxed ☐ Emailed					
Special Instructions:					

Date: 3/11/2016

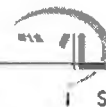
Time: 2:27 PM

Entered By: Fatima Khan

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1605459


Client NVL Laboratories Inc
 Street 4708 Aurora Ave N
Seattle, WA 98103
 Project Manager Syed Hasan
 Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number _____
 Client Job Number 2016-0206
 Total Samples 40
 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days
 Please call for TAT less than 24 Hrs
 Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
		☐ Paint Chips in %			☐ Zinc (Zn)
		☐ Paint Chips in cr			
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-E-1-1	STOP AT FIRST POSITIVE	
2		1-2		
3		1-3		
4		1-4		
5		1-5		
6		1-6		
7		1-7		
8		1-8	STOP AT FIRST POSITIVE	
9		1-9		
10		1-10		
11		1-11		
12		1-12		
13		1-13		
14		1-14		
15		1-15	STOP AT FIRST POSITIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jaweer Khan	NVL	3-11-16	9:00 AM
Relinquished by	TAN KHAN	Jaweer Khan	NVL	3-11-16	2:00 PM
Received by	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	3/11/16	1400
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to TAN

Page 193

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1605459

Client NVL Laboratories Inc

Street 4708 Aurora Ave N
Seattle, WA 98103

Project Manager Syed Hasan

Project Location "Carriage House" 3602 S. 180th Street
SeaTac, WA 98188

NVL Batch Number _____

Client Job Number 2016-0206

Total Samples 40

Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

Email address hughw@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-E-1-16		
2		1-17		
3		1-18		
4		1-19		
5		1-20		
6		1-21		
7		1-22	STOP AT FIRST POSITIVE	
8		1-23		
9		1-24		
10		1-25		
11		1-26		
12		1-27		
13		1-28		
14		1-29	STOP AT FIRST POSITIVE	
15		1-30		

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jaweer Khan	NVL	3-11-16	9:00 AM
Relinquished by	TAN KHAN	Jaweer Khan	NVL	3-11-16	2:00 PM
Received by				3/11/16	1:00
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

Page 293

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103

p 206.547.0100 | f 206.634.1936 | www.nvllabs.com

**CHAIN of CUSTODY
SAMPLE LOG**
1605459

S

 Client **NVL Laboratories Inc**

 Street **4708 Aurora Ave N
Seattle, WA 98103**

 Project Manager **Syed Hasan**

 Project Location **"Carriage House" 3602 S. 180th Street
SeaTac, WA 98188**

NVL Batch Number

 Client Job Number **2016-0206**

 Total Samples **40**

 Turn Around Time ☐ 1 Hr ☐ 6 Hrs ☐ 3 Days ☐ 10 Days
☐ 2 Hrs ☐ 1 Day ☐ 4 Days
☐ 4 Hrs ☒ 2 Days ☐ 5 Days

Please call for TAT less than 24 Hrs

 Email address **hughw@kcha.org**

Phone: (206) 574-1230 Fax: (206) 357-2441

☐ Asbestos Air	☐ PCM (NIOSH 7400)	☐ TEM (NIOSH 7402)	☐ TEM (AHERA)	☐ TEM (EPA Level II)	☐ Other
☒ Asbestos Bulk	☒ PLM (EPA/600/R-93/116)	☐ PLM (EPA Point Count)	☐ PLM (EPA Gravimetry)	☐ TEM BULK	
☐ Mold/Fungus	☐ Mold Air	☐ Mold Bulk	☐ Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	☐ All 8	Other Metals
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Arsenic (As)	☐ Chromium (Cr)	☐ All 3
☐ TCLP	☐ ICP (ppm)	☐ Drinking water	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
☐ Cr 6	☐ GFAA (ppb)	☐ Dust/wipe (Area)	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
☐ Other Types of Analysis	☐ Fiberglass	☐ Nuisance Dust	☐ Other (Specify) _____		
	☐ Silica	☐ Respirable Dust			

 Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2016-0206-E-1-31		
2		1-32		
3		1-33		
4		3-1		
5		3-2		
6		3-3		
7		3-4		
8		3-5		
9		3-6		
10		3-7		
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Javeer Khan	NVL	3-11-16	9:00 AM
Relinquished by	TAN KHAN	Javeer Khan	NVL	3-11-16	2:00 PM
Received by	Wes R		NV	3/11/16	1450
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Results report to

TAN

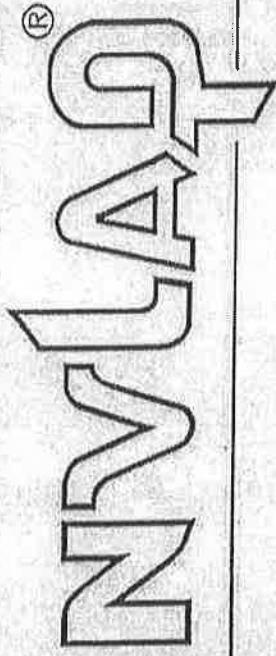
Page 3 of 3



Appendix B

AHERA Certifications & Laboratory Qualifications

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

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 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2015-09-25 through 2016-09-30

Effective Dates



A handwritten signature in black ink, appearing to read "Peter S. Daman".

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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@nvlabs.com
<http://www.nvlabs.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102063-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA 600/M4-82-020: Interim Method for 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

A handwritten signature in dark ink, appearing to read "Dana S. Luman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that

Tanveer E. Khan

has satisfactorily completed
4 hours of refresher training as an

Asbestos Building Inspector

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

151522

Certificate Number



Instructor

EPA Provider Cert. Number: 1085



May 20, 2015

Date(s) of Training

Exam Score: NA

Expiration Date: May 19, 2016

Argus Pacific, Inc. • 1900 W. Nickerson, Suite 315 • Seattle, Washington • 98119 • 206.285.3373 • fax 206.285.3927

Certificate of Completion

This is to certify that

Daniel E. Crownhart

has satisfactorily completed
24 hours of training as an

Asbestos Building Inspector

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

152896
Certificate #

Mary Czajka
Instructor

EPA Provider Certificate #1085



Aug 25 - 27, 2015

Date(s) of Training

Exam Score: **98**

Expiration Date: Aug 26, 2016

ARGUS PACIFIC, INC. • 1900 W NICKERSON ST, SUITE 315 • SEATTLE, WASHINGTON • 98119 • 206.285.3373 • WWW.ARGUSPACIFIC.COM