

# Development Services

## From Concept to Construction

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More Contact Info (<http://www.portlandoregon.gov/bds/article/519984>)



### APPEAL SUMMARY

**Status:** Decision Rendered

|  |  |
|--|--|
| <b>Appeal ID:</b> 22278  | <b>Project Address:</b> 1945 SE Harrison St  |
| <b>Hearing Date:</b> 1/8/20  | <b>Appellant Name:</b> Katie Holmquist   |
| <b>Case No.:</b> M-002   | <b>Appellant Phone:</b> 530-219-7604   |
| <b>Appeal Type:</b> Mechanical   | <b>Plans Examiner/Inspector:</b> Paul Ilg, David Wood, Kathy Aulwes  |
| <b>Project Type:</b> residential   | <b>Stories:</b> 1 <b>Occupancy:</b> R-3 <b>Construction Type:</b> V-B  |
| <b>Building/Business Name:</b>   | <b>Fire Sprinklers:</b> No   |
| <b>Appeal Involves:</b> Alteration of an existing structure, occ Change from Basement to ADU | <b>LUR or Permit Application No.:</b>  |
| <b>Plan Submitted Option:</b> pdf [File 1]   | <b>Proposed use:</b> Residential, ADU (Unit B) to be Tenant occupied, Main Unit (Unit A) to remain owner-occupied. |

### APPEAL INFORMATION SHEET

#### Appeal item 1

|                     |  |
|---------------------|--|
| <b>Code Section</b> | M1503 Range Hoods  |
| <b>Requires</b>     | <p>M1503 Range Hoods.</p> <p>Domestic kitchen cooking appliances shall be equipped with a ducted range hood or down-draft exhaust system meeting all of the following criteria:</p> <ul style="list-style-type: none"> <li>-Min 150 cfm intermittent exhaust rate; and</li> <li>-Single-wall ducting with smooth interior surface; and</li> <li>-Air-tight ducting equipped with a backdraft damper; and</li> <li>-Exhaust directly to the outdoors</li> </ul> <p>M1503.1 General.</p> <p>Range hoods shall discharge to the outdoors through a single-wall duct.</p> <p>M1503.3 Kitchen exhaust rates.</p> <p>Where domestic kitchen cooking appliances are equipped with ducted range hoods or down-draft exhaust systems, the fans shall be sized in accordance with Section M1507.4.</p> <p>M1507.4 Local exhaust rates.</p> <p>Local exhaust systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table M1507.4.</p> <p>In the case where the area to be exhausted is a Kitchen, an exhaust rate of 100 cfm intermittent or 25 com continuous is required.</p> |

**Code Modification or  
Alternate Requested**
**Proposed Design**
**SUMMARY OF INTENT OF APPEAL:**

Omission of ducted range hood in Accessory Dwelling Unit conversion, and request for approval of proposed alternate of: Provision of small, electric (non-gas) induction cooktop surface in combination with adjacent window, design for increased cross-ventilation, and proximate bathroom ventilation.

**PROPOSED DESIGN:**

This appeal is very similar to Appeal no. 14783, and relates to the conversion of an existing basement to a small Accessory Dwelling Unit (ADU). The ADU is 350-SF within a 1,400-SF residence in the Ladd's Addition Historic District. The ADU has been constructed per the approved plans, indicating a small 2-pot electric induction cooktop to fulfill requirements for facilitation of food preparation in the unit without a range hood vented to the exterior.

The ADU is very small and the kitchen was located to take advantage of an existing sink, and so could not have reasonably been located elsewhere. There is an operable window directly in front of the cooktop. Additionally, the front door is approximately ten feet away, there is an egress window on the opposite western wall, and another operable window is located in the bathroom. Together these windows provide ample cross ventilation. The Kitchen-adjacent bathroom has been constructed with a 110-CFM exhaust fan, exhausting directly to the outdoors.

The installed electric cooktop has a 120V plug-in connection and is comparable to other devices which do not require a range hood, such as a coffeemaker, toaster, microwave, or hot plate. Moreover, an induction cooktop surface plate was specifically selected for its low waste heat: the unit heats the pan and the pan only.

