

PROJECT MANUAL

PROJECT NAME AND LOCATION:

Roofing Replacement – PVC Membrane Contract Number: HW2201731
Windsor Heights Apartments – Building P

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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, removal of asphalt shingles, underlayment, flashing, roof penetration flashing, vents, gutters, downspouts and all accessories; Repair damaged or rotted roof framing. (See 1.13 Unit Cost.); Replace deteriorated plywood decking. (See 1.13 Unit Cost.); Replace deteriorated fascia board. (See 1.13 Unit Cost.); Supply and installation of PVC Membrane Roofing System according to manufacturer's specifications, and other tasks as described in the bid documents.

PROJECT MANUAL DISTRIBUTION:

Address: King County Housing Authority, 600 Andover Park, Seattle, 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: 8/8/2022 at 12:30 P.M.
Jobsite Address: Windsor Heights Apartments, 17229 32nd Ave. South, 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.
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 will be posted on KCHA's website.

BIDS ARE DUE:

Time: **2:00 P.M.**
Date: **August 22, 2022**
Address: King County Housing Authority
600 Andover Park West, Seattle, WA 98188
Submittal Process: * Bids may be sent to Michelle Jackson by email to MichelleJ@kcha.org,
Process: All Bids must be received by KCHA no later than the above due date and time. No Bids will be accepted after that date and time.

BID GUARANTEE: Not Required.

PERFORMANCE AND PAYMENT BONDS: As a condition of award Performance and Payment bonds for 100% of the Contract Award Amount shall be furnished for the Work. On contracts of one hundred fifty thousand dollars (\$150,000.00) or less, at Contractors option the requirement may be waived in lieu of an additional 5% (total 10%) retainage.

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

****Contractor must be certified by the manufacturer, Versico**

SPECIFICATIONS

**Roofing Replacement – PVC Membrane
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SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Roofing Replacement
- B. Project Location: Windsor Heights Apartments, 17229 32nd Ave. South, SeaTac, WA 98188. Building P. Includes approximately 7,600 square feet roofing. Roofing penetrations including, but not limited to, 2 FDC stand pipes, 22 plumbing vents, 18 fan vents and 20 attic static air vents. Also includes approximately 370 lineal feet of gutter, 8 downspouts, roof anchors per code and walkway protection at roof hatch doors at shed roofs. Bidder responsible to verify all dimensions and quantity take-offs prior to submitting bid. Owner assumes no responsibility for quantities.
- C. Work includes but is not limited to:
 - 1. Removal of asphalt shingles, underlayment, flashing, roof penetration flashing, vents, gutters, downspouts and all accessories.
 - 2. Repair damaged or rotted roof framing. (See 1.13 Unit Cost.)
 - 3. Replace deteriorated plywood decking. (See 1.13 Unit Cost.)
 - 4. Replace deteriorated fascia board. (See 1.13 Unit Cost.)
 - 5. Supply and installation:
 - a. PVC Membrane Roofing System according to manufacturer's specifications. (See Versico's "Landmark PVC Specifications" attached.)
 - b. Roof penetration flashing
 - c. PVC static attic air vents, 20 per building.
 - d. Bath/Kitchen fan vents
 - e. Fall arrest/restraint anchors
 - f. Gutters and Downspouts
 - g. Painting at fascia

1.2 WORK SEQUENCE

- A. The Work shall be completed in 30 calendar days from the date of Notice to Proceed.
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to severe weather conditions. For additional days to be considered the Contractor shall notify the Owner no later than 8:00 a.m. on each day of a severe weather condition.
- 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

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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 \$250.

1.4 WORK RESTRICTIONS

A. Use of the Premises

- 1. Use of Site: Limit use of premises to work areas. Do not disturb portions of site beyond areas in which the Work is indicated.
 - a. 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.
 - b. 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.
- 2. 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.

B. Occupancy Requirements

- 1. Full Owner Occupancy: Owner and tenants will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner and tenant usage. Perform the Work so as not to interfere with Owner's operations.

1.5 PERMITS

- A. Contractor is responsible for obtaining and paying for all permits and for the coordination of all required inspections.
- B. Prepare and file necessary plans, prepare documents and obtain necessary approvals of Authorities Having Jurisdiction (AHJ). Obtain required certificates of inspection for work and deliver to the Owner before request for acceptance and final payment for the work.

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.

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- 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.
- B. Unit prices include necessary material, plus cost for delivery, preparations required for installation, demolition, disposal, 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.
- D. Unit Price List
 - 1. Unit Price No. 1 – Roof Framing Replacement – 2x Framing Lumber
 - a. Unit of measure – 1 Lineal Foot.
 - b. The base bid includes replacement of 50 lineal feet of framing lumber to be used for deteriorated roof framing.
 - c. If, on inspection, the number of feet required is reduced by the Owner, the Unit Price will be used as a deductive.
 - d. In the event additional framing installation is required by the owner, the Unit Price will be used as an additive.
 - 2. Unit Price No. 2 – Plywood Decking Replacement – 4 x 8 x 1/2" CDX Plywood
 - a. Unit of measure – 1 @ 4 x 8 x 1/2" Sheet.
 - b. The base bid includes replacement of 10 sheets of 1/2" CDX plywood to be used for deteriorated plywood decking.
 - c. If, on inspection, the number of sheets required is reduced by the Owner, the Unit Price will be used as a deductive.

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- d. In the event additional sheets are required by the owner, the Unit Price will be used as an additive.
3. Unit Price No. 3 – Fascia Board Replacement – 1x8 White Wood
 - a. Unit of measure – 1 Lineal Foot.
 - b. The base bid includes replacement of 40 lineal feet of fascia to be used for deteriorated fascia board.
 - c. If, on inspection, the number of feet required is reduced by the Owner, the Unit Price will be used as a deductive.
 - d. In the event additional fascia is required by the owner, the Unit Price will be used as an additive.
- E. Obtain approval from the Owner prior to performing added Work. Work performed without approval will not be compensated.

1.8 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.
- 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 that 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.
- E. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.

1.9 PROJECT MEETINGS

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- 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.

1.10 SUBMITTALS

- A. Provide product data for each element of construction and type of product or equipment for approval by Owner.
- B. Subcontract list. Prepare written information that demonstrates capabilities and experience of firm or persons.
- C. Contractors project manager and/or supervisors. Prepare written information that demonstrates capabilities and experience of firm or persons.
 - 1. The Owner will review subcontractors and assigned staff and will accept or reject based on experience or qualifications.
- D. 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.

1.11 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. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against.
- C. Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- D. Four parking spaces shall be available to the contractor for storage containers and parking. Do not park in marked tenant spaces.

1.12 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

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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.

1.13 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.

1.14 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

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.

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1.15 DEMOLITION

- A. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work. A Limited Good Faith Asbestos Inspection dated July 18, 2022 is included in the specifications. Comply with all applicable laws regarding removal and disposal of hazardous materials.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Owner.

1.16 CLOSEOUT PROCEDURES

- 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 one (1) year from final completion.

PART 2 - PRODUCTS (Not Used) (See Versico VersiFlex PVC Landmark Apartments Specifications attached.)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100

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SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Roof Framing Lumber
 - 2. Plywood sheathing
 - 3. Fascia
 - 4. Roof anchors

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

2.2 SHEATHING

- A. Plywood Roof Sheathing: Exterior, Structural sheathing.
- B. CDX Plywood panel roof sheathing: Minimum of (1/2") inch thick, identified with the appropriate APA trademark. Each panel should meet the requirements of the latest edition of the U.S. Product Standard PS-1 for Construction and Industrial Plywood, or APA PRP-108 Performance Standards.

2.3 MISCELLANEOUS MATERIALS

- A. Fasteners and Baffles:
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 - 2. Power-Driven Fasteners: CABO NER-272.
 - 3. Plywood clips.
 - 4. Roof Anchors – OSHA Compliant 1910, 1926 Subpart M, Capacity 130-420 lbs.

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PART 3 - EXECUTION

3.1 DEMOLITION

- A. Remove all existing asphalt roofing, underlayment, flashing, gutters, downspouts and including any deteriorated plywood roof sheathing or fascia board.
- B. Remove all attic static air vents.
- C. Remove all plumbing vent boots, bathroom and kitchen fan vents and dryer vents.

3.2 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Replace any deteriorated roof framing.
- B. Secure all static vent locations and plumbing, bath and kitchen fan vent locations.
- C. Securely attach rough carpentry work and any new plywood sheathing to roof framing by anchoring and fastening as indicated, complying with the following:
 - 1. Published requirements of metal framing anchor manufacturer.
 - 2. IRC Section R905.2.6.Fastening Methods.
 - 3. Sheathing: Nail to wood framing.
 - 4. Roof Anchors: Nailed to solid wood not plywood.

END OF SECTION 06100

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SECTION 07540 – THERMOPLASTIC POLYVINYL CHLORIDE (PVC) MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes PVC Roofing.
- B. See Versico's VersiFlex PVC Landmark Specifications attached separately for specification details.
 - 1. VersiFlex PVC Adhered Roofing System
 - 2. 1/2" Coverboard
 - 3. FRS 60 mil thick gray fiberglass reinforced PVC membrane
 - 4. Flashings and insulation as specified.
 - 5. Fasteners.
 - 6. Accessories

END OF SECTION 07311

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SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the replacement of all metal flashing as follows:
 - 1. Formed roof drainage system.
 - 2. Roof flashing and edging

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 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

2.2 FABRICATION, GENERAL

- A. General: Custom 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 indicated. Shop fabricate items.

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2.3 SHEET METAL FABRICATIONS

- A. See Versico’s FersiFlex PVC Landmark Roofing specifications for details.

2.4 ROOF DRAINAGE SHEET METAL FABRICATIONS

- A. Hanging Gutters: 5-inch K-Style, 027 gauge aluminum, continuous aluminum gutter complete with end pieces, outlet tubes, and other accessories as required. Fabricate on-site, with no seams. Fabricate gutter accessories from same metal as gutters.
 - 1. Fabricate gutters from: 0.027-inch thick aluminum with baked on finish (Owner to select color from standard range).
 - 2. Hanger Style: Aluminum quick screw hanger with 3-inch hex head screw.
 - 3. Spacers between fascia and gutter: 0.024-inch thick aluminum with baked on finish.
 - 4. Approximately 370 lineal feet of gutter on each building. Bidder responsible to verify all dimensions and take off quantities on site prior to submitting bid. Owner not responsible for any quantity take offs.
- B. Downspouts: Standard 2” x 4” rectangular downspouts complete with front and side elbows. Furnish with metal straps from same material as downspouts.
 - 1. Fabricate downspouts from: 0.027-inch thick aluminum with baked on finish (Owner to select color from standard range).
 - 2. Includes 8 downspouts in original locations, 4 on the front and 4 on the back. The 2 shed roof structures also receive a diverter downspout from the upper roof and then connect to their own downspouts.
- C. Sealant: Geocel 2000 or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
- C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.

