

Building Energy 2017

Air (vital stuff) - Strategies for Getting it into  
(and out of) Multifamily Buildings

Steve Bluestone

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# NEW YORK CITY BUILDING CODE

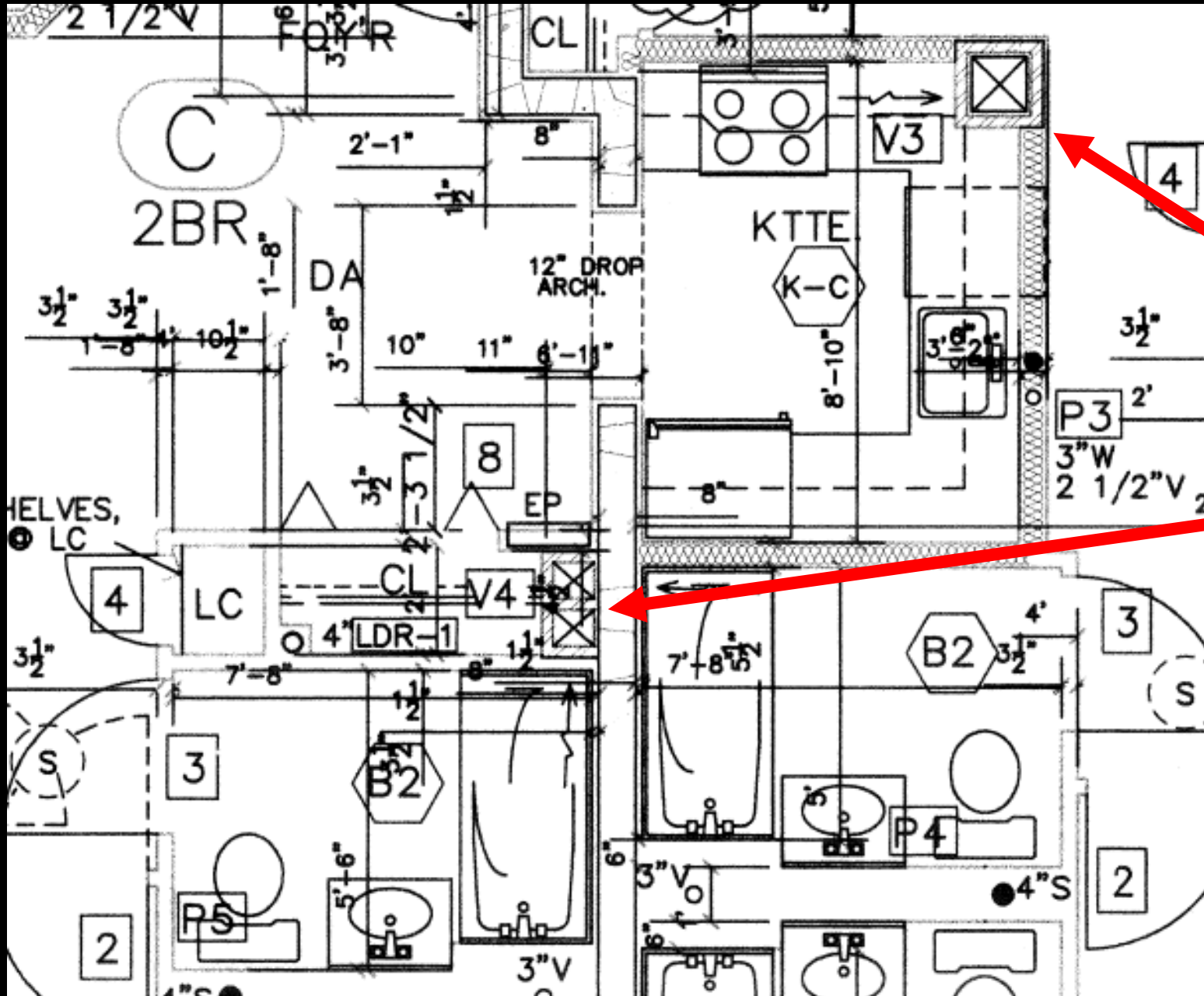
## CHAPTER 12

### INTERIOR ENVIRONMENT

#### **1203.4.1.3 Bathrooms and toilet rooms in R and I-1 occupancies.**

Bathrooms or toilet rooms in R or I-1 occupancies shall be provided with natural ventilation in accordance with Section 1203.4.1.3, unless provided with exhaust ventilation in accordance with the *New York City Mechanical Code*. Openings providing required natural ventilation shall be windows.

