Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 15477, item #1 (8/2/17) for additional information

Appeal ID: 15766	**Project Address:** 2517 SE 82nd Ave
Hearing Date: 9/6/17	**Appellant Name:** Patrick Sullivan
Case No.: B-001	**Appellant Phone:** 5038472174
Appeal Type: Building	**Plans Examiner/Inspector:** Thomas Ng
Project Type: commercial	**Stories:** 4 **Occupancy:** R-2, A-2, S-2 **Construction Type:** V-A
Building/Business Name: The Jade	**Fire Sprinklers:** Yes - Full NFPA 13
Appeal Involves: Erection of a new structure,Reconsideration of appeal,other: Submitting additional requsted documentation for appeal 15477 as requested by Thomas Ng	**LUR or Permit Application No.:** 17-187357-CO
Plan Submitted Option: pdf [File 1] [File 2]	**Proposed use:** Mixed-Use Multi-Family

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	2014 OSSC 1812
Requires	Section 1812.1 Scope. The provisions of this section apply to new Group R-2 and R-3 occupancies constructed in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties for which initial building permits are issued on or after April 1, 2011 Section 1812.3.2 – Subfloor Preparation. A layer of gas permeable material shall be placed under all concrete slabs and other floor systems that directly contact the ground and are within the walls of the living spaces of the building, to facilitate future installation of a sub-slab depressurization system, if needed. Section 1812.3.3 – Soil-gas-retarder. A minimum 6-mil polyethylene or equivalent flexible sheeting material shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly to serve as a soil-gas-retarder by bridging any cracks that develop in the slab or floor assembly and to prevent concrete from entering the void spaces in the aggregate base material. Section 1812.3.6 – Passive subslab depressurization system (basement or slab-on-grade). In basement or slab-on-grade buildings, subslab soil exhaust system ducts complying with Section 1812.3.7 shall be installed during construction… Section 1812.3.7 – Subslab soil exhaust system ducts (SSESD). SSESD's shall be provided in accordance with this section and shall run continuous from below the soil-gas-retarder to the termination point described in section 18.12.3.7.5…

Proposed Design

This appeal includes additional information requested As per discussion with Thomas Ng (see attached correspondence) regarding appeal 15477, Item #1. We have provided additional ventilation during unoccupied hours equivalent to continuously running at .02 cfm/sf. We have also provided a fan in the commercial shell space as requested to be in operation until the TI begins construction.

**

The Proposed building is a fully sprinkled, 4 story building of Type V-A construction. There are 3 stories of R-2 living units (27 total units) over 1 story of retail, support space, and a private parking garage.

Please consider the following:

a) There are no residential or living spaces that directly contact the ground floor of the building.
b) All ground floor support spaces such as water room, lobby, etc. are ventilated and exhausted per code for air changes and / or moisture control.
c) The open garage is naturally ventilated.
d) The shell space will need to meet, at minimum, a ventilation rate to control moisture. The code requires a minimum of 0.02 cfm/sf mechanical ventilation (IMC 406.1). The Owner will obtain separate TI building permits for the TI buildouts which is indicated on our drawings.
e) All spaces on the ground floor of the building will have a ventilation/ exhaust rates that exceed that which is required for radon control.
f) A vapor barrier is specified under all slab on grade areas.

**

Reason for alternative

This appeal submitted as requested by Thomas Ng. Previous appeal 15477 was held for additional information, which is provided herein.

The code compliant mechanical ventilation systems for the ground floor uses of office & assembly, support spaces, and the open garage meet the ventilation requirements of the mechanical code. Additionally, no residential living spaces are located on the ground floor and the ground floor spaces have ventilation and exhaust rates that exceed that which is required for radon control. Because of these conditions, we believe the building meets or exceeds the intention of the code to prevent radon gas impacts to residential spaces.

Similar appeals have been previously approved. See, for example, Appeal ID 13547, Appeal ID 12045, Appeal ID 10875, Appeal ID 10325, Appeal ID 9795, and Appeal ID 8416.

APPEAL DECISION

Omission of radon control measures in mixed use building: Granted as proposed.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

Patrick Sullivan

From: Ng, Thomas <Thomas.Ng@portlandoregon.gov>
Sent: Tuesday, August 22, 2017 8:09 AM
To: Patrick Sullivan
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Filed by Newforma

Patrick,
Please resubmit on line. Please coordinate with Donna or appeal technician for fee.