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- D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric sealant.
- E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
- F. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- G. Seal joints with elastomeric sealant as required for watertight construction.

3.2 METAL FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements of ANSI/SPRI ES-1 standards and comply with International Building Code.
- B. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof.

3.3 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. Hanging Gutters: Attach gutters at eave or fascia to firmly anchored gutter brackets spaced not more than 36-inches apart. Crimped and sealed end caps and downspout flanges with a heavy bead of non-curing sealant.
 - 1. Anchor gutter with quick screw hanger with 3-inch hex head screw spaced not more than 24-inches apart.
 - 2. Slope gutters to downspouts.
 - 3. When specified use a “Y” attachment to connect two gutters to a single downspout.
- C. 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.

END OF SECTION 07620

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SECTION 07720 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Attic Vents – Versico One-way pressure relief breather vents.
2. Plumbing & Fan Vents – Versico PVC T-Top and Square Top vents
3. Flashing – VersiFlex reinforced membrane

1.2 SUBMITTALS

A. Product Data: For each product indicated.

1.3 QUALITY ASSURANCE

A. Standards: Comply with the following:

1. SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
2. NRCA's "Roofing and Waterproofing Manual" details for installing units.

PART 2 - PRODUCTS

2.1 ATTIC VENTS

A. Versico One-way pressure relief breather vents, per manufacturer's recommendations, 20 vents per building spaced evenly, 10 to a side.

2.2 PLUMBING VENTS, FAN VENTS & FLASHING

- A. Plumbing vents, bathroom and kitchen fan vents to match existing sizes. Install Versico PVC T-Top and Square Top vents following manufacturer's recommendations.
- B. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using VersiFlex reinforced membrane.
- C. VersiFlex non-reinforced membrane can be used for flashing pipe penetrations, sealant pockets, scuppers, as well as inside and outside corners, when the use of pre-molded accessories is not feasible.

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PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install attic vents, bath and kitchen vents, and pipe boots.
- B. General: Coordinate installation of roof accessories with installation of roofing, flashing, penetrations, equipment, and other construction to ensure that combined elements are waterproof and weathertight. Anchor roof accessories securely to supporting structural substrates so they are capable of withstanding lateral and thermal stresses, and inward and outward loading pressures.
- C. Connect bath and kitchen vents to existing duct work securely.
- D. Report any deficiencies in duct work, insulation or attic ventilation to Owner.

END OF SECTION 07720

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SECTION 09911 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes field painting of new exposed exterior fascia.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.

PART 2 - PRODUCTS

2.1 PREPARATORY COATS

- A. Exterior Primer: Exterior alkyd or latex-based primer of finish coat manufacturer and recommended in writing by manufacturer for use with finish coat and on substrate indicated.
 - 1. Ferrous-Metal and Aluminum Substrates: Rust-inhibitive metal primer.
 - 2. Zinc-Coated Metal Substrates: Galvanized metal primer.
- B. Caulking: WL001360A - Sher-MAX Ultra Urethanized Elastomeric Sealant White.

2.2 EXTERIOR FINISH COATS

- A. Exterior Low-Luster Acrylic Paint: Sherwin-Williams; SuperPaint Exterior Latex Satin Wall Paint A89 Series.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with procedures specified in PDCA P4 for inspection and acceptance of surfaces to be painted.
- B. Visible plywood shall match existing color.
- C. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50°F, unless products are designed specifically for these conditions.

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- D. Caulk all splits, cracks and nail holes.
- E. Prime Coats: Before applying finish coats, prime as recommended by manufacturer.
 - 1. Prime all bare material.
- F. Application Procedures: Apply by sprayer one heavy coat with back roll on the body to achieve a minimum dry film thickness of 6 mils or as necessary to achieve manufacturer's warranty.
- G. Protect property from overspray. Contractor is responsible and shall pay for all property damage including cars, walkways, patios and landscaping.

3.2 CLEANING AND PROTECTING

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- B. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- C. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
 - 1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

END OF SECTION 09911

VERSICO - VersiFlex

Windsor Heights Apartments

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Windsor Heights Apartments is located at 117229 32nd Ave. South, SeaTac, WA. 98188.
- B. The project consists of installing Versico's VersiFlex PVC Adhered Roofing System as outlined below:
Apply the VersiFlex FRS Adhered Roofing System in conjunction with ½ inch coverboard after tear off of the existing asphalt shingle roof to expose the wood for verification of suitable substrate as specified in this specification.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the VersiFlex FRS 60-mil thick gray fiberglass reinforced PVC (polyvinyl chloride) membrane adhered roofing system including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.
- C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.
- D. Any contractor who intends to submit a bid using a roofing system other than the approved manufacturer must submit for pre-qualification in writing fourteen (14) days prior to the bid date. Any contractor who fails to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
 - 1. Shop drawings showing layout, details of construction and identification of materials.
 - 2. A sample of the manufacturer's Membrane System Warranty.
 - 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer along with the dates training was received.
 - 4. Certification from the membrane manufacturer indicating the membrane thickness over the reinforcing scrim (top ply membrane thickness) is nominal .016-mil or thicker for PVC FRS.
 - 5. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier

prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store VersiFlex membrane on provided pallets in the original undisturbed plastic wrap and cover with light colored breathable waterproof tarpaulins in a cool, shaded area. VersiFlex membrane that has been exposed to the elements must be prepared with Versico PVC cleaner prior to hot air welding.
 - 2. Store curable materials (adhesives and sealants) between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
 - 3. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- C. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.
- D. Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. Interior stairs or elevators may not be used for removing debris or delivering materials, except as authorized by the building superintendent.

1.07 EXISTING CONDITIONS

If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

1.08 PRECONSTRUCTION CONFERENCE

- A. A pre-bid meeting will be held at the job site. See Invitation to Bid for details.
- B. Prior to bid submittal, the roofing contractor should schedule a job site inspection to observe actual conditions and verify all dimensions on the roof. The job site inspection may occur on the day of the pre-bid meeting or prior to such a meeting. Should access to the roof be necessary before or after the pre-bid meeting, the contractor must contact the owner's representative, Lance Drago, Project Manager, at 206-315-4398 to coordinate an appropriate time.
- C. Bids must be submitted per directions in Invitation to Bid.
- D. Any conditions which are not shown on the shop drawings should be submitted as questions prior to bid submittal per instructions included in Invitation to Bid.

1.09 TEMPORARY FACILITIES AND CONTROLS

- A. Temporary Utilities:
 - 1. Water and power for construction purposes are available at the site and will be made available to the roofing contractor.
 - 2. Provide all hoses, valves and connections for water from a source designated by the owner when made available.
 - 3. When available, electrical power should be extended as required from the source. Provide all trailers, connections and fused disconnects.
- B. Temporary, Sanitary Facilities
Sanitary facilities will not be available at the job site. The roofing contractor shall be responsible for the provision and maintenance of portable toilets or their equal.
- C. Building Site:
 - 1. The roofing contractor shall use reasonable care and responsibility to protect the building and site against damages. The contractor shall be responsible for the correction of any damage incurred as a result of the performance of the contract.
 - 2. The roofing contractor shall remove all debris from the job site in a timely and legally acceptable manner so as to not detract from the aesthetics or the functions of the building.
- D. Security:
Obey the owner's requirements for personnel identification, inspection and other security measures.

1.10 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to

construct, maintain and remove necessary, temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.

- C. Do not overload any portion of the building, by either use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas **where work is in progress**. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk material and return the job site to its original condition upon completion of the work.

1.11 SAFETY

The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. **Safety shall be the responsibility of the roofing contractor.** All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.12 WORKMANSHIP

- A. Applicators installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.

1.13 QUALITY ASSURANCE

- A. The VersiFlex Membrane Roofing System must achieve a UL Class B.
- B. The specified roofing assembly must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to

ANSI/SPRI WD-1 "Wind Design Standard Practice for Roofing Assemblies"
American Society of Civil Engineers (ASCE 7)
International Building Code (IBC)
- C. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- D. The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing single-ply PVC roofing systems and having installed at least one (1) roofing application or several similar systems of equal or greater size within one year.
- E. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified including operation of hot air welding equipment and

power supply. Provide at least one thoroughly trained and an experienced superintendent on the job at all times roofing work is in progress.

- F. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- G. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.

1.14 JOB CONDITIONS, CAUTIONS AND WARNINGS

Refer to Versico's VersiFlex specification for General Job Site Considerations.

- A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Versico Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weather tight at the end of the work day.
- I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.15 WARRANTY

- A. Provide manufacturer's 20 year Total System Warranty covering both labor and material with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 55 mph measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.
- B. Pro-rated System Warranties shall not be accepted.
- C. Evidence of the manufacturer's warranty reserve shall be included as part of the project submittals for the specifier's approval.

PART 2 PRODUCTS

2.01 GENERAL

- A. All components of the specified roofing system shall be products of Versico or accepted by Versico as compatible.
- B. All products (including insulation, fasteners, fastening plates, pre-fabricated accessories and edgings) must be **manufactured and supplied** by the roofing system manufacturer and covered by the warranty.

2.02 MEMBRANE

- A. Furnish VersiFlex PVC FRS 60-mil thick gray, fiberglass reinforced PVC (polyvinyl chloride) membrane as needed to complete the roofing system. Membrane thickness over the reinforcing scrim (top-ply thickness) shall be nominal .016-mil or thicker.

2.03 COVERBOARD

- A. The cover board shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Cover board shall be as supplied by Versico.

Dens Deck Prime –gypsum core that incorporates glass-mat facings on the top and bottom side. The top surface is pre-primed and provides excellent bond strength for adhered membrane for use as a cover board. Available in ¼” to 5/8” and 4’ x 4’ or 4’ x 8’ size boards.

