

Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201

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



APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 18960

Project Address: 123 SE 13th Ave

Hearing Date: 2/6/19

Appellant Name: Joshua Scott

Case No.: B-013

Appellant Phone: (206) 755-1290

Appeal Type: Building

Plans Examiner/Inspector: Thomas Ng

Project Type: commercial

Stories: 4 **Occupancy:** R-2 **Construction Type:** V-A

Building/Business Name:

Fire Sprinklers: Yes - Throughout, NFPA-13

Appeal Involves: Erection of a new structure

LUR or Permit Application No.: 18-275312-MT

Plan Submitted Option: pdf [File 1] [File 2] [File 3]
[File 4]

Proposed use: Multi-Family Residential

APPEAL INFORMATION SHEET

Appeal item 1

Code Section OSSC 3004.1

Requires 3004.1 Vents required. Hoistways of elevators and dumbwaiters with a hoistway height of 25 feet or more, as measured from the bottom floor landing to the underside of the hoistway ceiling, shall be provided with a means for venting smoke and hot gases to the outer air in case of fire.

Proposed Design Eliminates the vents entirely consistent with the 2015 IBC.

Reason for alternative The section on the hoistway ventilation has been eliminated from the 2015 IBC.

Based on reports from the ICC CTC Elevator Lobby Study Group (pg. 33 of the attached document) there is a specific concern of smoke movement related to stack effect when these vents are incorporated in the design. By eliminating the vents, the stack effect is reduced and should improve the overall life safety and egress in the building.

APPEAL DECISION

Omission of elevator hoistway venting per 2015 IBC: 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.

3004

Elevator Hoistway Venting

CHANGE TYPE: Deletion

CHANGE SUMMARY: The elevator hoistway venting provisions of Section 3004 have been deleted; such hoistways are no longer required to be vented to the exterior.

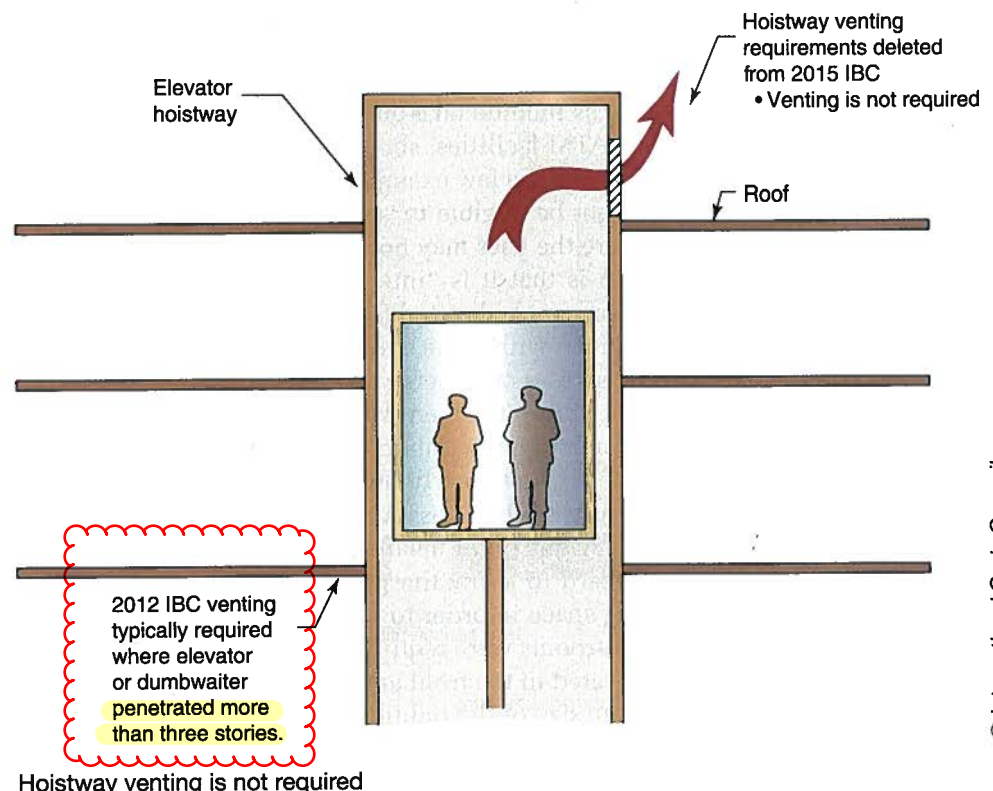
2015 CODE:

SECTION 3004 HOISTWAY VENTING

3004.1 Vents Required. Hoistways of elevators and dumbwaiters penetrating more than three stories shall be provided with a means for venting smoke and hot gases to the outer air in case of fire.

Exception: Venting is not required for the following elevators and hoistways:

1. In occupancies of other than Groups R-1, R-2, I-1, I-2 and similar occupancies with overnight sleeping units, where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Sidewalk elevator hoistways.
3. Elevators contained within and serving open parking garages only.
4. Elevators within individual residential dwelling units.



~~**3004.2 Location of Vents.** Vents shall be located at the top of the hoistway and shall open either directly to the outer air or through noncombustible ducts to the outer air. Noncombustible ducts shall be permitted to pass through the elevator machine room, provided that portions of the ducts located outside the hoistway or machine room are enclosed by construction having not less than the fire-resistance rating required for the hoistway. Holes in the machine room floors for the passage of ropes, cables or other moving elevator equipment shall be limited as not to provide greater than 2 inches (51 mm) of clearance on all sides.~~

~~**3004.3 Area of Vents.** Except as provided for in Section 3004.3.1, the area of the vents shall be not less than 3½ percent of the area of the hoistway nor less than 3 square feet (0.28 m²) for each elevator car, and not less than 3½ percent nor less than 0.5 square feet (0.047 m²) for each dumbwaiter car in the hoistway, whichever is greater. Of the total required vent area, not less than one-third shall be permanently open. Closed portions of the required vent area shall consist of openings glazed with annealed glass not greater than ¼ inch (3.2 mm) in thickness.~~

~~**Exception:** The total required vent area shall not be required to be permanently open where all the vent openings automatically open upon detection of smoke in the elevator lobbies or hoistway, upon power failure and upon activation of a manual override control. The manual override control shall be capable of opening and closing the vents and shall be located in an approved location.~~

~~**3004.3.1 Reduced Vent Area.** Where mechanical ventilation conforming to the *International Mechanical Code* is provided, a reduction in the required vent area is allowed provided that all of the following conditions are met:~~

- ~~1. The occupancy is not in Group R-1, R-2, I-1 or I-2 or of a similar occupancy with overnight sleeping units.~~
- ~~2. The vents required by Section 3004.2 do not have outside exposure.~~
- ~~3. The hoistway does not extend to the top of the building.~~
- ~~4. The hoistway and machine room exhaust fan is automatically reactivated by thermostatic means.~~
- ~~5. Equivalent venting of the hoistway is accomplished.~~

~~**3004.4 3002.9 Plumbing and Mechanical Systems.** Plumbing and mechanical systems shall not be located in an elevator hoistway enclosure.~~

~~**Exception:** Floor drains, sumps and sump pumps shall be permitted at the base of the hoistway enclosure provided they are indirectly connected to the plumbing system.~~

CHANGE SIGNIFICANCE: Elevator hoistways have been required to vent to the exterior of the building for decades by the IBC as well as its legacy codes. Over the years, numerous changes have occurred in areas such as elevator lobbies, energy conservation, automatically operated

3004 continues

3004 continued dampers, better smoke control and more sprinklered buildings. However, the venting requirements have remained and undergone minor revisions, although the exact purpose or need for the vents is no longer clear. Based on the lack of a specific detailed need for the venting and recognizing that the requirement has been removed from the 2010 edition of the ASME A17.1 *Safety Code for Elevators and Escalators*, the venting requirement has been deleted.