**(1203.4.1.4 covers kitchens in a similar manner)**



Vertical  
Duct  
Risers

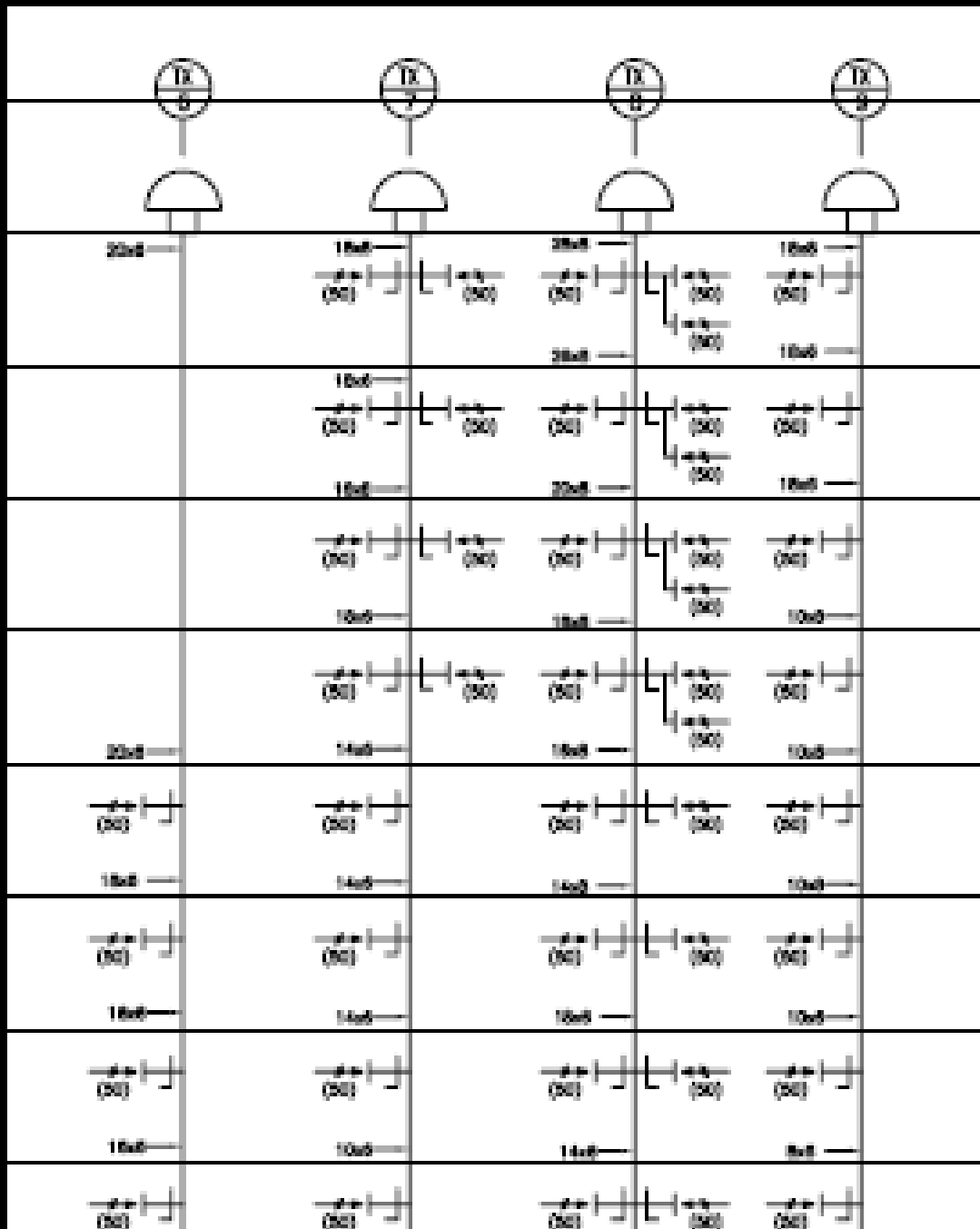