Thanks. Thomas

From: Patrick Sullivan [mailto:patricks@seradesign.com]
Sent: Friday, August 18, 2017 4:01 PM
To: Ng, Thomas <Thomas.Ng@portlandoregon.gov>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Thomas,

Confirmed, the system will run 8 to 6 Monday thru Sunday. To be clear you are asking us to submit a second appeal item and fee, or just submit online and note that this is additional information for appeal 15477?

I appreciate your patience with our review,

Patrick Sullivan
d: 503.847.2174
seradesign.com

From: Ng, Thomas [mailto:Thomas.Ng@portlandoregon.gov]
Sent: Friday, August 18, 2017 3:21 PM
To: Patrick Sullivan <patricks@seradesign.com>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Patrick,
I just want to confirm the system will be on from 8 to 6 Mon-Sun. If this is the case, please submit an appeal with the calculation and SOO for the alternate approach.

Thanks Thomas

From: Patrick Sullivan [mailto:patricks@seradesign.com]
Sent: Thursday, August 17, 2017 2:54 PM
To: Ng, Thomas <Thomas.Ng@portlandoregon.gov>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Thomas,

1) We will program the HVAC system to run for its main period of occupancy as 8:00am to 6:00pm. The system will turn on a second time 6 hours later and run from 12:00am to 2:00am. From there it is 6 hours until it kicks back on for the main occupancy at 8:00am. Running the ventilation system for 2 hours will adequately ventilate the ground floor space.

   .02cfm/sf X 2,700sf = 54cfm

   If we extrapolate the required ventilation rate for the total typical off-hours operation span of 14 hours (6:00pm to 8:00am) that would equate to a total air volume of 45,360 cubic feet.

   54cfm X (14hrs X 60min/hr) = 45,360cf

   The designed ventilation system will run at 509cfm. At that rate it will completely exchange the entire nights worth of air in 90 minutes.

   45,360cf / 509cfm = 90min

   We will run the system beyond this to a total of 2 hours to satisfy the requirement that an intermittent schedule be set no greater than 6 hours between on/off cycles.

2) We will update our mechanical plans to indicate an exhaust fan for the commercial space to be installed until the TI mechanicals are up and running, with a note that future systems by similarly controlled and operate under the same parameters as discussed in item #1.

Thank you very much,

Patrick Sullivan
d: 503.847.2174
seradesign.com

From: Ng, Thomas [mailto:Thomas.Ng@portlandoregon.gov]
Sent: Tuesday, August 15, 2017 3:20 PM
To: Patrick Sullivan <patricks@seradesign.com>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Patrick,

1) Please provide ventilation during off hours every 6 hour period (or continuous exhaust) and propose ventilation method during off hours. The calculation below should not include the regular hours.
2) Please provide system until tenant move in and note on plan the future system will have similar control on item 1.

Thanks and please let me know if you have any questions. Thomas

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From: Patrick Sullivan [mailto:patricks@seradesign.com]
Sent: Monday, August 14, 2017 3:36 PM
To: Ng, Thomas <Thomas.Ng@portlandoregon.gov>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Thomas,

Thank you for the follow-up. Please see my responses below and let me know your thoughts.

Much appreciated,

Patrick Sullivan
d: 503.847.2174
seradesign.com

From: Ng, Thomas [mailto:Thomas.Ng@portlandoregon.gov]
Sent: Monday, August 14, 2017 12:21 PM
To: Patrick Sullivan <patricks@seradesign.com>
Subject: RE: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Patrick,
The following is the comment for the appeal:

1) Please provide HVAC equipment SOO for the off-hour operations. The unit shall be continuous or operated intermittently every 6 hours during off hours/holidays. The minimum ventilation rate shall be 0.02 CFM/SF continuous or approved equal. Please provide calculation and SOO as part of the appeal.

   The ventilation system for the ground floor is currently only designed to run during hours of occupation. We can conservatively state that typical hours of operation will be 8am to 5pm, though in practice it is likely that the common room, lounge, and manager's office will have longer hours than that.

   Our contention is that during the hours of operation the ventilation system exhausts multiple times over the volume of air required to insulate the residential floors from the radon exposure. The ground floor area in question (minus the commercial TI area) is 2,700SF. At a ventilation rate of .02cfm/sf, that equals 54cfm for the whole ground floor.

   .02cfm/sf X 2,700sf = 54cfm

   If we extrapolate the required ventilation rate for this space over a full day (24 hours) that would equate to a total air volume of 77,760 cubic feet

   54cfm X (24hrs X 60min/hr) = 77,760cf

   As noted on ventilation schedule on sheet M001, the mechanical system for the ground floor space operates at 509cfm. At that rate the ground floor ventilation system would ventilate 77,760cf of air in 153 minutes.