Plans were approved without the requirement for a range hood for the electric cooktop exhausting directly to the outdoors; and at no time during plan review, nor the construction process, nor mechanical inspections was it indicated that a range hood would be required. Rough-in mechanical inspection approval was received 7/1/2019 from Paul Ilg. The ceilings and all walls have been closed and tiled, per the photos in the Attachment PDF. Most significantly, because of the way the foundation walls step, there is no wall area directly behind the burner to mount a range hood on. An island hood could be considered, but these are 30 inches wide and would block both the sink and the window: It would require the kitchen to be completely rebuilt. The hood cannot vent to the east toward SE 20th St, as Title 33, 33.445.320, requires all new vents to go to non-street facing facades: however, the joists run north/south through-out the basement. Nor can a vent readily run and penetrate to the north: the existing stairs to the Main Unit's backdoor are located here (attached to the wall); the ADU ceiling carries a required 1-Hour fire rating; and the cavity is fully and newly insulated to meet STC requirements. Finally, a mechanical soffit cannot be dropped, as this would drop the ceiling height below the required ceiling height minimum and put the duct in conflict with the home's concrete foundation walls, which run directly to the underside of the joists.

The proposed and constructed design -- per approved plans -- specifies a non-gas and very small electric cooktop unit that will not produce gas-related combustion bi-products or fumes, such as those that a true 'stove', 'range', or 'oven' would produce. The cooktop is comparable to common kitchen appliances for which manufacturer specifications do not require mechanical ventilation or exhaust systems with replacement air for safe household use. It exists in a safely ventilated space. Finally, it exists in a location where reasonable accommodation of the requirement is impossible.

**Reason for alternative (A) FEASIBILITY:**

(1) Existing Conditions: The location of the ADU kitchen is based on the location of the existing and retained sink, located at the East exterior wall on the street-facing side of the building. The hood cannot vent to the east as 33.445.320 requires all new vents to go to non-street facing facades and joists are running north/south further preventing this. Venting can also not run to the north, as the existing stairs to the house kitchen are there, the ceiling carries a required 1-Hour fire rating, and the cavity is insulated to meet STC requirements. Finally, a mechanical soffit cannot be dropped, as this would drop the ceiling height below the required min ceiling height and put the duct in conflict with the home's concrete foundation walls, which run directly to the underside of the joists.

(2) Due to construction being completed on the ADU, alterations to accommodate installation of an exterior exhaust range hood at this time would require substantial demolition, and would delay the project, driving up project costs and delaying the long-term rental of the unit.

**(B) ALTERNATIVE WILL PROVIDE EQUIVALENT HEALTH, LIFE SAFETY AND FIRE PROTECTION:**

**(1) Location for Optimal Ventilation:**

(1a) The electric cooktop has been located directly below the existing operable window in the Kitchen, within 2' of the clear window opening.

(1b) The electric cooktop is within 10' of the bathroom, which is exhausted directly to the outdoors, and has an additional operable window.

(1c) "M1503.3 Clearance" does not specify a maximum clear distance between an appliance or unit and required ventilation thereof.

**(2) Enhanced Ventilation by New Operable Window Area:**

(2a) The ADU 350-SF space has been designed with operable windows at both ends, operable windows in all distinct spaces - Kitchen, Sleeping room, and Bathroom - as well as a main entry to the ADU opening to the outdoors, totaling: 44sf (based on 9 sf egress, updated) of operable area for high cross ventilation in the modest ADU unit.

(2b) The new 9-SF (based on 9 sf egress, updated) operable window in the sleeping area was not required to meet safe egress requirements, but rather was designed by owner to increase light and ventilation within the ADU. This newly constructed window is located on the West wall, opposite all of the existing windows, and thus is critical to providing improved and safe through- and cross-ventilation within the ADU. A total of 44sf (based on 9 sf egress, updated) of operable window opening in a 350-SF Accessory Dwelling Unit is thought to provide sufficient ventilation to operate plug-in electric, standard-watt, appliances.