2.04 FASTENING COMPONENTS

To be used for mechanical attachment of cover board and to provide additional membrane securement:

A. Fasteners, Plates and Bars

1. **HPVX Fasteners:** A heavy duty #15 threaded fastener with a #3 phillips drive used for membranre or insulation securement into steel, wood plank or minimum 5/8 inch thick plywood when increased pullout resistance is desired.
2. **Term Bar Nail-Ins:** A 1-1/4” long expansion anchor with a zinc plated steel drive pin used for fastening the Versico Termination Bar or Seam Fastening Plates to concrete, brick, or block walls.
3. **HPVX Plates:** A 2-3/8” diameter metal barbed fastening plate used with Versico HPVX or MP-14-10 Fasteners for membrane securement. This plate can be used for insulation securement.

2.05 ADHESIVES, CLEANERS AND SEALANTS

All products shall be furnished by Versico and specifically formulated for the intended purpose.

- A. **VersiFlex PVC Bonding Adhesive:** A high-strength, synthetic rubber adhesive used for bonding VersiFlex membrane to various surfaces. The adhesive is applied to both the membrane and the substrate at a coverage rate of approximately 45 - 50 square feet per gallon per finished surface (includes coverage on both surfaces).
- B. **Low VOC PVC Bonding Adhesive:** A high strength solvent-based contact adhesive that allows bonding of PVC membrane to various porous and non-porous substrates. It is specially formulated using a blend of VOC exempt and nonexempt solvent to be in compliance with the state of California Clean Air Act of 1988 (updated in 1997) and as further regulated by California's Air Quality Control Districts listing VOC grams per liter limitations. This product also meets the <250 gpl VOC content requirements of the OTC Model Rule for Single Ply Roofing Adhesives.
- C. **VersiFlex PVC Cut-Edge Sealant:** A clear-colored sealant used to seal cut edges of reinforced VersiFlex membrane. A coverage rate of approximately 225 - 275 linear feet per squeeze bottle can be achieved when a 1/8" diameter bead is applied.
- D. **Water Cut-Off Mastic:** Used as mastic to prevent moisture migration at drains, compression terminations and beneath conventional metal edging (at a coverage rate of approximately 10' per tube or 100' per gallon).
- E. **Universal Single-Ply Sealant:** A 100% solids, solvent free, one-part, polyether sealant that provides a weather tight seal to a variety of building substrates. Can be used as a termination bar sealant or for use in counterflashing, coping, and scupper details.
- F. **Foil Grip Aluminum Tape:** A general-purpose pressure-sensitive sealant used as a bond break at joints in PVC Coated Metal. Packaged in rolls 2" wide by 100' long.
- G. **PVC Membrane Cleaner:** Used to prepare membrane that has been exposed to the elements for approximately 7 days prior to heat welding or to remove general construction dirt at an approximate coverage rate of 400 square feet per gallon (one surface).
- H. **Cav-Grip Primer:** a low VOC contact adhesive used to prime surfaces for the application of 725TR.

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

- A. **General:** All metal edging shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code.
- B. **Termination Bar:** a 1" wide and .098" thick extruded aluminum bar pre-punched 6" on center; incorporates a sealant ledge to support Lap Sealant and provide increased stability for membrane terminations.

2.07 WALKWAYS

Protective surfacing for roof traffic shall be VersiFlex PVC Walkway Rolls installed per manufacturer's requirements or concrete pavers loose laid over an approved slip sheet (pavers not recommended for slopes greater than 2" in 12").

2.08 OTHER MATERIALS

- A. **Versico 725TR Air & Vapor Barrier / Temporary Roof:** 725TR is a 40-mil composite consisting of 35-mils of self-adhering rubberized asphalt factory laminated to a 5-mil polyethylene film with an adhesion textured surface. 725TR roll dimensions are 39" x 75' and the product is applied after priming an acceptable substrate with CCW 702, 702-LV or Cav-Grip primer.
- B. One-Way Pressure Relief Breather Vents - 8" PVC Square Top Vents "Gray" Product Code 326881.
 - a. Versico's Weldable One-Way Pressure Relief Breather Vents are engineered to reduce moisture within the roofing system and release trapped air pressure within the building. One-Way Vents allow trapped air pressure to escape; Two-Way Vents (combined with One-Way Vents) help to reduce moisture.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, job site considerations and weather restrictions.
- C. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.
- D. Inspect all existing plywood decking and confirm condition meets manufacturer requirements for substrate. Replace any deteriorated plywood sheets per Section 01100 1.7 Unit Prices.
- E. Install permanent roof anchors to meet OSHA requirements.

3.02 COVER BOARD PLACEMENT AND ATTACHMENT

- A. Install cover board or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints horizontally and vertically if multiple layers are provided.

3.04 MEMBRANE PLACEMENT AND ATTACHMENT

- A. Position VersiFlex membrane over the acceptable substrate. Fold membrane sheet back onto itself so half the underside of the membrane is exposed.
- B. Apply Bonding Adhesive in accordance with the manufacturer's published instructions, to the exposed underside of the membrane and the corresponding substrate area. Do not apply Bonding Adhesive along the splice edge of the membrane to be hot air welded over the adjoining sheet. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
 - 1. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded section of the membrane sheet immediately after rolling the membrane into the adhesive with a soft bristle push broom to achieve maximum contact.
 - 2. Fold back the unbonded half of the sheet and repeat the bonding procedures.
- B. Position adjoining sheets to allow a minimum overlap of 2 inches to provide a minimum 1-1/2" hot air weld.
- C. Continue to install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2 inches and complete the bonding procedures as stated previously.

3.05 MEMBRANE HOT AIR WELDING PROCEDURES

- A. Heat weld the VersiFlex membrane using an Automatic Heat Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's specifications. At all splice intersections, roll the seam with a silicone roller immediately after the welder causes the membrane step off to ensure a continuous hot air welded

seam.

- B. Probe all seams once the hot air welds have thoroughly cooled (approximately 30 minutes).
- C. Repair all seam deficiencies the same day they are discovered.
- D. Apply Cut Edge Sealant on all cut edges of reinforced membrane (where the scrim reinforcement is exposed) after seam probing is complete. Cut Edge Sealant is not required on vertical splices.

3.06 FLASHING

- A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using VersiFlex reinforced membrane. VersiFlex non-reinforced membrane can be used for flashing pipe penetrations, Sealant Pockets, and scuppers, as well as inside and outside corners, when the use of pre-molded accessories is not feasible.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.07 VENTS

- A. For attic ventilation, install one-way pressure relief breather vents per manufacturers recommendations. Install 20 attic vents per building, 10 for each side, located near the top ridge, evenly spaced along the length of the building.
- B. Provide and install Versico PVC T-Top and Square Top Vents matched to the diameter of each existing stand pipes, plumbing vent, bath/kitchen fan vent and dryer vent.

3.08 WALKWAYS

- A. Install walkways at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations as identified on the specifier's drawing.
- B. Hot air weld walkway material to the membrane in accordance with the manufacturer's specifications.

3.09 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
- B. Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

3.10 CLEAN UP

- A. Perform daily clean up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SPECIFICATION



G U I D E - S P E C

Fully Adhered Roofing System

January 2022

This **GUIDE-SPEC** is a brief outline of Versico's VersiFlex™ Adhered Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and Versico Authorized Roofing Contractors must comply with the VersiFlex Specification prior to design or bid.

PART I GENERAL

1.01 DESCRIPTION

The VersiFlex Adhered Roofing System incorporates maximum 10' wide, 50-, 60- or 80-mil thick Polyester or Fiberglass reinforced VersiFlex Polyvinyl Chloride (PVC) membrane (white, gray, light gray, slate gray and tan) OR 10' wide 50-, 60- or 80-mil thick Polyester Reinforced VersiFlex KEE HP (High Performance) membrane (white, gray, light gray, slate gray and tan). Versico Insulation is mechanically fastened to the roof deck or secured with an approved adhesive and the membrane is fully adhered to the substrate with VersiFlex Low VOC Bonding Adhesive, Hydrobond Water-Based Adhesive or CAV-GRIP PVC Aerosol Contact Adhesive. Adjoining sheets of membrane are overlapped and joined together with a minimum 1-1/2" wide heat weld.

1.02 QUALITY ASSURANCE

- A. This roofing system must be installed by a Versico Authorized Contractor in compliance with shop drawings as approved by Versico.
- B. Upon request, an inspection shall be conducted by a Field Service Representative of Versico to ascertain that the membrane roofing system has been installed according to Versico's published specifications and details applicable at the time of bid. This inspection is to determine whether a warranty shall be issued. It is not intended as a final inspection for the benefit of the owner.
- C. For specific code approvals achieved with this system, refer to Versico's PVC Code Approval Guide, DORA (Directory of Roof Assemblies), FM Approvals or UL Fire Resistance Directory for Roofing Materials and Systems.

1.03 SUBMITTALS

- A. To ensure compliance with Versico's minimum warranty requirements, the following projects should be forwarded to Versico for review prior to installation, preferably prior to bid.
 - 1. Air pressurized buildings, canopies, and buildings with large openings, cold storage buildings or freezer facilities, adhered roofing system projects over 100' in height or projects where the PVC membrane is expected to come in direct contact with petroleum-based products, waste products (i.e., grease, oil, animal fats, etc) and other chemicals.
- B. Shop drawings must be submitted to Versico by the Versico Authorized Roofing Contractor along with a completely executed Copy-A – Job Approval Request for approval. Approved shop drawings are required for inspection of the roof and on projects where on-site technical assistance is requested.

1.04 GENERAL DESIGN CONSIDERATIONS

- A. It is the responsibility of the building owner or his/her designated representative to verify structural load limitation. In addition, a core cut may be taken to verify weight of existing components when the roofing system is to be specified on an existing facility.
- B. On new construction projects, especially in cold climate regions, moisture generated due to the construction process could adversely impact various components within the roofing assembly if not addressed. Refer to Design References DR-01-21 "Construction Generated Moisture" included in the Versico Technical Manual.
- C. On structural concrete decks, when a vapor retarder is not used, gaps in the deck along the perimeter and around penetrations must be sealed along with vertical joints between tilt-up panels, if present, to prevent infiltration of hot humid air and possible moisture contamination resulting from condensation. This is specifically important when adhesive is used to attach the roof insulation.

CAUTION: If left unaddressed, collected moisture could weaken insulation boards and facers resulting in a blow-off or increase the probability of mold growth.

- D. Vapor Retarders



1. Versico does not require a vapor retarder for the protection of the membrane; however, it should be considered by the specifier for the protection of the roofing assembly (i.e. primarily insulation, underlayment and adhesives). The following criteria should be considered by the specifier:
 - a. Use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly, should be investigated by the specifier.
 - b. In the generally temperate climate of the United States, during the winter months, water vapor flows upward from a heated, more humid interior toward a colder, drier exterior. Vapor retarders are more commonly required in northern climates than in southern regions, where downward vapor pressure may be expected and the roofing membrane itself becomes the vapor retarder.