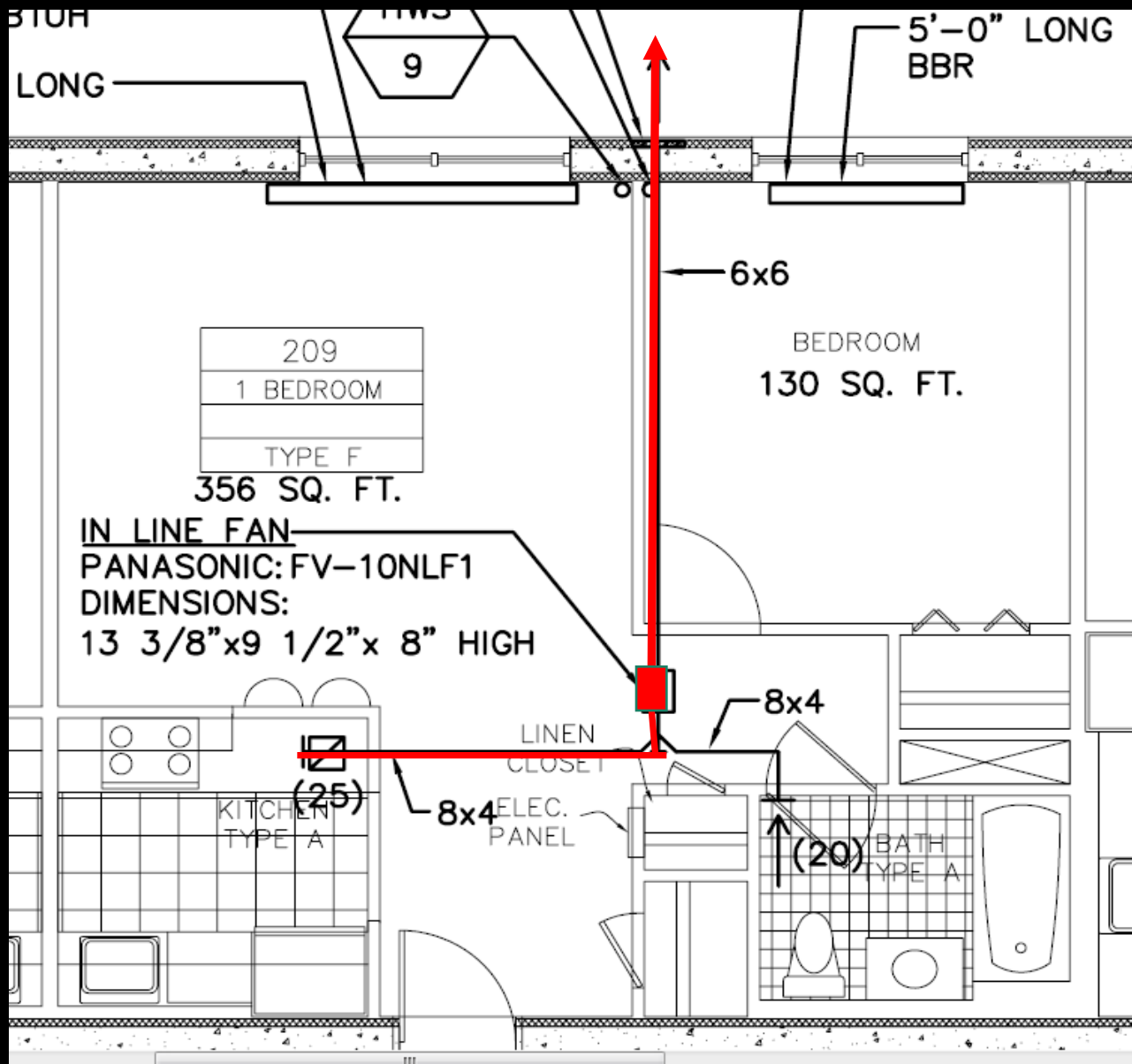
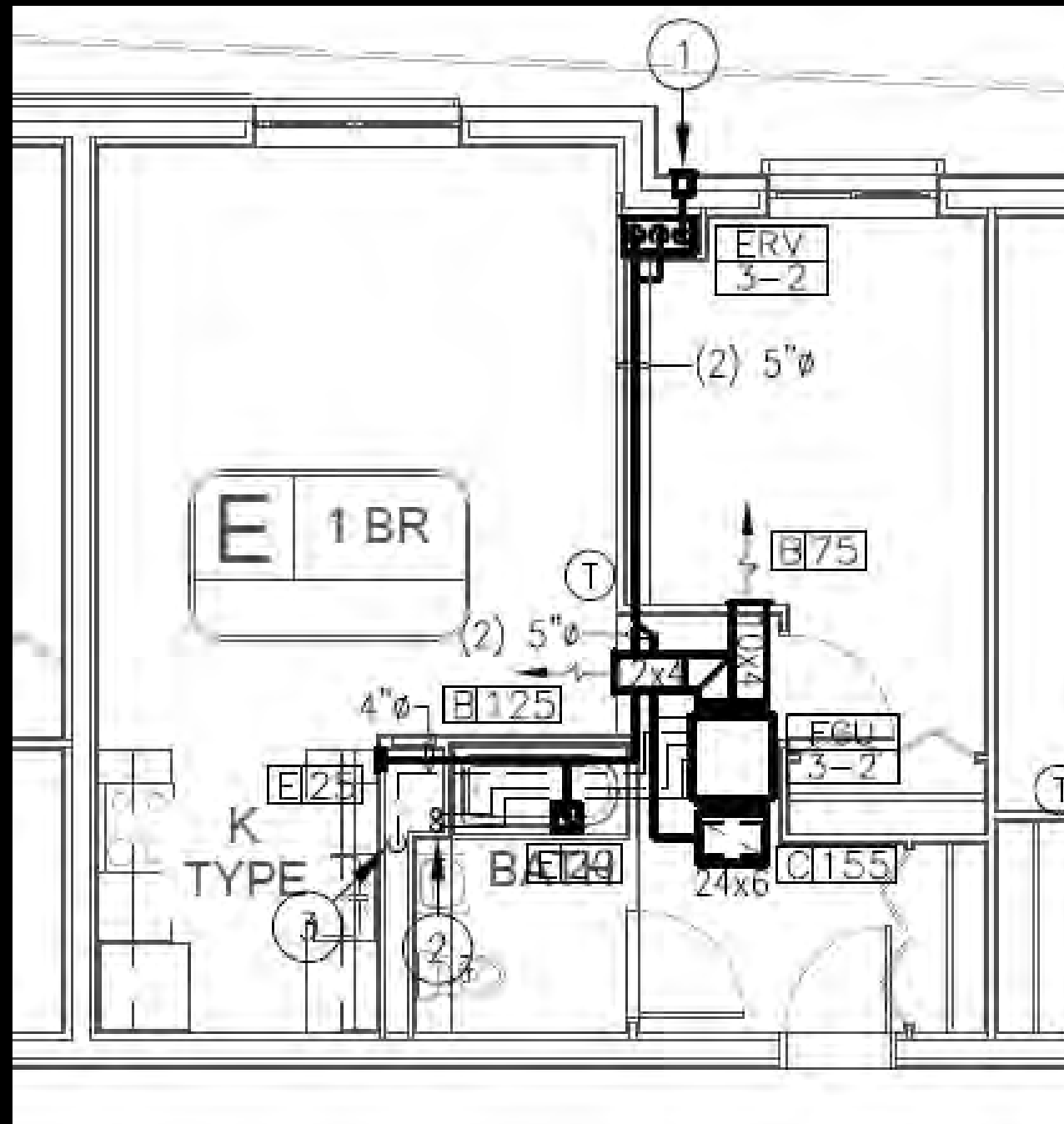