(3) Appliance Specification and Ventilation Requirements: The proposed and constructed design, per approved plans, specifies a non-gas and very small electric cooktop unit that will not produce any gas-related combustion by-products or fumes, such as those that a true 'stove', 'range', or 'oven' would produce, and is a conduction surface that minimized heat transfer to the air. Furthermore, the electric cooktop is comparable to common kitchen appliances for which manufacturer specifications do not require mechanical ventilation or exhaust systems with replacement air for safe household use.

(3a) The installed electric cooking unit is 120-V with plug-in connection, and is highly comparable to typical electrical kitchen appliances that do not require any form of ventilation per code, such as a coffemaker, toaster, microwave, or hotplate.

(3b) In the Oregon Residential Specialty Code a specific definition for 'range' is not given. In discussion with the City of Portland, the intent of code and requirements for kitchen design for

ADU conversions was discussed as: required to provide the means for ADU residents to fully engage in cooking activities and complete independent food preparation. Per dictionary definitions, a 'range' is defined as: "a cooking stove that has an oven and a flat top with burners or heating elements," (Merriam-Webster dictionary). The installed cooktop does not have an oven and is not a range. M1503 outlines ventilation and exhaust requirements for range hoods and kitchen ranges, ovens, and stoves.

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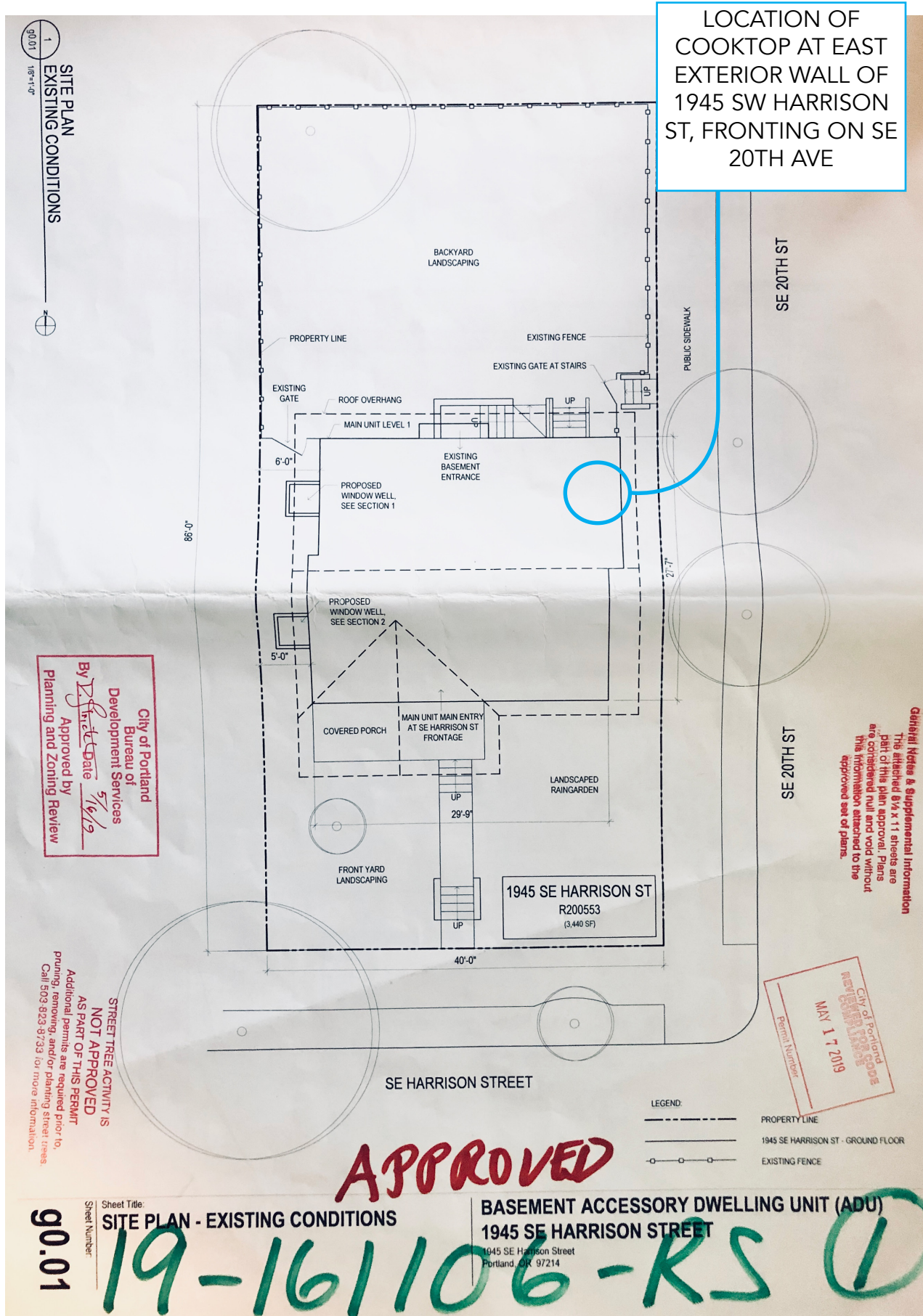
## APPEAL DECISION