1.05 WARRANTY

Table I Adhered Membrane Systems Warranty Options

Years	Thermoplastic Membranes (VersiFlex PVC/KEE HP PVC)				
	55, 72, 80 or 90 mph	100 mph	110 to 120 mph	Minimum Membrane Thickness (4)	Additional Puncture Coverage
	Adhered	Adhered	Adhered		
5,10, or 15 year	√	√	√	VersiFlex PVC/KEE HP PVC 50-mil (3)	Not Available - 80-mil Membrane Required
20 year	√(2)	√	√	VersiFlex PVC 60-mil OR VersiFlex KEE HP PVC 50 mil (3)	Not Available - 80-mil Membrane Required
25 year (5)	√	√	N/A	VersiFlex PVC 80-mil OR VersiFlex KEE HP PVC 60-mil (1)(3)	Available – See Below
30 year (5)	√	√	N/A	VersiFlex PVC/KEE HP PVC 80-mil (1)(3)	Available – See Below

Notes: N/A = Not Acceptable √ = Acceptable

- (1) Sure-Flex PVC/KEE HP PVC 60- or 80-mil membranes in Slate Gray are limited to Warranties Up to 20 Year.
- (2) HydroBond Adhesive may be used for projects with 20 year maximum warranty and wind speed coverage up to 90 mph.
- (3) VersiFlex FRS membrane can be used in lieu of VersiFlex Polyester reinforced membrane for Adhered Roofing Systems Only.
- (4) All “T-Joints” must be overlaid with appropriate flashing material when using 80-mil membrane.
- (5) Enhancements may be required for certain flashing details. Published details must be referenced for applicable requirements.

<p>VersiFlex PVC/KEE HP PVC Membrane</p> <p>Hail</p> <ul style="list-style-type: none"> -1" Dia. Hail Coverage requires a minimum of 60-mil VersiFlex PVC/KEE HP PVC Adhered to cover board. -2" Dia. Hail Coverage requires 80-mil VersiFlex PVC/KEE HP PVC Adhered to cover board. <p>Additional Design Requirement:</p> <ul style="list-style-type: none"> -Cover board (SecurShield HD, SecurShield HD Plus, SecurShield HD or DuraFaceR Composite, DensDeck Prime, or Securock – Adhered Only). <p>Puncture</p> <ul style="list-style-type: none"> -Minimum 60-mil PVC/KEE HP with Polyester Reinforcement.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.
- B. Store VersiFlex membrane on provided pallets in original undisturbed plastic wrap.
- C. Job site storage temperatures in excess of 90°F may affect shelf life of curable materials (i.e., adhesives and sealants).

- D. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60°F before use.
- E. Do not store adhesive containers with opened lids due to loss of solvent, which will occur from flash off.

1.07 JOB CONDITIONS

- A. Refer to Versico Technical Manual for applicable project specific Job Conditions.

PART II PRODUCTS

2.01 GENERAL

The components of this roofing system are to be products of Versico or accepted by Versico as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted by Versico**, is not the responsibility of Versico and is **expressly disclaimed** by the Versico Warranty.

2.02 MEMBRANE

VersiFlex (white, gray, light gray, slate gray and tan) 50-mil (100' long), 60-mil (80' long) or 80-mil (65' long) reinforced Polyvinyl Chloride (PVC) membrane OR VersiFlex KEE HP (white, gray, light gray, slate gray and tan) 50-mil (100' long), 60-mil (80' long) or 80-mil (65' long) polyester reinforced membranes are used for this system. Membrane sheets are 10' and 81" wide. For physical properties of the membrane, refer to Thermoplastic Specification.

2.03 RELATED MATERIALS

Versico Flexible DASH Adhesive, Hydrobond Adhesive, VersiFlex Non-Reinforced Flashing, Reinforced Cover Strips, Cut Edge Sealant, Water Cut-Off Mastic, PVC and KEE HP Membrane Cleaner, One-Part Pourable Sealer, Heat Weldable Walkway Pads, Pre-Molded Inside/Outside Corners, Pipe Flashings, LIQUISEAL Liquid Flashing and Sealant Pockets.

PART III EXECUTION

3.01 GENERAL

- A. When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and to minimize construction traffic on completed sections. This will include completion of all flashings, terminations and daily seals.
- B. Follow criteria outlined in the VersiFlex Specification to prepare the roof deck or the existing substrate prior to application of the new roofing system.

3.02 ROOF DECK CRITERIA

- A. The proper substrate shall be provided by the building owner. The structure shall be sufficient to withstand normal construction loads and live loads.
- B. Defects in the roof deck must be reported and documented to the specifier, general contractor and building owner for assessment. The Versico Authorized Contractor shall not proceed with installation unless the defects are corrected.
- C. Refer to Versico Technical Manual for acceptable decks and the applicable Versico Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE PREPARATION

- A. On retrofit-recover projects, cut and remove wet insulation, as identified by the specifier, and fill all voids with new insulation so it is relatively flush with the existing surface.
- B. For all projects, substrate must be even without noticeable high spots or depressions, and must be free of accumulated water, ice or snow.
- C. Clear the substrate of debris and foreign material. Fresh bitumen based roof cement must be removed or concealed.

3.04 INSTALLATION

Refer to the applicable Safety Data Sheets and Technical Data Bulletins for cautions and warnings.

A. Insulation Attachment

1. Versico Flexible DASH Adhesive may be specified for insulation securement in full spray or beads with spacing as outlined in the

Versico Technical Manual.

2. Versico Fasteners may be used, when specified, to secure Versico Insulation at the specified density outlined in the Versico Technical Manual.

B. Membrane Installation and Heat Welding

1. Sweep loose debris from the substrate.
2. Position VersiFlex Membrane over acceptable substrate and fold membrane back so half the underside is exposed.
3. For VersiFlex PVC, apply membrane bonding adhesive as follows:
 - a. Apply Sure-Flex Low VOC Bonding Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate. Allow adhesive to flash-off and roll coated membrane into coated substrate. Avoid wrinkling.
 - b. Apply Hydrobond Water-Based Adhesive to the exposed substrate with a roller or airless sprayer at the appropriate coverage rate. HydroBond is designed as a one-sided, "wet" lay-in adhesive with no flash-off time and the adhesive must not dry during the application process. Once the adhesive is applied, roll the membrane in place. Avoid wrinkling.
 - c. Apply CAV-GRIP PVC Aerosol Contact Adhesive to the exposed substrate area with supplied spray gun at the appropriate coverage rate. Allow to flash-off and roll membrane into coated substrate. Avoid wrinkling Versico PVC Bonding Adhesive, Aqua Base 120 Bonding Adhesive or Hydrobond Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate.
4. For VersiFlex KEE HP PVC, apply Low-VOC PVC Bonding Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate. Allow adhesive to flash-off and roll coated membrane into coated substrate. Avoid wrinkling.
5. Brush down the bonded section of membrane immediately with a soft bristle push broom.
6. Fold back the unbonded half of the sheet and repeat the bonding procedure.
7. Install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2 inches to provide for a minimum 1-1/2" hot air weld. It is recommended that all splices be shingled to avoid bucking of water.
8. Heat weld the membrane sheets a minimum of 1-1/2" with an Automatic Heat Welding Machine.

C. Additional Membrane Securement

The membrane must be secured at the perimeter of each roof level, roof section, expansion joint, curb, skylight, interior wall, penthouse, etc., at any angle change which exceeds 2" per horizontal foot and at all other penetrations in accordance with Versico's published details.

D. Membrane Flashing

Flash all walls and curbs with VersiFlex PVC/KEE HP reinforced membrane. Non-Reinforced membrane shall be limited to inside and outside corners, field fabricated pipe seals, scuppers and Sealant Pockets where the use of pre-molded accessories are not practical. Terminate the flashing in accordance with an appropriate Versico Termination Detail.

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Versico
P.O. Box 1289, Carlisle, PA 17013
800-479-6832
www.versico.com

**Physical properties of VersiFlex Membrane can be referenced in Part II, "Products" of the Thermoplastic Specification.
Attach copies of the applicable Versico Details that pertain to the individual project to complete a bid package submittal.**

VersiFlex™ FRS PVC Membrane

(All material minimum thickness)



Overview

Versico's VersiFlex FRS PVC is an advanced-formula, heat-weldable PVC membrane used exclusively in fully adhered applications that utilize liquid-applied bonding adhesives. Designed to provide long-term weatherability and performance, thick PVC-based top and bottom plies encapsulate the membrane's internal fiberglass reinforcement, enhancing dimensional stability. The membrane's smooth surface facilitates a permanent weld for a consistent, watertight, monolithic roof assembly. All FRS PVC membranes are manufactured to exceed minimum thickness specifications.

Features and Benefits

- Manufactured to exceed minimum thickness specifications
- Available in white, gray, and tan in a variety of thicknesses
- Excellent chemical resistance
- Exceptional heat weldability and low-temperature flexibility
- Resistant to punctures, UV, ozone, and oxidation
- Impact Resistance – UL-2218 Class 4 Rating
- Simple installation process
- Reflective FRS PVC can help reduce cooling and air conditioning costs

Installation

With minimal labor and few components required, VersiFlex FRS PVC is quick and easy to install.

Fully Adhered Roofing System

The fully adhered system starts with a suitable surface upon which the CAV-GRIP® PVC, VersiFlex PVC Low-VOC Bonding Adhesive, or HydroBond™ Water-Based PVC Bonding Adhesive will be applied.

REVIEW CURRENT VERSICO SPECIFICATIONS AND DETAILS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Precautions

- Sunglasses that filter out ultraviolet light are strongly recommended when working on reflective membranes. Roofing technicians should dress appropriately and wear sunscreen to protect skin from the sun.
- Smooth surfaces become slippery due to frost and ice build up. Exercise caution during cold conditions to prevent falls.
- Care must be exercised when working close to a roof edge when surrounding area is snow-covered as the roof edge may not be clearly visible.
- Use proper stacking procedures to ensure sufficient stability of the materials.
- Exercise caution when walking on wet membrane. Membranes may be slippery when wet.
- Store FRS PVC membrane in its original, undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. FRS PVC membrane that has been exposed to the weather or contaminated with dirt must be prepared with PVC Membrane Cleaner prior to hot-air welding.