Photo credit:  
Henry Gifford

Baths and kitchens are often located away from exterior walls. Bedrooms and Living Rooms are required to have windows.



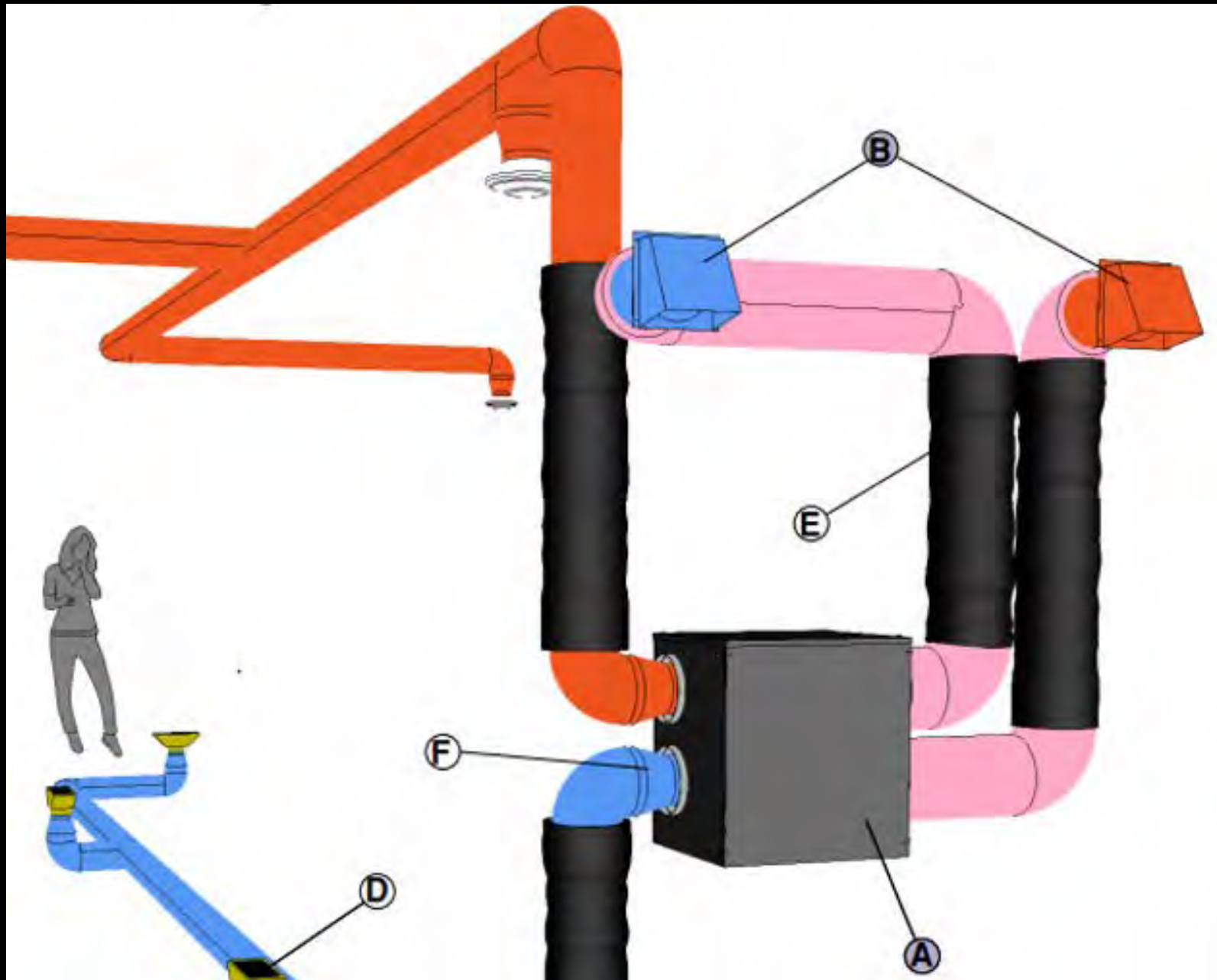




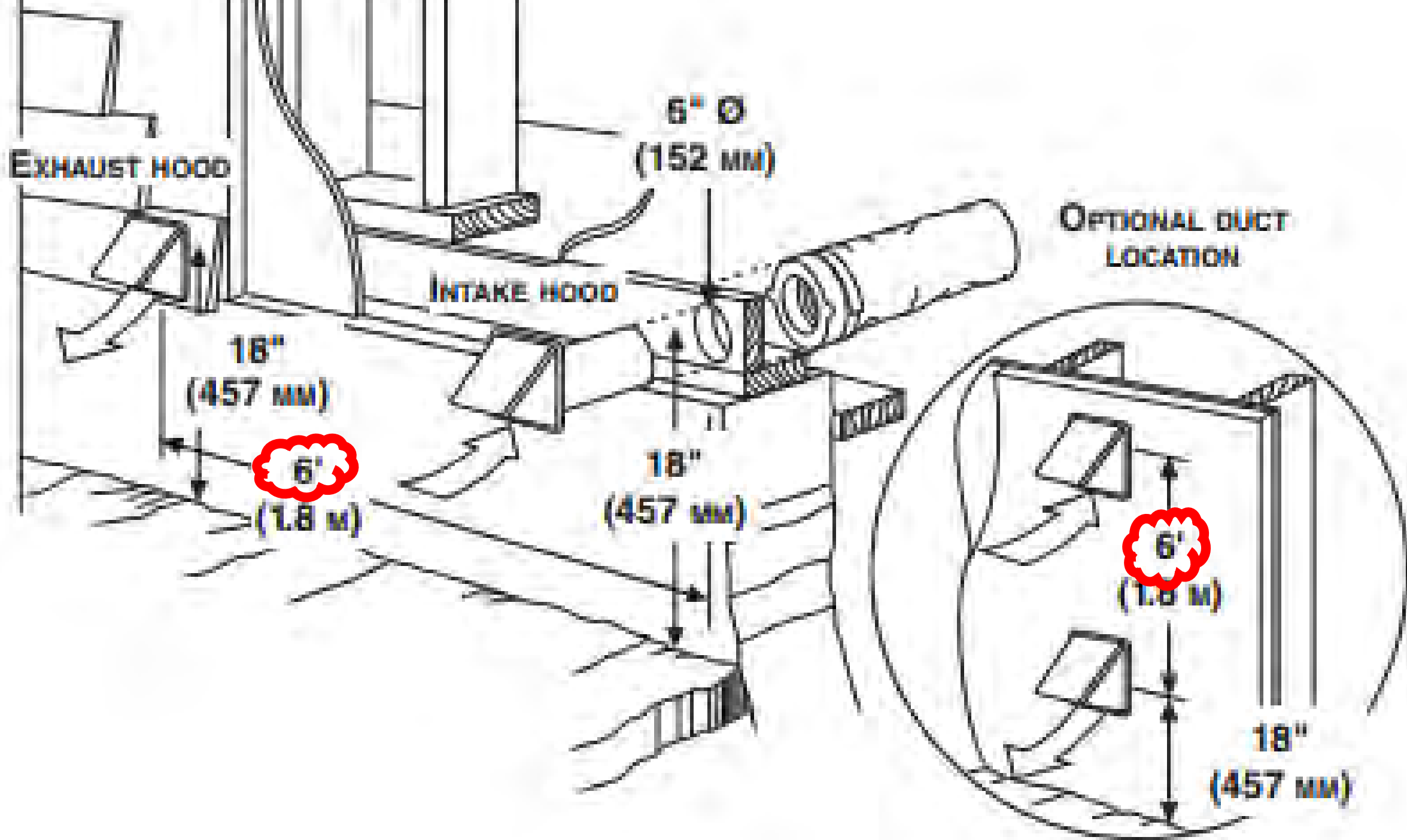
The code says ERV exhaust  
and intake ports need to be  
separated by a minimum of 10'.