**Omission of ducted range hood in ADU: Denied. Proposal does not provide equivalent Life Safety protection.**

**Appellant may contact John Butler (503 823-7339) with questions.**

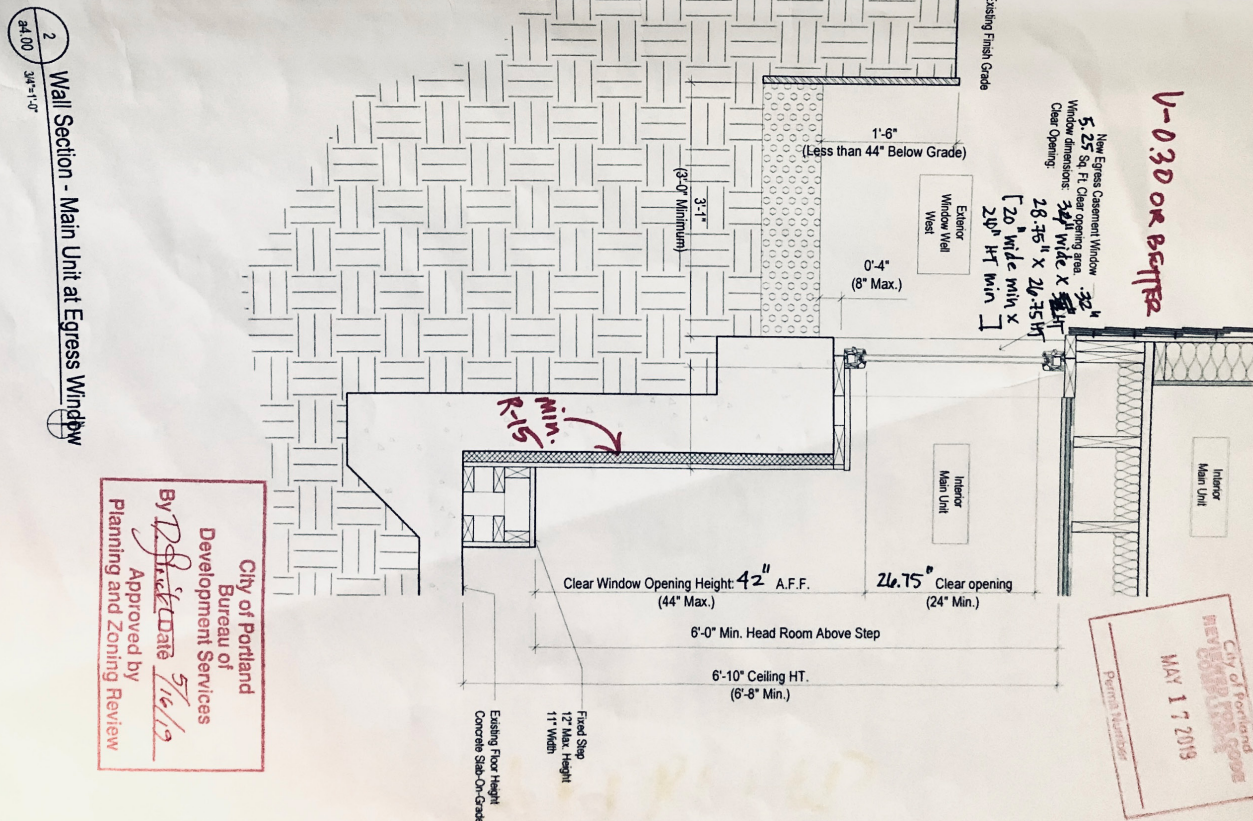