Supplemental Approvals, Statements and Characteristics

1. VersiFlex FRS PVC membrane meets or exceeds the requirements of ASTM D4434 Standard Specification for Poly (Vinyl Chloride) Sheet Roofing. VersiFlex FRS PVC membrane is classified as type II as defined by ASTM D4434.
2. VersiFlex FRS PVC membrane was tested for dynamic puncture resistance per ASTM D5635 using the most recently modified impact head. 50-mil membrane was watertight after an impact energy of 10.0 J (14.75 ft-lbf) which passes the ASTM D4434 requirement.
3. VersiFlex FRS PVC membrane was tested for static puncture resistance per ASTM D5602 and exceeded 33 lbf (145 N) which passes the ASTM D4434 requirement.

VersiFlex FRS PVC Membrane

(All material minimum thickness)

Typical Properties and Characteristics

Physical Property	ASTM D4434 Requirement	60-mil Minimum	80-mil Minimum
Thickness over scrim, in. (mm) ASTM D7635	0.016 (0.40) minimum	0.034 (0.86)	0.040 (1.02)
Weight, lbs/ft ² (kg/m ²)	No Requirement	0.44 (2.15)	0.54 (2.63)
Breaking Strength lbf/in (kN/m), MD x CD, ASTM D751 Proc A	55 (10) minimum	80 x 85 (14 x 15)	80 x 85 (14 x 15)
Elongation at break percentage, MD x CD, ASTM D751 Proc A	250 x 220 minimum	310 x 250	380 x 290
Tear Resistance lbf (N), MD x CD, ASTM D1004	10 (45) minimum	20 x 20 (88 x 88)	25 x 25 (111 x 111)
Low Temperature Bend, no cracks 5x at -40°C, ASTM D2136	-40°C	PASS	PASS
Linear Dimensional Change, percentage ASTM D1204, 6 hours at 176°F	0.1 maximum	0.05 x 0.05	0.06 x 0.05
Ozone Resistance, no cracks 7x, ASTM D1149, 168 hours at 100pphm	PASS	PASS	PASS
Water Absorption Resistance, mass percentage, ASTM D570, 166 hours at 158°F water	± 3.0 maximum	PASS	PASS
Puncture Resistance – Dynamic, J (ft-lbf), ASTM D5602	10 (7.4)	PASS	PASS
Puncture Resistance – Static, lbf (N), ASTM D5602	33 (145)	PASS	PASS
Xenon-Arc Resistance, no cracks/crazing 10x, ASTM G155, 0.35 W/m ² at 340-nm & 63°C B.P.T. 12,600 kJ/m ² total radiant exposure 10,000 hours	PASS	PASS	PASS
Properties After Heat Aging ASTM D3045, 56 days at 176°F Breaking strength, percent retained Elongation, percent retained	90 min. 90 min.	PASS	PASS

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

Radiative Properties for Cool Roof Rating Council (CRRC) and LEED®

Physical Property	Test Method	White PVC	Tan PVC	Gray PVC	Lt Gray PVC
CRRC - Initial Solar Reflectance	ASTM C1549	0.87	0.72	0.59	0.74
CRRC - Solar Reflectance after 3 years	ASTM C1549 (uncleaned)	0.70	0.56	0.49	0.64*
CRRC - Initial Thermal Emittance	ASTM C1371	0.89	0.87	0.89	0.88
CRRC - Thermal Emittance after 3 years	ASTM C1371 (uncleaned)	0.88	0.87	0.89	0.89*
Solar Reflective Index (SRI) Initial	ASTM E1980	110	88	70	91
Solar Reflective Index (SRI) SRI after 3 years	ASTM E1980	85	66	57	77*

* Rapid Ratings

LEED Information

Pre-consumer Recycled Content	10%
Post-consumer Recycled Content	0%
Manufacturing Location	Greenville, IL
Solar Reflectance Index (SRI), Initial	White: 108, Tan: 89, Gray: 69



A SINGLE SOURCE FOR SINGLE-PLY ROOFING

800.992.7663 • www.versico.com

TPO AND PVC T-TOP AND SQUARE TOP VENTS



Overview

Available in TPO and PVC versions, Versico's T-Top and Square Top Vents are designed to allow air to flow freely through the vent while preventing water from infiltrating the roofing system.

VersiWeld® TPO T-Top and Square Top Vents are constructed using 60-mil (1.5 mm) TPO Detail Membrane, which provides enhanced flexibility and allows for the elimination of T-Joint Covers at three-way membrane intersections.

VersiFlex™ PVC T-Top and Square Top Vents are constructed using 60-mil (1.5 mm) KEE HP Membrane, which provides excellent long-term weathering protection.

TPO and PVC T-Top Vents are white in color and are manufactured in standard sizes of 4", 6", and 8". Additional sizes and colors are available on a special-order basis.

TPO and PVC Square Top Vents are white in color and are available in a nominal size of 8". Additional colors are offered on a special-order basis. Custom sizes of Square Top Vents are not available.

Versico's TPO and PVC T-Top and Square Top Vents are part of the Certified Fabricated Accessory (CFA) program. CFAs are the only factory-fabricated TPO and PVC accessories that meet the stringent quality tolerances to be included in a Versico warranted roofing system.

Features and Benefits

- Provides a substantial labor savings compared to field-fabrication
- Flexible TPO Detail Membrane allows for the elimination of T-Joint Covers at three-way membrane intersections
- Provides a more consistent, professional appearance than field-fabrication

Installation

1. After cutting the appropriate-sized hole through the membrane and substrate, secure the vent sub-base to the deck with proper fasteners.
2. Heat-weld the TPO or PVC base flange to the deck membrane.
3. Once the weld area is completely cool, check all splices for voids and cold-welds with a seam probe. Make any needed repairs.
4. For TPO applications, apply TPO Cut-Edge Sealant to all edges of the vent flanges that are located on the deck.

REVIEW VERSICO SPECIFICATIONS AND DETAILS FOR COMPLETE INSTALLATION INFORMATION.

T-TOP VENTS TYPICAL PROPERTIES AND CHARACTERISTICS

Physical Property	4" TPO	6" TPO	8" TPO	4" PVC	6" PVC	8" PVC
Product Codes	326869	326882	326883	326868	326880	326881
Weight Per Item	4.1 lbs.	4.9 lbs.	6.1 lbs.	4.1 lbs.	4.9 lbs.	6.1 lbs.
Packaging	1 per box	1 per box	1 per box	1 per box	1 per box	1 per box
Diameter (Actual)	Top: 4.5" Bottom: 6.25"	Top: 6.5" Bottom: 8.25"	Top: 8.5" Bottom: 10.25"	Top: 4.5" Bottom: 6.25"	Top: 6.5" Bottom: 8.25"	Top: 8.5" Bottom: 10.25"
Base Size	Sub-base: 12" x 12" Boot: 18" x 18"	Sub-base: 12" x 12" Boot: 20" x 20"	Sub-base: 15" x 15" Boot: 22" x 22"	Sub-base: 12" x 12" Boot: 18" x 18"	Sub-base: 12" x 12" Boot: 20" x 20"	Sub-base: 15" x 15" Boot: 22" x 22"
Overall Height	10.5"	11.5"	12.5"	10.5"	11.5"	12.5"

Sub-base material: 26 Ga. Galv with .060 Weldable Membrane Flange
Hood material: 26 Ga. Painted steel with Kynar coating

SQUARE TOP VENT TYPICAL PROPERTIES AND CHARACTERISTICS

Physical Property	8" TPO	8" PVC
Product Codes	326867	326866
Weight Per Item	3 lbs.	3 lbs.
Packaging	1 per box	1 per box
Height	Riser: 6.375" Overall: 7.5"	Riser: 6.375" Overall: 7.5"
Width	Hood: 10.25" Vent: 7.625"	Hood: 10.25" Vent: 7.625"
Base Size	Sub-base: 14" x 14" Boot: 20" x 20"	Sub-base: 14" x 14" Boot: 20" x 20"

Sub-base material: 26 Ga. Galv with .060 Weldable Membrane Flange
Hood material: 26 Ga. Painted steel

NET FREE AREA (SQ. IN.)

	NFA	NFA w/ 1/8" Screen
8" Square Top	50	38
4" T-Top	14	11
6" T-Top	31	23
8" T-Top	53	40

LEED® INFORMATION

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Locations	Mount Prospect, IL Piedmont, SC Woodland, WA
Solar Reflectance Index (SRI)	White: 99

GUARDIAN

FALL PROTECTION

RIDGE-IT ANCHOR

ANCHORAGE CONNECTOR

FEATURES & BENEFITS

- Highly durable stainless steel and zinc-plated steel
- Easy to install
- Discreet design
- Lightweight and durable
- Ideal for both residential construction and maintenance work
- Designed for permanent use on wpod-framed roofs



CONNECTION POINT

D-Ring

MATERIAL

Zinc-Plated Steel & Butyl strips for weatherproofing

COMPATIBLE

Fits any roof pitch

SHOWN:
PART #00500



SHOWN:
PART #00510

SPECIFICATIONS

STANDARDS:

OSHA 1910, OSHA 1926 Subpart M

WORKER CAPACITY:

130 - 420 lbs.