Although it appears that the original intent was focused more upon fire-fighting and post-fire overhaul, the operation of the vents or their being opened for relieving shaft pressures can also lead to smoke movement up through the shaft and on to other floors. In addition, the amount of conditioned air lost through the vent or unconditioned air allowed to enter into the building greatly affects energy conservation.

The only provision from the 2012 IBC that has been retained is the prohibition of installing plumbing and mechanical systems within the hoistway enclosure. This provision is still appropriate and therefore has been relocated to Section 3002.9 addressing other hoistway enclosure requirements.



No. 16-01
2015 International Building Code
(Ref.: ORS 455.060)

Statewide Alternate Methods are approved by the Division administrator in consultation with the appropriate advisory board. The advisory board’s review includes technical and scientific facts of the proposed alternate method. In addition:

- *Building officials shall approve the use of any material, design or method of construction addressed in a statewide alternate method;*
- *The decision to use a statewide alternate method is at the discretion of the designer; and*
- *Statewide alternate methods do not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.*

Code Edition: 2014 Oregon Structural Specialty Code (OSSC)
2015 International Building Code (IBC)

Date: March 3, 2016

Initiated by: Building Codes Division

Subject:

To allow the use of the *2015 International Building Code (IBC)* as an alternate method to the provisions of the *2014 Oregon Structural Specialty Code (OSSC)*.

Background:

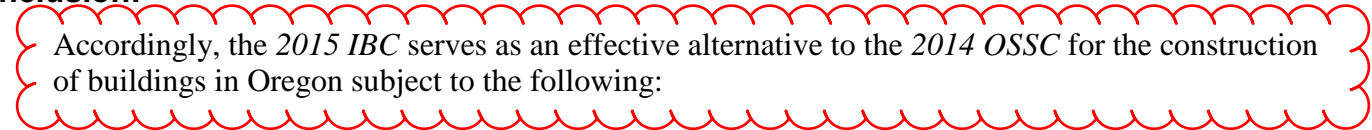
The *2014 OSSC*, based on the *2012 IBC*, is the adopted building code for the State of Oregon; this alternate method will allow designers to voluntarily use the *2015 IBC* as an additional choice to the development community.

Discussion:

Oregon Building Codes Division finds the *2015 IBC* to be a contemporary building code advancing the public safety and general welfare through a timely evaluation and recognition of the latest advancements in construction techniques, emerging technologies and science related to the built environment.

Conclusion:

Accordingly, the *2015 IBC* serves as an effective alternative to the *2014 OSSC* for the construction of buildings in Oregon subject to the following:



1. The use of this alternate method constitutes a separate compliance path from the *2014 OSSC* in that designs must comply with the *2015 IBC* in its entirety. Limited cross-over applications are allowed where approved by the building official.
2. Designs must also comply with the *2015 International Mechanical Code (IMC)* and the new construction provisions of *2015 International Fire Code (IFC) (Oregon Fire Code Alternate Method)*. Alternate methods for these respective codes are available through www.bcd.oregon.gov. Designs may comply with either the *2014 Oregon Energy Efficiency Specialty Code (OEESC)* or the *2015 International Energy Conservation Code (IECC)*.
3. Specified existing Oregon amendments as noted below are considered part of this ruling.

Contact:

Tony Rocco
Building Code Specialist
503-373-7529
Anthony.J.Rocco@oregon.gov

Rex Turner
Structural Program Chief
503-373-7755
Rex.L.Turner@oregon.gov

The technical and scientific facts for this Statewide Alternate Method are approved.