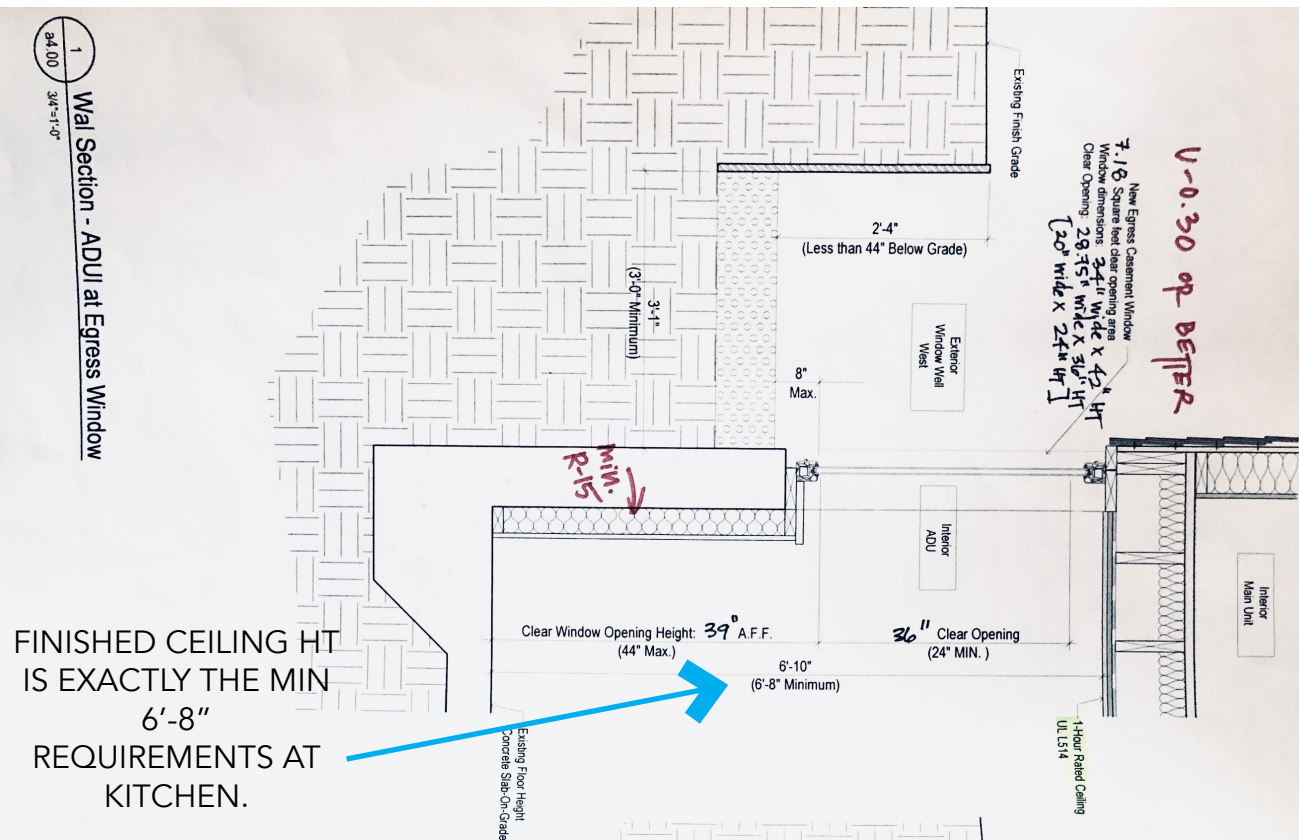
Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to [www.portlandoregon.gov/bds/appealsinfo](http://www.portlandoregon.gov/bds/appealsinfo), call (503) 823-7300 or come in to the Development Services Center.