I'm sorry, but size does matter.





**B** 6 INCH WALL TERMINATION KIT  
(SIX FOOT SEPARATION)



3. The petitioner states that, based on a survey of several major manufacturers of smaller, apartment sized ERVs (including Ultimate Air, Venmar, Lennox, Fantech, and Panasonic), across the board the recommended minimum separation between the systems' exterior intake and exterior exhaust ports was only 6'-0". These smaller units typically have a relatively low volume of environmental air being conveyed (at times as low as 25CFM to 30CFM) as compared with larger 5,000 CFM ERV systems (that is referred to in 503.2.6 Energy recovery ventilation systems).



CCD1, Construction Code Determination Form

Must be completed



1 Location Information Required for all requests on filed applications.

House/Neighborhood: 45-05 Street Name: ROCKAWAY BEACH BOULEVARD
Borough: Queens Block: 15853 Lot: 48 Supp: 4002735 City: 414

2 Applicant Information Required for all requests on filed applications.

Last Name: LONERGAN First Name: MARK Middle Name: EDWARD
Business Name: JOHNSON & URBAN, LLC Business Telephone: 732-772-1500
Business Address: 285 HIGHWAY 34 Business Fax:
City: COLT NECK State: NJ Zip: 07722 Mobile Telephone:
E-Mail: MLONERGAN@JOHNSONURBAN.COM License Number: 092080
License Type: PE RA RLA DOB PENS ID # (if available):

3 Attendee Information Required if different from Applicant in section 2 (if not Applicant)

Relationship to this property: Filing Representative Attorney Other
Last Name: CHOI First Name: HACKJONG Middle Initial:
Business Name: WILLIAM VITACCO ASSOCIATES, LTD. Business Telephone: 212-791-4578
Business Address: 298 BROADWAY, 5TH FLOOR Business Fax:
City: New York State: NY Zip: 10007 Mobile Telephone:
E-Mail: hchoi@vitacco.com License/Registration # (if PE, RA, RLA or Other):
DOB PENS ID # (if available): A11929

4 Nature of Request Required for all requests. Only one request may be submitted per form.

Dissemination request issued to: Borough Commissioner's Office Technical Affairs
Job associated with this request? Yes (provide job/professional name below) No
Job Number: 420653373 Document Number: Examined by: MARIA TERESA FERNANDEZ
Has this request been previously denied? Yes (attach all denied request forms) and attachment(s) No
Indicate total number of pages submitted with this request, including attachments. Attachment may not be larger than 11" x 17"
Construction Code (if applicable): 2014 Code 2008 Code 1998 Code Prior to 1998 Code
Indicate relevant code section(s), rule(s), etc.: MC 501.2.1.6.2, BC 1203, Appendix F of ASHRAE 62.1 - 2007

Indicate all Buildings Department officials that you have previously reviewed this issue with (if any):

- Borough Commissioner Code Zoning Specialist General Counsel (if applicable)
Borough/Commissioner's Office Chief Plan Examiner Other

Administrative Use Only table with columns: Reference #, Appointment Date, Appointment Area, Appointment Scheduled With, Comments, Reviewed By, Date, Time.