(Signature on file)

Mark Long, Administrator
Building Codes Division

April 6, 2016

Date

The following Oregon amendments are made part of the 2015 IBC Alternate Method Ruling (underlined text denotes addition to 2015 IBC, strikethrough denotes deletion to 2015 IBC):

CHAPTER 1 ADMINISTRATION

Replace with
2014 Oregon Structural Specialty Code (OSSC)
Chapter 1 Administration

CHAPTER 2 DEFINITIONS

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Energy Conservation Code*, *International Fuel Gas Code*, *International Fire Code*, *International Mechanical Code* or ~~*International Plumbing Code*~~, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies. Words of common usage are given their plain, natural, and ordinary meanings. Words that have well-defined legal meanings are given those meanings.

ACCESSIBLE SPACE. A space that complies with this code.

ADULT FOSTER HOME. See Section 310.2 and ORS 443.705(1).

AFFECTED BUILDINGS. Section 1102 and ORS 447.210(1).

AGRICULTURAL BUILDING. See ORS 455.315 and Appendix C. ~~A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.~~

AMERICANS WITH DISABILITIES ACT. See ORS 447.210(2).

APPROVED FIELD EVALUATION FIRM. An organization primarily established for purposes of testing to approved standards approved by the Authority Having Jurisdiction.

ARCHITECTURAL BARRIER. See ORS 447.210(3).

ARRAY. A mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required, to form a power-producing unit.

BASEMENT. A story that is not a story above grade plane (see "Story above grade plane").—This definition of "Basement" does not apply to the provisions of Section 1612 for flood loads.

BUILDING CODE. For the purposes of the Oregon Structural Specialty Code, building code shall mean the Oregon Structural Specialty Code (OSSC) as adopted by OAR 918-460-0010.

BUTT JOINT. A non-bonded plain, square joint a keyed joint or a doweled joint between two members, where primarily movement is at right angles to the plane of the joint. Sealant in a butt joint will generally be in tension or compression, but not shear.

~~CELL (Group I-3 occupancy). A room within a housing unit in a detention or correctional facility used to confine inmates or prisoners.~~

CELL. A housing unit in a detention or correctional facility for the confinement of not more than two residents.

CELL COMPLEX. A cluster or group of cells in a jail, prison or other detention facility, together with rooms used for accessory purposes, all of which open into the cell complex, and are used for functions such as dining, counseling, exercise, classrooms, sick call, visiting, storage, staff offices, control rooms or similar functions, and interconnecting corridors all within the cell complex.

CELL, DORMITORY. A housing area in a detention or correctional facility designated to house three or more residents.

CELL TIERS. Cells, dormitories and accessory spaces. Cell tiers are located one level above the other, and do not exceed two levels per floor. A cell tier shall not be considered a story or mezzanine.

~~CELL TIER. Levels of cells vertically stacked above one another within a housing unit.~~

CLUSTERED MAILBOXES. Clustered mailbox units, which are also known as Centralized Box Units or CBU's, are free-standing mailbox units with multiple locked mailboxes, along with parcel lockers and a slot for mail collection.

**CHAPTER 26
PLASTIC
** NO OREGON AMENDMENTS ****

**CHAPTER 27
ELECTRICAL**

Section 2702 Emergency and Standby Power Systems

[F]2702.1.2 **Electrical.** Emergency power systems and standby power systems required by this code or the *International Fire Code* shall be installed in accordance with this code, NFPA 70, NFPA 110 and NFPA 111.

Exception: Fuel supply requirements of NFPA 110, Section 5.1.2 may be reduced, when approved by the building official, based on the operational needs and uses of the facility served by the emergency or standby power system.

[F] 2702.2.17 **Group I-2. Automatic emergency power and/or standby power supplies shall be provided for all health care facilities, as defined in NFPA 99. The approved alternative power supply shall maintain operating energy to the facility for a period of not less than 90 minutes. Emergency and standby power supplies shall be installed as required in the *Electrical Code* and in accordance with NFPA 99.**

**CHAPTER 29
PLUMBING SYSTEMS**

Replace all provision in Chapter 29 of the 2015 *International Building Code* with all of the provisions from Chapter 29 of the 2014 Oregon Structural Specialty Code.