## APPROVED PLANS



ATTACHMENTS TO APPEAL APPLICATION FOR 1945 SE HARRISON ST





Sheet Title: **BASEMENT FLOOR PLAN**

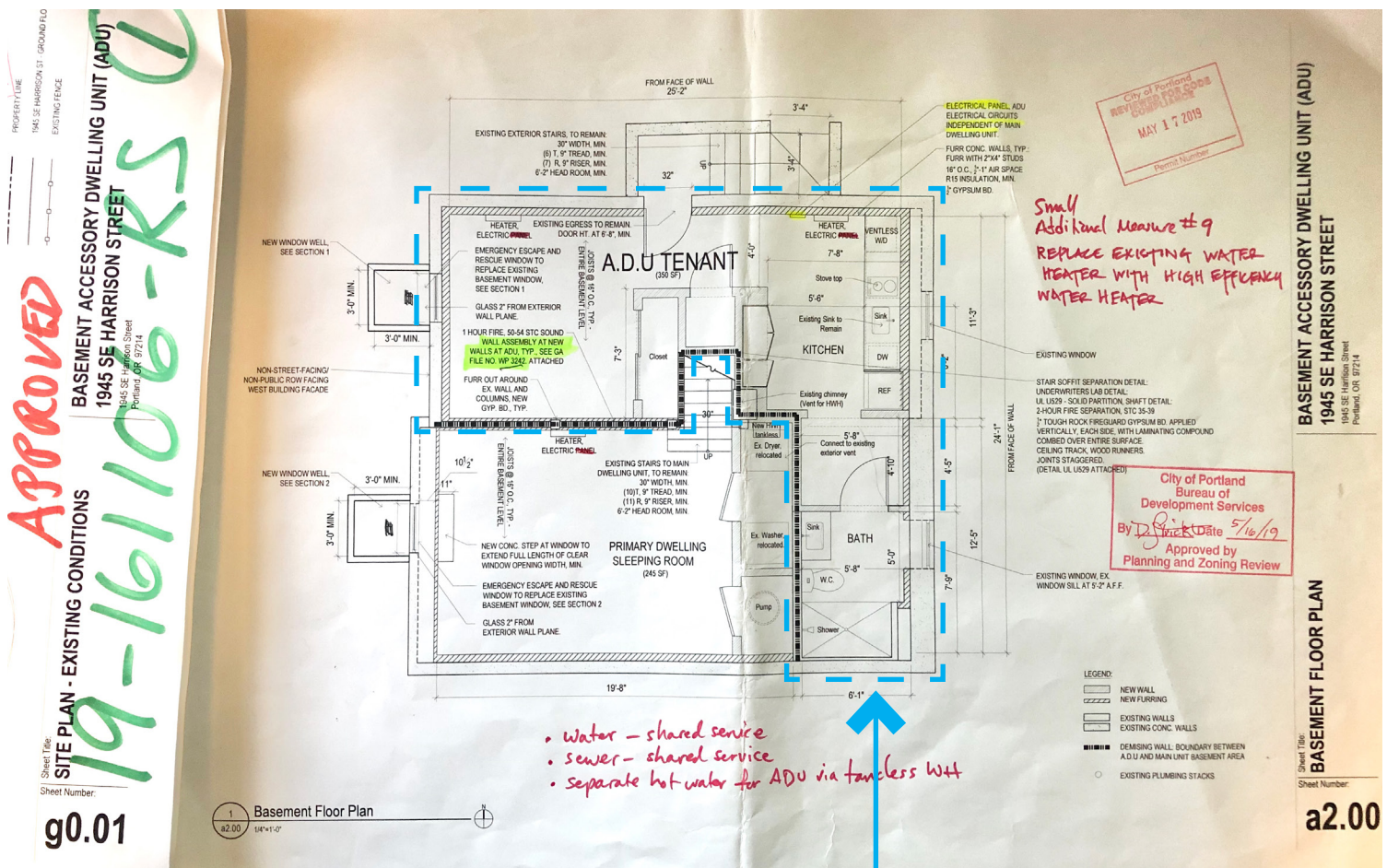
Sheet Number: **a4.00**

**BASEMENT ACCESSORY DWELLING UNIT (ADU)  
1945 SE HARRISON STREET**

1945 SE Harrison Street  
Portland, OR 97214



# a2.00 BASEMENT LEVEL FLOOR PLAN



350 SF ACCESSORY DWELLING UNIT, 1945 B

**A.D.U. TENANT**  
(350 SF)

- EXISTING EXTERIOR STAIRS, TO REMAIN:  
30" WIDTH, MIN.  
(6) T, 9" TREAD, MIN.  
(7) R, 9" RISER, MIN.  
6'-2" HEAD ROOM, MIN.
- HEATER, ELECTRIC PANEL
- EXISTING EGRESS TO REMAIN  
DOOR MIN. 6'-8", MIN.
- EMERGENCY ESCAPE AND RESCUE WINDOW TO REPLACE EXISTING BASEMENT WINDOW, SEE SECTION 1
- GLASS 2" FROM EXTERIOR WALL PLANE.
- 1 HOUR FIRE, 50-54 STC SOUND WALL ASSEMBLY AT NEW WALLS AT ADU, TYP., SEE GA FILE NO. WP 3242 ATTACHED
- FURR OUT AROUND EX. WALL AND COLUMNS, NEW GYP. BD., TYP.
- JOISTS @ 16" O.C., TYP. - ENTIRE BASEMENT LEVEL