NOTES:

- Not repairable
- #00500 & #00510: 8 provided nails

MATERIALS:

Stainless steel
Zinc-plated steel
Butyl

PERFORMANCE:

- Maximum Users: 1

PART #	DESCRIPTION	SIZE/LENGTH	WEIGHT
00500	Ridge-It Anchor with 1 D-Ring	9 3/4"	0.8 Lbs
00510	Ridge-It Anchor with 2 D-Rings	17 1/2"	1.1 Lbs

APPLICATIONS



PERSONAL FALL ARREST:

Ridge-it Anchors may be used in Personal Fall Arrest applications to support:

- MAXIMUM 1 Personal Fall Arrest System (PFAS). Structure must withstand loads applied in the directions permitted by the system of at least 5,000 lbs.
- Maximum free fall is 6', or up to 12' if used in combination with equipment explicitly certified for such use.
- Applicable D-rings: Dorsal



RESTRAINT:

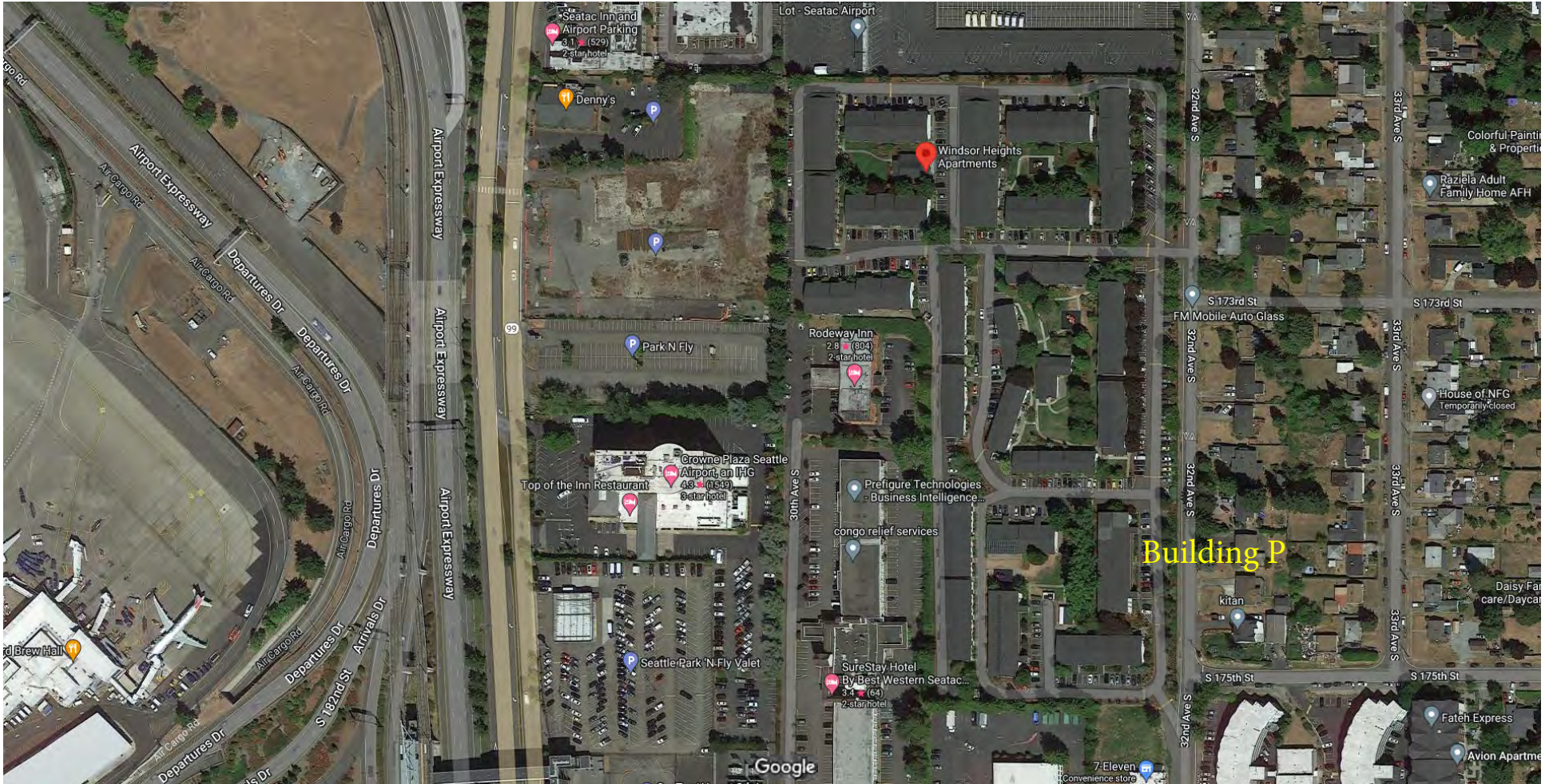
Ridge-it Anchors may be used in Restraint applications. Restraint systems:

- Prevent workers from reaching the leading edge of a fall hazard.
- Always account for fully deployed length of lanyard / SRL.
- Structure must withstand loads applied in the directions permitted by the system of at least 1,000 lbs.
- No free fall is permitted.
- Restraint systems may only be used on surfaces with slopes up to 4/12 (vertical/horizontal).
- Applicable D-rings: Dorsal, Chest, Side, Shoulder.



NEED MORE INFORMATION?

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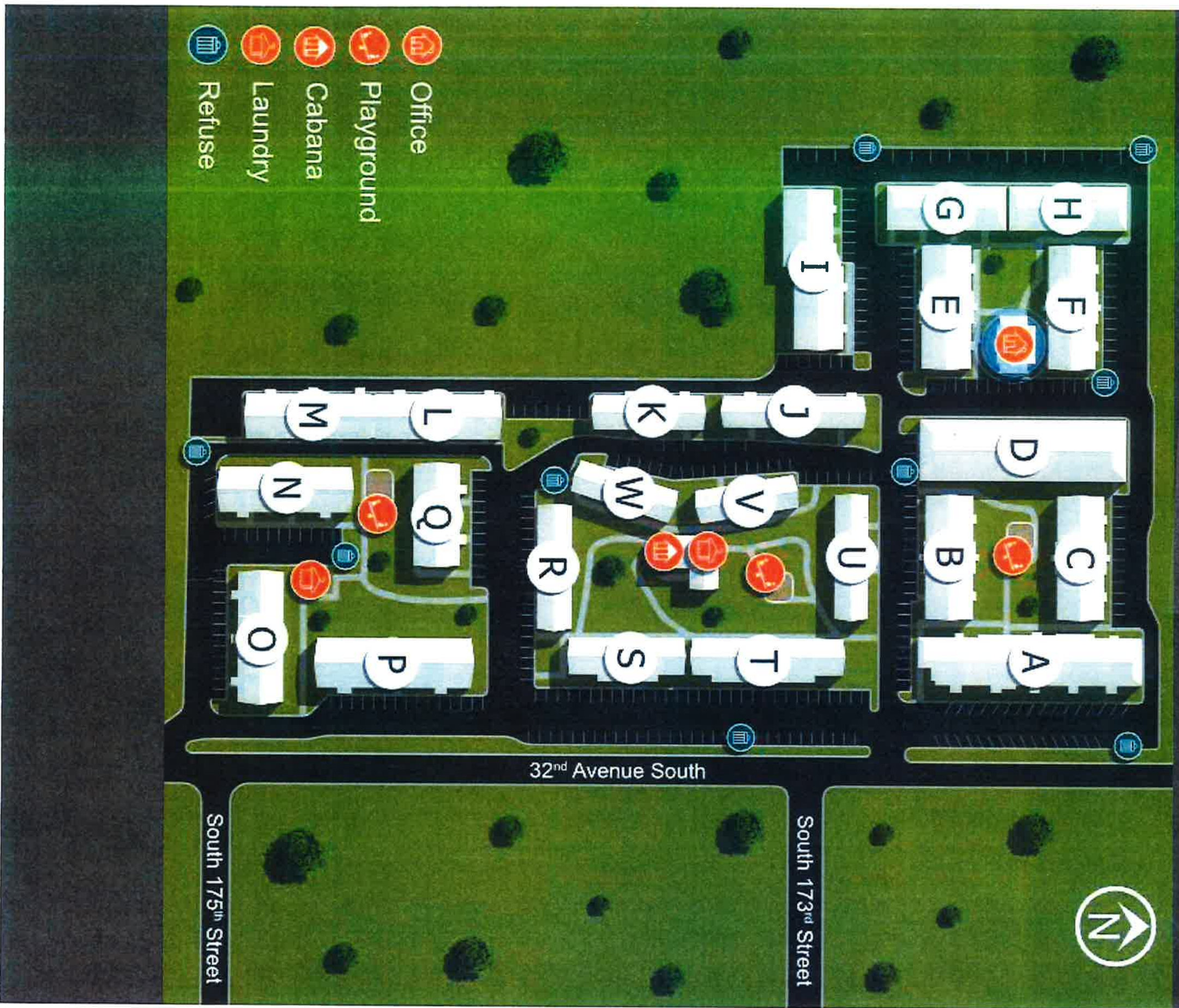


Windsor Heights - Building P Roofing
HW2201731
17229 32nd Ave. South, SeaTac, WA 98188

WINDSOR HEIGHTS APARTMENTS

17229 32ND AVENUE SOUTH

SEATAC, WA 98188



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. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;
 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 roofing 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.
- C. Subcontractors shall have had three years minimum experience licensed in Washington State 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
- E. The Bidder agrees to hold the base bid prices for sixty (60) days from date of bid opening.

1.4 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 the bid due date.
 - 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.

1.5 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.

1.6 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- 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.

INSTRUCTIONS TO BIDDERS

1.7 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 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
Seattle, WA 98188
Email: MichelleJ@kcha.org

1.8 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.

1.9 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.
- B. The retail sales tax does not apply to the gross contract price as indicated in WAC 458-20-17001.
- 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.

1.10 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. On contracts of one hundred fifty thousand dollars (\$150,000.00) or less, the requirement for a Performance and Payment Bond may, at Contractors option, be waived in lieu of an additional 5% (total 10%) retainage.

INSTRUCTIONS TO BIDDERS

1.11 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.

1.12 ADDITIVE OR DEDUCTIVE BID ITEMS

- 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.

1.13 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 price extensions and the total bid price. A discrepancy between a bid item price and the extended amount of any bid item shall be resolved by accepting the bid item price as correct.
- 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.

INSTRUCTIONS TO BIDDERS

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 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.

1.14 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. **Bonding, insurance certificates and endorsements, and an approved Statement of Intent to Pay Prevailing Wages** shall be submitted to the Owner within 14 days of award. A Notice to Proceed shall be issued immediately after receipt.
- C. **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.
- D. **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.

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.
Employer's Liability: \$1,000,000 per accident for bodily injury/sickness or disease.

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.

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.

GENERAL CONDITIONS

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.
- B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Owner may, in lieu of the bond, retain ten percent of the contract amount for a period of forty-five days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later.

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.

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

GENERAL CONDITIONS

- 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.
- 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.

GENERAL CONDITIONS

- 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.
 - 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.

GENERAL CONDITIONS

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 and Department of Labor & Industries.
- E. 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.
- F. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.

GENERAL CONDITIONS

- G. 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 written 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 the Change Order, pursuant to the Contract between the Owner and Contractor.

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.

GENERAL CONDITIONS

- 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 Premium: The costs of any change or additional premium of Contractor's liability insurance or bond premium arising directly from the changed Work. The costs of any change in insurance shall be added after overhead and profit are calculated.

B. Change Order Pricing - Unit Prices

- 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, bond premium, 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.

GENERAL CONDITIONS

- 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.

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.

GENERAL CONDITIONS

- 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;

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.