**CHAPTER 30
ELEVATORS AND CONVEYING SYSTEMS**

Section 3001 General

3001.2 Referenced standards. Except as otherwise provided for in this code, the design, construction, installation, *alteration*, repair and maintenance of elevators and conveying systems and their components shall conform to to ~~ASME A17.1/CSA B44, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 Elevator Code adopted under OAR 918-400-0455 for~~ construction in *flood hazard areas* established in Section 1612.3.

All references to the adopted elevator safety standard.

ASME A17.1 are governed by the *Elevator Code*. Inspections and plan review are performed only by inspectors authorized by the state. References to ASME A17.1 in this section are provided for clarification.

3001.3 Accessibility. Passenger elevators required to be accessible **shall conform to Chapter 11** or to serve as part of an *accessible means of egress* shall comply with Sections 1009 and 1109.7 **and the Elevator Code.**

Section 3003 Emergency Operations

[F] **3003.1 Standby power.** In buildings and structures where standby power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 3003.1.1 through 3003.1.4. **Elevators under standby power shall operate as required by ASME A17.1.**

[F] **3003.1.3 Two or more elevators.** Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to standby power within 60 seconds after failure of normal power where the standby power source is of sufficient capacity to operate all elevators at the same time. Where the standby power source is not of sufficient capacity to operate all elevators at the same time, **the operation of all elevators shall comply with ASME A17.1** all elevators shall transfer to standby power in sequence, return to the designated landing and disconnect from the standby power source. After all elevators have been returned to the designated level, at least one elevator shall remain operable from the standby power source.

Section 3004 Conveying Systems

3004.1 General. Escalators, moving walks, conveyors, personnel hoists and material hoists shall comply with the provisions of Sections 3004.2 through 3004.4 **ASME A17.1 and the Oregon Elevator Specialty Lifts, Part 1, whichever is applicable.**

Section 3005 Machine Rooms

3005.1 Access. An *approved* means of access shall be provided to elevator machine rooms and overhead machinery spaces **as required by ASME A17.1.**

Section 3007 Fire Service Access Elevator

3007.1 General. Where required by Section 403.6.1, every floor of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.9. Except as modified in this section, fire service access elevators shall be installed in accordance with this chapter and ~~ASME A17.1/CSA B44.~~



ROOFTOP UNIT (RTU) SCHEDULE

Table with 20 columns: TAG, MANUFACTURER, MODEL, SERVES, TYPE, GAS CONN. SIZE, GAS TYPE, GAS PRESSURE (PSI), INPUT (MBH), HTG EFFICIENCY, TEMP RISE (DEG F), CFM, EXTERNA L SP (in), HP, FRPM, VOLT/PH ASE, MCA (AMPS), MOC (AMPS), WEIGHT, DIMENSIONS (L)(W)(H), NOTES. Includes rows for RTU-1 and MAU-1.

- NOTES:
1. DISCONNECT AND POWER WIRING BY ELECTRICAL CONTRACTOR.
2. OUTDOOR ROOFTOP CONFIGURATION. PROVIDE WITH FACTORY CURB
3. WITH 2 INCH DISPOSABLE FILTERS.
4. 2-STAGE GAS VALVE
5. FLOW ARRANGEMENT IS 100% OUTSIDE AIR.
6. CONTROL WITH THERMOSTAT

AIR HANDLER / CONDENSING UNIT (IDU/ODU) SCHEDULE

Table with 18 columns: TAG, SERVES, MANUF., MODEL, CAPACITY, CFM, ELECTRICAL, SEER, COP/(HSPF) (COP), WEIGHT (LBS), SOUND POWER (dBA), DIMENSIONS (H"xW"xD"), NOTES. Includes row for IDU-1/ODU-1.