REVIEWED BY Scott D. Pevan, RA
APPROVED WITH CONDITIONS
Date: 11/05/2015

STATE OF NEW YORK DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO GOVERNOR
CESAR A. PERALES SECRETARY OF STATE

STATE OF NEW YORK: DEPARTMENT OF STATE

In the Matter of the Petition of: DECISION
Banta Homes Corp.
For a Variance to the New York State Uniform Fire Prevention & Building Code PETITION NO. 2015-0385

Upon the application of Banta Homes Corp., filed pursuant to 19 NYCRR 1205 on June 23, 2015, and upon all other papers in this matter, the Department makes the following determination:

NATURE OF GRIEVANCE AND RELIEF SOUGHT

The petition pertains to the construction of a new mixed-use building, R2, multiple dwelling, and M, mercantile occupancies, 16 stories in height, of type IB construction, and having a gross area of approximately 256,000 square feet, located at 42 West Broad Street, City of Mount Vernon, County of Westchester, State of New York.

Relief is requested from:

- 19 NYCRR, Part 1223, The Mechanical Code of New York State, Section 501.2.1, which requires that the termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:
1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet from property lines; 10-feet from operable openings into buildings; 6 feet from exterior walls and roofs; 30 feet from combustible walls and operable openings into buildings which are in the direction of the exhaust discharge; 10 feet above adjoining grade.
2. For other product-conveying outlets: 10 feet from the property lines; 3 feet from exterior walls and roofs; 10 feet from operable openings into buildings; 10 feet above adjoining grade.
3. For environmental air duct exhaust: 3 feet from property lines; 3 feet from operable openings into buildings for all occupancies other than Group U, and 10 feet from mechanical air intakes.
4. For specific systems: For clothes dryer exhaust, see Section 504.4; for kitchen hoods, see Section 506.3; for dust, stock and conveying systems, see Section 511.2; and for subslab soil exhaust systems, see Section 512.4.

[The petitioner requests that the termination point of exhaust outlets be less than the required distance from mechanical air intakes.]





The SFX vent cap is identical to the SX with an exception of the hood. This model is excellent for exteriors where protection from the elements is necessary and not already carried out by the building design. Insect screens are an option.

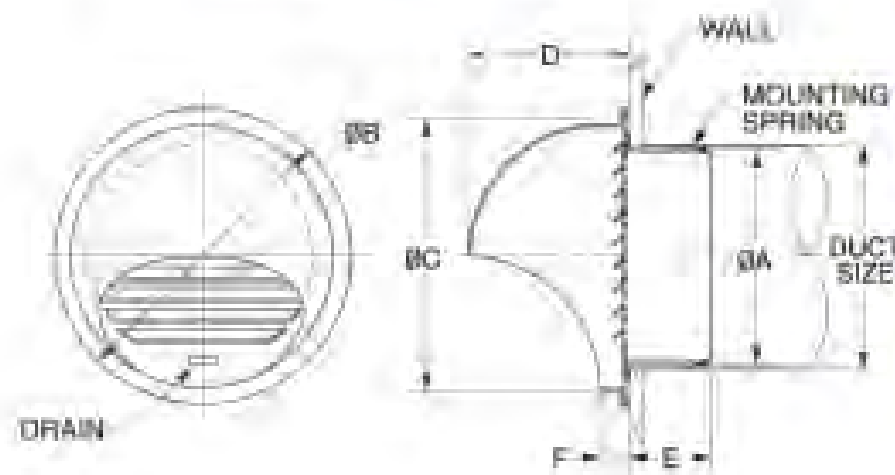
Model: **SFX**  
(Model SFX-N; With Screen)