- NEW CONG. STEP AT WINDOW TO EXTEND FULL LENGTH OF CLEAR WINDOW OPENING WIDTH, MIN.
- EMERGENCY ESCAPE AND RESCUE WINDOW TO REPLACE EXISTING BASEMENT WINDOW, SEE SECTION 2
- GLASS 2" FROM EXTERIOR WALL PLANE.

**PRIMARY DWELLING SLEEPING ROOM**  
(245 SF)

- EXISTING STAIRS TO MAIN DWELLING UNIT, TO REMAIN:  
30" WIDTH, MIN.  
(10) T, 9" TREAD, MIN.  
(11) R, 9" RISER, MIN.  
6'-2" HEAD ROOM, MIN.
- Closet
- KITCHEN
- Existing chimney (Vent for HWH)
- New HWH tankless Ex. Dryer, relocated
- Ex. Washer, relocated.
- Pump
- BATH
- Sink
- DW
- REF
- Ventless WD
- Stove top
- Existing Sink to Remain
- Connect to existing exterior vent
- Shower
- W.C.

**ELECTRICAL PANEL, ADU ELECTRICAL CIRCUITS INDEPENDENT OF MAIN DWELLING UNIT.**

**FURR CONC. WALLS, TYP.: FURR WITH 2"x4" STUDS 16" O.C., ½"-1" AIR SPACE R15 INSULATION, MIN. ⅝" GYPSUM BD.**

**STAIR SOFFIT SEPA UNDERWRITERS LA UL U529 - SOLID PAI 2-HOUR FIRE SEPA ½" TOUGH ROCK FIR VERTICALLY, EACH COMBED OVER EN CEILING TRACK, W JOINTS STAGGERE (DETAIL UL U529 AT**