- NOTES:
1. POWER WIRING AND DISCONNECT BY E.C.
2. WALL MOUNTED UNIT; FIELD ROUTE CONDENSATE DRAIN TO APPROVED DRAIN.
3. WITH R-410A REFRIGERANT.
4. WITH 1/2" GAS, 1/4" LIQUID REFRIGERANT LINES.
5. MOUNT OUTDOOR UNIT ON WALL IN GARAGE

ELECTRIC HEATER SCHEDULE

Table with 10 columns: MARK, MANUF, MODEL, SERVING, CFM, E.S.P., VOLT/PH., WATTS, WEIGHT (LBS), NOTES. Includes rows for EWH-1, EWH-2, and EWH-3.

- NOTES:
1. POWER WIRING AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. CONTROL WITH INTEGRAL THERMOSTAT.
3. MOUNT AT 12" AFF.

EXHAUST FAN SCHEDULE

Table with 13 columns: MARK, MANUF, MODEL, SERVING, CFM, E.S.P., VOLT/PH., H.P./ (WATTS), RPM, NOISE (dBA), WEIGHT (LBS), DIMENSIONS, NOTES. Includes rows for CEF-1, EF-1, EF-2, EF-3, EF-4, REF-1, REF-2, and GEF-1.

- NOTES:
1. POWER WIRING AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. WITH INTEGRAL BACKDRAFT DAMPER.
3. WITH SPEED CONTROLLER.
4. CONTROL WITH TIMER
5. TO RUN CONTINUOUSLY.
6. INTERLOCK W/ RTU-1
7. CONTROL W/ LINE VOLTAGE T-STAT
8. CONTROL WITH CO SENSOR AND N/O SENSOR IN GARAGE. WIRED IN PARALLEL. FAN TO RUN CONTINUOUSLY AT MINIMUM SPEED (150 CFM). WHEN CO LEVEL IS ABOVE 25 PPM, FAN TO RAMP UP AND RUN AT FULL SPEED. WHEN CO IS BELOW SETPOINT, FAN RAMP DOWN TO MINIMUM SPEED.
9. PROVIDE SIDEWALL FAN WITH VFD AND VFD RATED MOTOR AND FAN HOUSING.

SCC: SF-1 & SF-2 not required per RFI-39

STAIR PRESSURIZATION FAN SCHEDULE

Table with 13 columns: MARK, MANUF, MODEL, SERVING, CFM, E.S.P., VOLT/PH., H.P./ (WATTS), RPM, NOISE (dBA), WEIGHT (LBS), DIMENSIONS, NOTES. Includes rows for SF-1 and SF-2.

- NOTES:
1. POWER WIRING AND DISCONNECT BY ELECTRICAL CONTRACTOR.
2. WITH MOTORIZED DAMPER.
3. TO OPERATE UPON ACTIVATION OF SMOKE DETECTOR AT EACH FLOOR (BY OTHERS).
4. PROVIDE WITH TWO BELT DRIVES.

AIR HANDLER / HEAT PUMP UNIT (AHU/HP) SCHEDULE

Table with 18 columns: TAG, SERVES, MANUF., MODEL, CAPACITY, CFM, ELECTRICAL, IEER/ (SEER), COP/ (HSPF), WEIGHT (LBS), SOUND POWER (dBA), DIMENSIONS (H"xW"xD"), NOTES. Includes rows for HP-1 and AHU-1.