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.

GENERAL CONDITIONS

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.
- 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:

Roofing Replacement – PVC Membrane Contract Number: HW2201731
Windsor Heights Apartments – Building P

The undersigned, Legal Name of Bidder: _____ on this date: _____, 2022, 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 _____ (\$ _____)
(Including sales tax indicated in Instructions to Bidders)

Unit Price No. 2 _____ (\$ _____)
(Including sales tax indicated in Instructions to Bidders)

Unit Price No. 3 _____ (\$ _____)
(Including sales tax indicated in Instructions to Bidders)

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

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.

BID FORM

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 _____ 2022

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, Seattle, 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. General Conditions
8. Instructions to Bidders
9. Prevailing Wage Rates
10. Performance and Payment Bonds
11. Hazardous Material Report

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: Windsor Heights Roof Replacement – Bldg P

Contract No.: HW2201731

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 thirty (30) 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 **\$250.00** per day will be assessed for each calendar day that the Contractor exceeds the time for completion.

1.6 Contractor must be certified by the manufacturer, Versico, and must submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer along with the dates training was received.

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 _____, 2022

Contractor

Owner

President/Owner

[Name of Signer]

[Title of Signer]

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	<p style="text-align: center;">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.</p> <p style="text-align: center;">COMPANIES AFFORDING COVERAGE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center;">COMPANY A</td> <td>ABC Insurance Company</td> </tr> <tr> <td style="text-align: center;">COMPANY B</td> <td>DEF Insurance Company</td> </tr> <tr> <td style="text-align: center;">COMPANY C</td> <td>GHI Insurance Company</td> </tr> <tr> <td style="text-align: center;">COMPANY D</td> <td></td> </tr> </table>	COMPANY A	ABC Insurance Company	COMPANY B	DEF Insurance Company	COMPANY C	GHI Insurance Company	COMPANY D	
COMPANY A	ABC Insurance Company								
COMPANY B	DEF Insurance Company								
COMPANY C	GHI Insurance Company								
COMPANY D									
INSURED Vendor Name Street Address City, State, Zip									

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 RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES 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
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG	1,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				PERSONAL & ADV INJURY	1,000,000
	<input type="checkbox"/> 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
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE	
	<input checked="" type="checkbox"/> HIRED AUTOS					
<input type="checkbox"/> NON-OWNED AUTOS						
	GARAGE LIABILITY				AUTO ONLY-EA ACCIDENT	
	<input type="checkbox"/> ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	
					AGGREGATE	
	EXCESS LIABILITY				EACH OCCURRENCE	
	<input type="checkbox"/> UMBRELLA FORM				AGGREGATE	
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM					
C	WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY	XXX789	01/01/00	01/01/01	<input checked="" type="checkbox"/> STATUTORY LIMITS	
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: <input type="checkbox"/> INCL <input type="checkbox"/> 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 HW2201731 at Windsor Heights Apartments, 17229 32nd Ave S., 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**



Limited Good Faith Asbestos Inspection

“Windsor Heights Apartments”
(Buildings N, O & Q – roofs only)
17229 32nd Ave S
SeaTac, WA 98188



Prepared For
Mr. Darrell Westlake
King County Housing Authority
600 Andover Park W
Tukwila, WA 98188

Project Number	2022-0487
Inspection Date	July 18, 2022
Report Date	July 21, 2022
Inspected By	Tanveer Khan / Cameron Patterson
AHERA Certification	# 185718 / 183734
Certification Expiration Date	July 13, 2023 / February 4, 2023

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6.0	CONCLUSIONS AND RECOMMENDATIONS	9
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APPENDICIES

- A** Sample Locations (Floor Plan)
- B** Laboratory Analysis Results
- C** AHERA Certification & Laboratory Qualifications

1.0 SCOPE OF WORK

A Limited Good Faith Asbestos Inspection was conducted on the roofs of buildings N, O & Q at Windsor Heights apartment complex located at 17229 32nd Ave S, SeaTac, WA 98188 on July 18, 2022.

Tanveer Khan and Cameron Patterson, AHERA Certified Building Inspectors, conducted this inspection at the request of Mr. Darrell Westlake of King County Housing Authority.

The purpose of this inspection was to identify all suspect asbestos-containing roofing materials which would be impacted by future renovations. **As per client, the sampling was limited to the roofing materials of buildings N, O & Q only.** Destructive sampling methods were utilized to collect samples of suspect roofing materials. No soft/limited demolition was performed during this inspection. 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 inspection 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, Subpart M 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) 296-62-07721 (2), *Communication of hazards*, 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.

A floor plan indicating locations of samples collected by NVL personnel has been included in **Appendix A.**

2.0 INSPECTION 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 C.

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 linear feet / 6 square feet;
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 INSPECTION 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 the space was performed to identify suspect asbestos-containing materials. This 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 (7-01-07 Edition) Part 763, Subpart E, Appendix E, 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

Parcel Number	282304-9183
Year of Construction	1974
Building Square Footage	26, 619 ft ² (surveyed area)
County	King
General Building Type	This is the Windsor Heights apartment complex. The building surveyed are multi-story structures of wood framed construction.
Primary External Components	The exterior of the buildings was not part of this inspection.
Foundation Type	The foundation of the buildings was not part of this inspection.
Roofing Material(s)	The buildings have asphaltic tri-tab shingle roofing.
Window Type(s)	The windows were not part of this inspection.
Flooring	The flooring was not part of this inspection.
Thermal Systems With Insulation	The thermal system was not part of this inspection.
Finishing	The finishing was not part of this inspection.

5.0 FINDINGS

Building N

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2022-0487-3-1	1: Tri-tab shingle with mastic 2: Black felt	Roof – southeast side	1: ND 2: ND		
2022-0487-3-2	1: Tri-tab shingle with mastic 2: Black felt	Roof – northeast side	1: ND 2: ND		

Building O

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2022-0487-3-3	1: Tri-tab shingle 2: Brown paper with asphalt	Roof – lower level	1: ND 2: ND		
2022-0487-3-4	1: Tri-tab shingle 2: Brown paper with asphalt	Roof – mid level	1: ND 2: ND		
2022-0487-3-5	Tri-tab shingle with mastic	Roof – upper level	ND		

Building Q

Sample Number	Material Description by Layer	Location	Asbestos	Quantity**	Friable*
2022-0487-3-6	1: Tri-tab shingle 2: Brown paper with asphalt	Roof – lower level	1: ND 2: ND		
2022-0487-3-7	1: Tri-tab shingle 2: Tri-tab shingle 3: Brown paper with asphalt	Roof – upper level	1: ND 2: ND 3: ND		

ND None Detected

Any suspect material(s) not identified above should not be disturbed and should be tested immediately. All suspect materials must be treated as asbestos-containing until testing proves otherwise.

6.0 CONCLUSIONS AND RECOMMENDATIONS

There were **no** asbestos-containing roofing materials identified during the Limited Good Faith Asbestos Inspection at "Windsor Heights Apartments" located at 17229 32nd Ave S, SeaTac, WA 98188.

Contractors should be aware that concealed suspect asbestos-containing building materials may be uncovered during 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 / demolition are required to be removed & disposed in accordance with Washington State regulations. Washington State Department of Labor and Industries and PSCAA requires that the abatement be performed using Certified Asbestos Workers under the direct on-site supervision by a Certified Asbestos Supervisor.

NVL recommends that an AHERA inspector/project manager be on site at the time of renovation/demolition to ensure that any potentially asbestos-containing materials uncovered during the process of renovation/demolition be dealt with properly. NVL Labs, Inc. is making the following recommendations:

1. A copy of this inspection report should be maintained at the project site during the duration of renovation / demolition.
2. A copy of this inspection report should be provided to the General Contractor and any Sub Contractors working on the renovation / demolition project.
3. The inspection report is not intended to serve as a design / bidding document, or scope of work prior to renovation / demolition.
4. Abatement specifications should be prepared by a Hazardous Materials Consulting firm covering the regulated building materials that will be impacted by the renovations / demolition, and these specifications should be part of any contract documents prepared for this project.
5. A licensed asbestos abatement contractor must be utilized to remove any asbestos-containing materials that will be impacted by the planned renovation / demolition.
6. A Hazardous Materials Consulting Firm should provide project oversight and air monitoring during the removal of the asbestos-containing materials.

7.0 LIMITATIONS

The purpose of this Limited Good Faith Asbestos Inspection report is to document asbestos-containing building materials discovered on the roofs of buildings N, O & Q at Windsor Heights apartment complex located at 17229 32nd Ave S, SeaTac, WA 98188.

The purpose of this inspection was to identify all suspect asbestos-containing roofing materials which would be impacted by future renovations. **As per client, the sampling was limited to the roofing materials of buildings N, O & Q only.** Destructive sampling methods were utilized to collect samples of suspect roofing materials. No soft/limited demolition was performed during this inspection. 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 property owner, or their agent, authorizing this survey.

Inspected By



Tanveer Khan

AHERA Building Inspector
AHERA Certification: # 185718
Expiration Date: July 13, 2023

Reviewed By



Syed Hasan

Manager Field Services
AHERA Certification: # 185713
Expiration Date: July 13, 2023

Inspected By



Cameron Patterson

AHERA Building Inspector
AHERA Certification: # 183734
Expiration Date: February 4, 2023

Appendix A

Sample Locations (Floor Plan)

Windsor Heights Apartments
 17229 32nd Ave S
 Seatac, WA 98188
 Tel. (206) 439-0081
 Fax. (206) 439-1025

A

1	2	3	4	5	6	7	8	9	10
11	12	14	15	16	17	18	19	20	21
22	23	24	25	26	27	28	29	30	31

C

1	7
2	8
3	9
4	10
5	11
6	12

D

1	2	3	4	5	6	7
15	14	12	11	10	9	8
16	17	18	19	20	21	22
29	28	27	26	25	24	23

Level 1
Level 2

U

134	234
135	235
136	236
137	237
138	238
139	239

R

255	155
254	154
253	153
252	152
251	151
250	150

 Comm. Center Laundry

W

145	146	147	148	149
245	246	247	248	249

S

127	126	125	124
227	226	225	224
327	326	325	324

T

133	132	131	130	129	128
233	232	231	230	229	228
333	332	331	330	329	328

R

255	155
254	154
253	153
252	152
251	151
250	150

Q

117	217
116	216
115	215
114	214

 Laundry

N

112	111	110	109	108	107
212	211	210	209	208	207
312	311	310	309	308	307

P

118	119	120	121	122	123
218	219	220	221	222	223
318	319	320	321	322	323

O

201	101
202	102
203	103
204	104
205	105
206	106

F

1	7
2	8
3	9
4	10
5	11
6	12

E

12	6
11	5
10	4
9	3
8	2
7	1

J

6	5	4	3	2	1
12	11	10	9	8	7

K

6	5	4	3	2	1
12	11	10	9	8	7

L

6	5	4	3	2	1
12	11	10	9	8	7

M

6	5	4	3	2	1
12	11	10	9	8	7

H

7	6	5	4	3	2	1
15	14	12	11	10	9	8

G

7	6	5	4	3	2	1
15	14	12	11	10	9	8

I

1	9
2	10
3	11
4	12
5	14
6	15
7	16
8	17

NVL PROJECT # 2022-0481



Appendix B

Laboratory Analysis Results

July 20, 2022



Tanveer Khan
NVL Field Services Division
4708 Aurora Ave. N.
Seattle, WA 98103

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2212975.00

Client Project: 2022-0487

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Dear Mr. Khan,

Enclosed please find test results for the 7 sample(s) submitted to our laboratory for analysis on 7/18/2022.