   77,760cf / 509cfm = 152.7min

   Given that the hours of operation are about 9 hours per day (540 minutes) at a minimum, this means that on a typical day the ground floor will ventilate about 3.5X more air exchanges than would be required by code. As stated above the hours of operation for the lobby, lounge, and community spaces are likely to be longer than 9 hours. The lobby, lounge, and community rooms spaces are occupied 7 days per week, and therefore are also ventilated 7 days per week.

   It is our assessment that the ventilation system exchanges air sufficiently to meet the intent of the requirements set in OSSC section 1812, in accordance with several previously approved appeals of similar conditions.

2) Please show Commercial area has the same requirements as item 1. There is no mechanical system show on plan.

The commercial space is a shell only. We can install a continuous 100cfm fan temporarily to meet the ventilation requirements if that will meet your approval. The future tenant will address ventilation in their future design.

Thanks and please let me know if you have any questions. Thomas

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From: Patrick Sullivan [mailto:patricks@seradesign.com]
Sent: Thursday, August 10, 2017 9:45 AM
To: Ng, Thomas <Thomas.Ng@portlandoregon.gov>
Subject: JADE: Appeal 15477 Additional Info Requested - Radon Mitigation

Mr. Thomas Ng,

Please find the attached information as requested in appeal 15477 regarding Item #1 radon mitigation. Please let me know if this is sufficient to review the mechanical systems for the ground floor or if I can provide anything further that will help your review.

Thank you very much,

Patrick Sullivan, LEED Green Associate, SHP
d: 503.847.2174
o: 503.445.7372

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1ST FLOOR

SCALE = 1/8" = 1'-0"

GENERAL NOTES

A. ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. TYPICAL ALL UNITS.

B. VENTILATION IN ALL UNITS PROVIDED BY PTHP IN MAIN LIVING AREA AND IN ANY CONNECTING ROOMS WITH A SOLID DOOR, VIA NATURAL VENTILATION THROUGH OPERABLE WINDOWS WITH NO LIMITERS.

KEY NOTES

1. AIR HANDLER SUSPENDED FROM PT DECK. SEE DETAIL #11 ON M600. HOLD TIGHT TO CEILING.
2. CONDENSATE DRAIN TO OUTLET PROVIDED BY PLUMBING CONTRACTOR. INSTALL CONDENSATE PUMP AS REQUIRED.
3. ROUTE REFRIGERATION LINES TO OUTDOOR UNIT ON ROOF VIA SHAFT(S) PROVIDED.
4. WALL MOUNTED DIGITAL THERMOSTAT. MOUNT 48" AFF. VERIFY LOCATION WITH ARCHITECT. PROGRAM OCCUPIED HOURS TO BE 7 DAYS [MONDAY-SUNDAY] FROM 8:00AM - 6:00PM, THEN FROM 12:00AM - 2:00AM.
5. 6"Ø EXHAUST DUCT TO EXTERIOR LOUVER
6. AH-2 RETURN GRILLE AT CEILING 14X14 (561 CFM) 8X8 RETURN GRILLE AT OFFICE (150 CFM) BALANCE OUTSIDE AIR TO (89 CFM)
7. AH-1 RETURN GRILLE AT CEILING 20X14 (863 CFM) BALANCE OUTSIDE AIR TO (337 CFM)
8. EXPOSED SPIRAL DUCTWORK.
9. SIDEWALL SUPPLY DIFFUSER, WITH ODB. BALANCE TO CFM SHOWN.
10. ELECTRIC WALL HEATER SHOWN FOR REFERENCE ONLY. ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. TYPICAL ALL UNITS.
11. 20X12 SUPPLY DUCT
12. EXHAUST FAN TO RUN CONTINIOUS [4,800 SQFT X .02 CFM/SQFT = MINUMUM 96 CFM]
13. FUTURE TENANT SPACE: HVAC SYSTEM WILL NEED TO OPERATE CONTINIOUSLY AT A MINIMUM OF .02 CFM/SQFT OR. PROVIDE AN ARCHITECT APPROVED EQUAL OF INTERMITTENT OPERATION EVERY 6 HOURS MAXIMUM, 7 DAYS A WEEK, 24 HOURS A DAY.

ARCHITECTURE
URBAN DESIGN + PLANNING
INTERIOR DESIGN

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THE JADE

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REVISIONS
1 28-AUG-2017

DRAWN BY: SCOTT LEVERENZ
ISSUE DATE: 22-JUN-2017
PROJECT NO.: 1503037

BUILDING PERMIT SET

FLOOR PLAN
- LEVEL 1

M101