- NOTES:
1. POWER WIRING AND DISCONNECT BY E.C.
2. FAN COIL UNIT; FIELD ROUTE CONDENSATE DRAIN TO APPROVED DRAIN.
3. WITH R-410A REFRIGERANT.
4. WITH 7/8" GAS, 3/8" LIQUID REFRIGERANT LINES.
5. WITH ECONOMIZER

STAIRWAY PRESSURIZATION CALCS

Table with 3 columns: STAIR NAME, CENTER STAIR, STAIR 2. Includes rows for NUMBER OF FLOORS, NUMBER OF DOORS PER FLOOR, DOOR DIMENSIONS, LEAKAGE AREA PER DOOR, EFFECTIVE LEAKAGE AROUND DOOR-SQ FT (A), MIN PRESSURE DIFFERENCE- IN WC (ΔP), MIN AIRFLOW REQ'D PER FLOOR, NUMBER OF FLOORS, MIN AIRFLOW (CFM) REQ'D FOR STAIRWAY, REQUIRED EXTRA RELIEF (CFM), and TOTAL MIN REQ'D AIRFLOW (CFM).

DIFFUSER SCHEDULE

Table with 6 columns: TAG, MANUFACTURER, MODEL, TYPE, SIZE, NOTES. Includes rows for SD-1, SD-2, EG, and RG.

GARAGE EXHAUST FAN CALCULATIONS

Table with 3 columns: GARAGE AREA, MIN EXHAUST, MAX EXHAUST, MIN EXHAUST CALC, MAX EXHAUST CALC, FINAL MAX EXHAUST, PER 2014 OMSC SECTION 404.2.

ROOF HOOD SCHEDULE

Table with 11 columns: MARK, MANUF, MODEL, AREA SERVED, CFM, PRESSURE DROP (IN WG), VELOCITY (FPM), INLET SIZE, OUTLET SIZE, WEIGHT (LBS), NOTES. Includes row for ERH-1.

- NOTES:
1. ROOF CURB.
2. MOTORIZED DAMPER.

Ankeny Street MicroApartments
1299 SE Ankeny Street Portland, OR

REVISIONS table with columns: NO, DATE, BY, DESCRIPTION. Includes a row for a revision.

MECHANICAL SCHEDULES

Table with 2 columns: DESIGNED, DRAWN, CHECKED, DATE, CADD FILE, JOB NUMBER. Includes values for each field.

M0.01

PERMIT SET 08/17/17



COOK

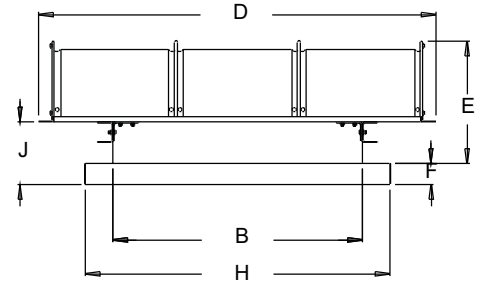
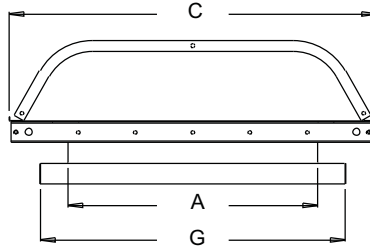
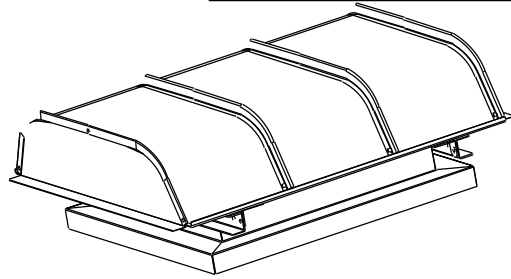
MARK: RH-1
PROJECT: ELEVATOR HOOD
DATE:

GR

Gravity Relief Ventilator

STANDARD CONSTRUCTION FEATURES:

Heavy gauge aluminum construction -
 Birdscreen - Radius throat - Rain gutter
 to prevent rain infiltration - Welded curb
 cap corners - Integral lifting lugs/tie down
 points - Hinged hood standard on throat
 lengths less than 73" - Five year
 warranty.



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)
1	24X24GR	1350	.021

Altitude (ft): 39 Temperature (F): 70

Dimensions (inches)

A	24
B	24
C	37
D	39
E	12.26
F	2
G	29.5
H	29.5
J	6

NOTE: Accessories may affect dimensions shown.