**FROM FACE OF WALL**

**Small Addition REPLACE HEATER WATER**

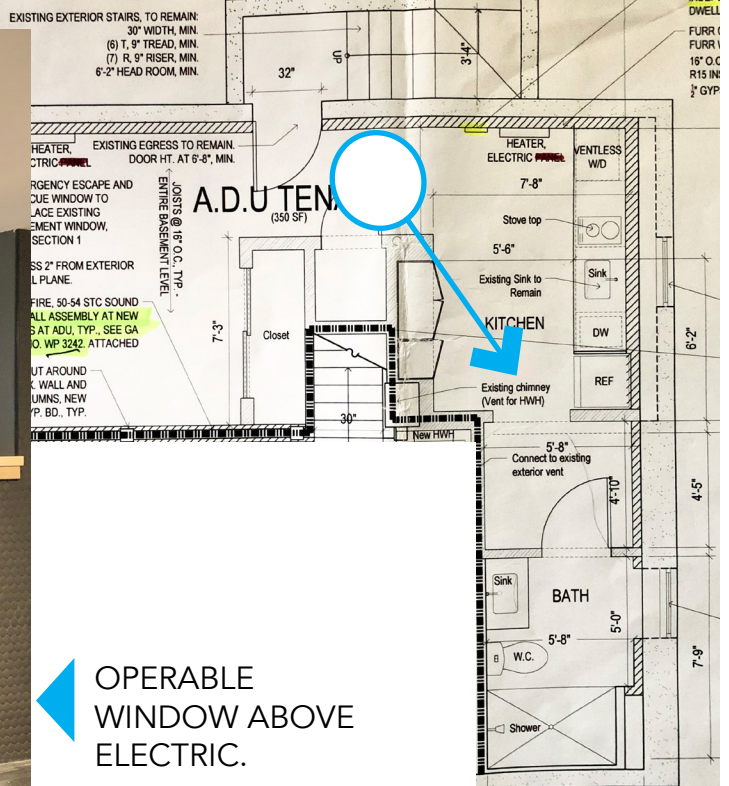
**EXISTING WINDOW**

**EXISTING WINDOW, WINDOW SILL AT 5'**

BATHROOM WITH OPERABLE WINDOW AND EXHAUST FAN, EXHAUSTING DIRECTLY TO THE EXTERIOR

ALL JOISTS RUNNING IN  
NORT-SOUTH DIRECTION  
THROUGHOUT BASEMENT,  
INCLUDING AT COOKTOP





NON-CONTINUOUS  
WALL ABOVE  
COOKTOP AT  
CONCRETE WALL.

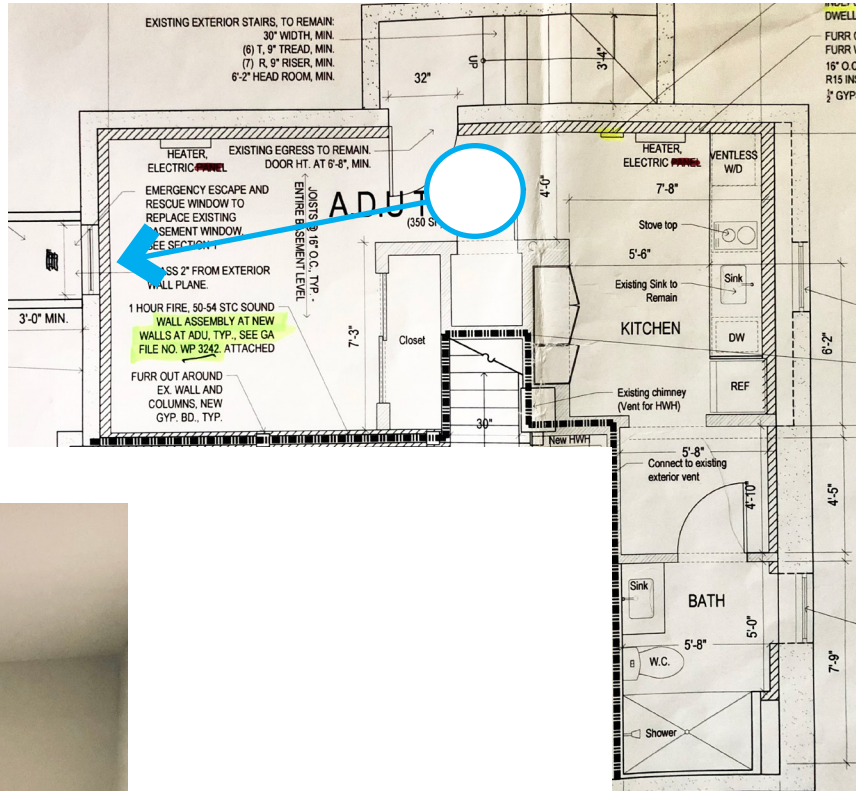


MIN. CEILING HT  
ABOVE COOKTOP.



# PHOTOS OF CONSTRUCTED COOKTOP

VIEW FROM KITCHEN  
WEST TOWARD NEW  
LARGE OPERABLE EGRESS  
WINDOW.



MAIN ADU  
DOOR  
TO THE WEST