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

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


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

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

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

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

Sincerely,


Munaf Khan, Laboratory Director



Testing

Lab Code: 102063-0

Enc.: Sample Results

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



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
 Address: 4708 Aurora Ave. N.
 Seattle, WA 98103

Batch #: 2212975.00
 Client Project #: 2022-0487
 Date Received: 7/18/2022
 Samples Received: 7
 Samples Analyzed: 7
 Method: EPA/600/R-93/116

Attention: Mr. Tanveer Khan
 Project Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Lab ID: 22379812 Client Sample #: 2022-0487-3-1

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 2 Description: Black asphaltic material with black granules

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Asphalt/Binder, Asphaltic Particles, Mineral grains	Glass fibers 53%	None Detected ND
Granules		

Layer 2 of 2 Description: Black asphaltic paper

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Binder/Filler, Asphaltic Particles	Cellulose 65%	None Detected ND

Lab ID: 22379813 Client Sample #: 2022-0487-3-2

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 2 Description: Black asphaltic material with multi-colored mineral grains and granules

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Asphalt/Binder, Asphaltic Particles, Mineral grains	Glass fibers 54%	None Detected ND
Granules		

Layer 2 of 2 Description: Black asphaltic paper

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Binder/Filler, Asphaltic Particles	Cellulose 67%	None Detected ND

Lab ID: 22379814 Client Sample #: 2022-0487-3-3

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 2 Description: Black asphaltic material with black granules

Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Asphalt/Binder, Asphaltic Particles, Granules	Glass fibers 57%	None Detected ND
Mineral grains		

Sampled by: Client		
Analyzed by: Muhammad Yousuf	Date: 07/19/2022	
Reviewed by: Munaf Khan	Date: 07/20/2022	Munaf Khan, Laboratory 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 EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
Address: 4708 Aurora Ave. N.
Seattle, WA 98103

Batch #: 2212975.00
Client Project #: 2022-0487
Date Received: 7/18/2022
Samples Received: 7
Samples Analyzed: 7
Method: EPA/600/R-93/116

Attention: Mr. Tanveer Khan

Project Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 2 of 2 **Description:** Brown paper with asphalt
Non-Fibrous Materials: Other Fibrous Materials:%
Binder/Filler, Asphaltic Particles Cellulose 72% **Asbestos Type: %**
None Detected ND

Lab ID: 22379815 **Client Sample #: 2022-0487-3-4**

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 2 **Description:** Black asphaltic material with black granules
Non-Fibrous Materials: Other Fibrous Materials:%
Asphalt/Binder, Asphaltic Particles, Granules Glass fibers 56% **Asbestos Type: %**
Mineral grains **None Detected ND**

Layer 2 of 2 **Description:** Brown paper with asphalt
Non-Fibrous Materials: Other Fibrous Materials:%
Binder/Filler, Asphaltic Particles Cellulose 68% **Asbestos Type: %**
None Detected ND

Lab ID: 22379816 **Client Sample #: 2022-0487-3-5**


Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 1 **Description:** Black asphaltic material with black granules
Non-Fibrous Materials: Other Fibrous Materials:%
Asphalt/Binder, Asphalt/Binder, Granules Glass fibers 58% **Asbestos Type: %**
Mineral grains **None Detected ND**

Lab ID: 22379817 **Client Sample #: 2022-0487-3-6**

Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 2 **Description:** Black asphaltic material with black granules
Non-Fibrous Materials: Other Fibrous Materials:%
Asphalt/Binder, Asphaltic Particles, Granules Glass fibers 57% **Asbestos Type: %**
Mineral grains **None Detected ND**

Sampled by: Client
Analyzed by: Muhammad Yousuf **Date:** 07/19/2022
Reviewed by: Munaf Khan **Date:** 07/20/2022

Munaf Khan, Laboratory 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 EPA 40 CFR Appendix E to Subpart E of Part 763 with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government



Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: NVL Field Services Division
 Address: 4708 Aurora Ave. N.
 Seattle, WA 98103

Batch #: 2212975.00
 Client Project #: 2022-0487
 Date Received: 7/18/2022
 Samples Received: 7
 Samples Analyzed: 7
 Method: EPA/600/R-93/116

Attention: Mr. Tanveer Khan
 Project Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188


Layer 2 of 2	Description: Brown paper with asphalt			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Asphaltic Particles	Cellulose 72%		None Detected ND

Lab ID: 22379818 **Client Sample #: 2022-0487-3-7**
 Location: "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

Layer 1 of 3	Description: Black asphaltic material with black/red granules			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Asphaltic Particles, Granules	Glass fibers 56%		None Detected ND
	Mineral grains			

Layer 2 of 3	Description: Black asphaltic material with black/white granules			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Asphalt/Binder, Asphaltic Particles, Granules	Glass fibers 57%		None Detected ND
	Mineral grains			

Layer 3 of 3	Description: Brown paper with asphalt			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Binder/Filler, Asphaltic Particles	Cellulose 76%		None Detected ND

Sampled by: Client		
Analyzed by: Muhammad Yousuf	Date: 07/19/2022	
Reviewed by: Munaf Khan	Date: 07/20/2022	

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

ASBESTOS LABORATORY SERVICES



Company NVL Field Services Division	NVL Batch Number 2212975.00
Address 4708 Aurora Ave. N. Seattle, WA 98103	TAT 3 Days AH No
Project Manager Mr. Tanveer Khan	Rush TAT
Phone (206) 547-0100	Due Date 7/21/2022 Time 3:30 PM
Cell (206) 799-2916	Email tanveer.k@nvlabs.com
	Fax (206) 634-1936

Project Name/Number: 2022-0487 **Project Location:** "Windsor Heights"-17229 32nd Ave S Seatac, WA 98188

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

Total Number of Samples 7 **Rush Samples** _____

Lab ID	Sample ID	Description	A/R
1	22379812	2022-0487-3-1	A
2	22379813	2022-0487-3-2	A
3	22379814	2022-0487-3-3	A
4	22379815	2022-0487-3-4	A
5	22379816	2022-0487-3-5	A
6	22379817	2022-0487-3-6	A
7	22379818	2022-0487-3-7	A

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

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Rachelle Miller		NVL	7/18/22	1530
Analyzed by	Muhammad Yousuf		NVL	7/19/22	
Results Called by					
<input type="checkbox"/> Faxed <input type="checkbox"/> Emailed					

Special Instructions: _____

Date: 7/18/2022
 Time: 3:33 PM
 Entered By: Rachelle Miller

CHAIN of CUSTODY SAMPLE LOG

2212975

INDUSTRIAL HYGIENE SERVICES
LABORATORY • MANAGEMENT • TRAINING

Client NVL Laboratories Inc
 Street 4708 Aurora Ave N
Seattle, WA 98103
 Project Manager Syed Hasan
 Project Location "Windsor Heights" 17229 32nd Ave S
Seatac, WA 98188

NVL Batch Number _____
 Client Job Number 2022-0487
 Total Samples 7
 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 Hr:

Email address DarrellW@kcha.org

Phone: (206) 574-1230 Fax: (206) 357-2441 Direct No (206) 693-6415

<input type="checkbox"/> Asbestos Air	<input type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Asbestos Bulk	<input checked="" type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM BULK	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Det. Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Chromium (Cr)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Lead (Pb)	<input type="checkbox"/> Copper (Cu)
<input type="checkbox"/> Cr 6	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> Nickel (Ni)
		<input type="checkbox"/> Soil	<input type="checkbox"/> Paint Chips in %		<input type="checkbox"/> Zinc (Zn)
		<input type="checkbox"/> Paint Chips in cr			
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: Good Damaged (no spillage) Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		2022-0487-3-1		
2		↓ 3-2		
3		3-3		
4		↓ 3-4		
5		3-5		
6		↓ 3-6		
7		3-7		
8		28		
9		7		
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TAN KHAN	Jaweed Khan	NVL	7-18-22	12:00 Pm
Relinquished by	TAN KHAN	Jaweed Khan	NVL	7-18-22	
Received by	Rachelle Miller		NVL	7/18/22	1530
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



Appendix C

AHERA Certification & Laboratory Qualifications

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 102063-0

NVL Laboratories, Inc.
Seattle, WA

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

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2021-10-01 through 2022-09-30

Effective Dates



Dana S. Laman
For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 102063-0

Bulk Asbestos Analysis

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

A handwritten signature in blue ink, appearing to read "Dana S. Laman".

For the National Voluntary Laboratory Accreditation Program

Certificate of Completion

This is to certify that
Tanveer Khan

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

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

EPA Provider # 1085

185718
Certificate Number



Jul 13, 2022
Date(s) of Training

Expires in 1 year.

Exam Score: N/A
(if applicable)

A handwritten signature in black ink, appearing to read "AZ", written over a horizontal line.

Instructor: Andre Zwanenburg

Certificate of Completion

This is to certify that
Cameron Patterson
has satisfactorily completed
24 hours of training as an
AHERA Building Inspector

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

EPA Provider # 1085

183734
Certificate Number



Feb 2 - 4, 2022 Expires in 1 year.

Date(s) of Training

Exam Score:
(if applicable)

A blue ink signature of David Welch, written in a cursive style.

Instructor: David Welch

ARGUS PACIFIC, INC / 21905 64th AVE W, SUITE 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206.285.3373 / ARGUSPACIFIC.COM