Accessories:

BDM-24 MTR DPR 115V
 ROOF CURB RCG 28X 28-9.5 H

Shipping Weight(lbs)***	153
--------------------------------	------------

***Includes accessories.



COOK

PROJECT: ELEVATOR HOOD
DATE:

BDM

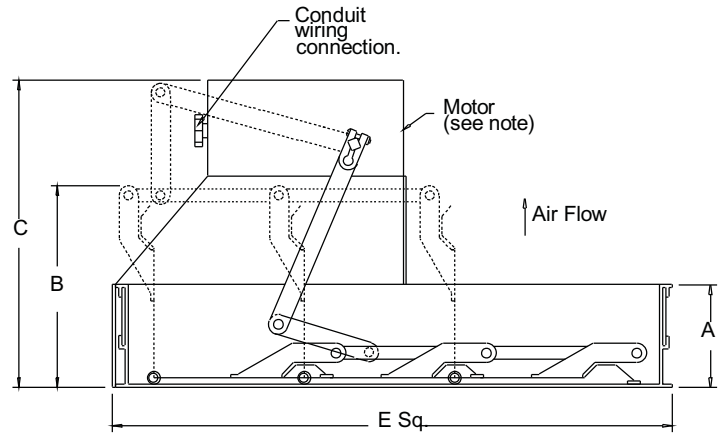
Motorized Backdraft Damper

STANDARD CONSTRUCTION FEATURES:

- .020 aluminum blades - .060
- aluminum frame - Aluminum hinge
- pins - Brass bushings -
- Non-overloading motor.

Notes:

Max operating temperature 130 Deg F (50 Deg C)



Dimensions (inches)

Mark	Qty	Description	A	B Max	C	E Sq.	# Motors
RH-1	1	BDM-24 MTR DPR 115V	1-7/8	5-3/16	8	23-3/4	1

****DAMPER IS POWER-CLOSE/FAIL-OPEN****



COOK

PROJECT: ELEVATOR HOOD
DATE:

RCG

Galvanized Steel

STANDARD CONSTRUCTION FEATURES:

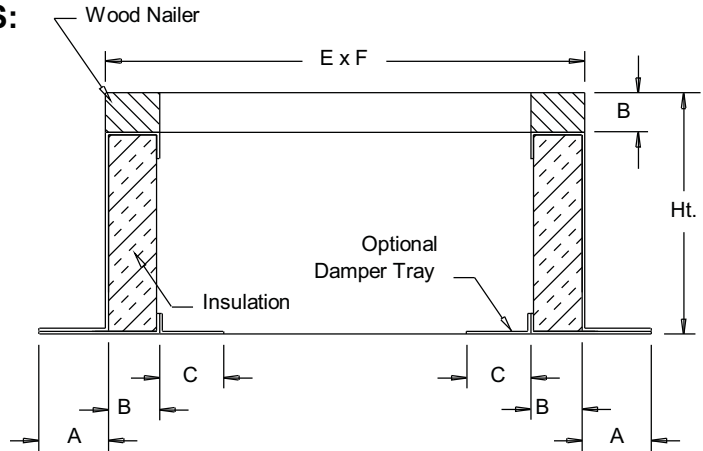
18 ga. galvanized steel - 1-1/2"(3.81 cm),
 3 lbs./cu.ft.(1.36 kg/cu. meter) density
 thermal and accoustical insulation -
 Continuously welded corners - Wood nailer.

Options:(As noted below*)

- 1) No wood nailer
- 2) Damper tray

Note:

Roof Opening is (E - 3) X (F - 3)



Dimensions (inches)

Mark	Qty	Description	Ht	Options*	A	B	C	E	F	Roof Opening
RH-1	1	RCG 28X 28	9.5	-	2	1.5	1.875	28	28	25 X 25