### MATERIAL

- Aluminum

### FINISH

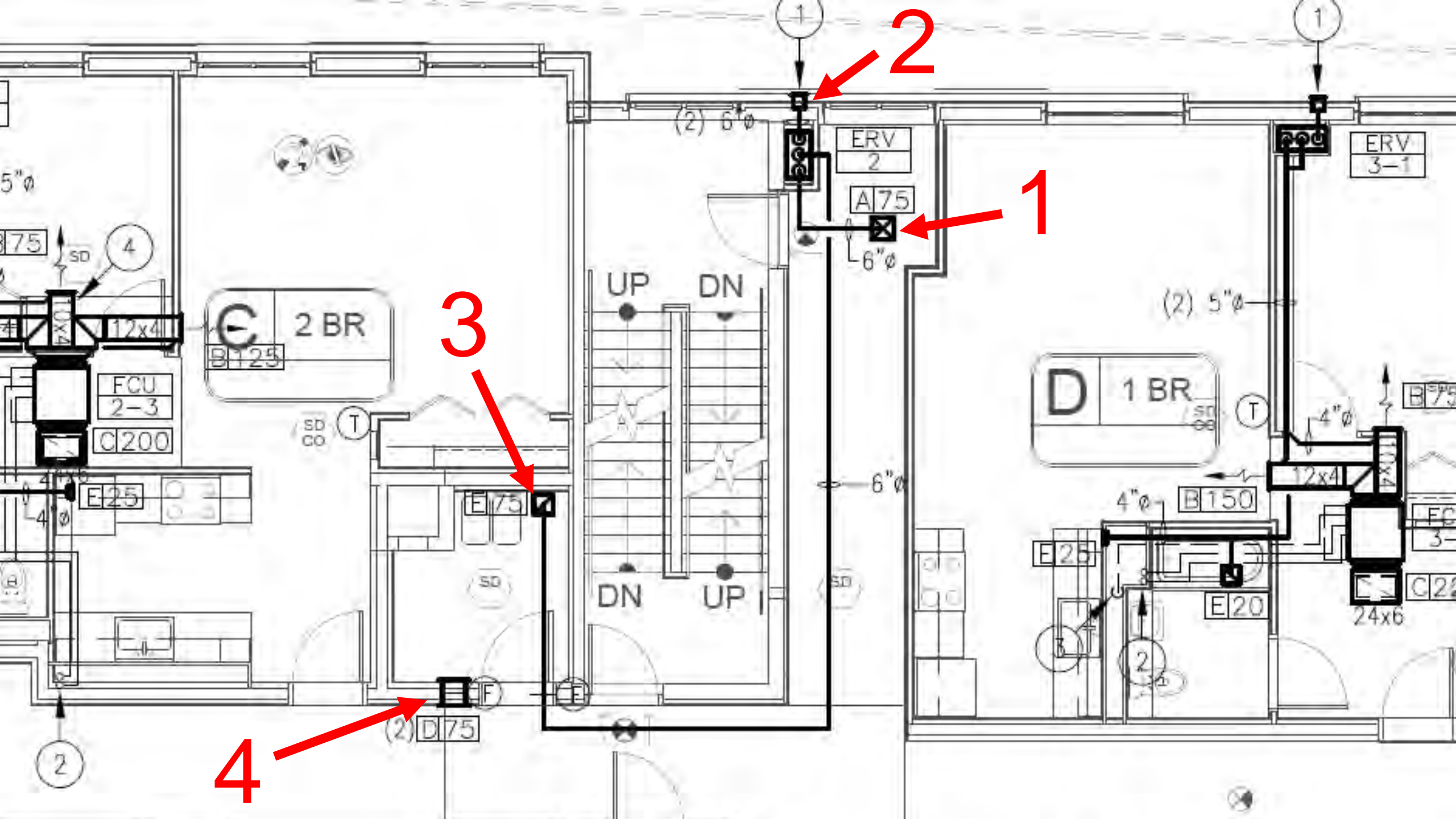
- Clear Anodized
- Custom Colors Available



MODEL	DUCT SIZE	A	B	C	D	E	F	FREE AREA
SFX 3	3	2 <sup>29</sup> / <sub>32</sub>	4 <sup>3</sup> / <sub>4</sub>	3 <sup>25</sup> / <sub>32</sub>	2 <sup>11</sup> / <sub>16</sub>	1 <sup>9</sup> / <sub>16</sub>	<sup>9</sup> / <sub>16</sub>	0.02 sq.ft.
SFX 4	4	3 <sup>13</sup> / <sub>32</sub>	6 <sup>3</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>8</sub>	3 <sup>17</sup> / <sub>32</sub>	1 <sup>9</sup> / <sub>16</sub>	<sup>3</sup> / <sub>4</sub>	0.04 sq.ft.
SFX 5	5	4 <sup>3</sup> / <sub>4</sub>	6 <sup>29</sup> / <sub>32</sub>	5 <sup>29</sup> / <sub>32</sub>	3 <sup>15</sup> / <sub>16</sub>	1 <sup>31</sup> / <sub>32</sub>	<sup>3</sup> / <sub>4</sub>	0.05 sq.ft.
SFX 6	6	5 <sup>23</sup> / <sub>32</sub>	8 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>	4 <sup>17</sup> / <sub>32</sub>	2 <sup>9</sup> / <sub>16</sub>	<sup>3</sup> / <sub>4</sub>	0.08 sq.ft.
SFX 7	7	6 <sup>11</sup> / <sub>16</sub>	9 <sup>15</sup> / <sub>32</sub>	8 <sup>9</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>8</sub>	2 <sup>9</sup> / <sub>16</sub>	<sup>3</sup> / <sub>4</sub>	0.11 sq.ft.
SFX 8	8	7 <sup>11</sup> / <sub>16</sub>	10 <sup>5</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>16</sub>	5 <sup>23</sup> / <sub>32</sub>	2 <sup>31</sup> / <sub>16</sub>	<sup>3</sup> / <sub>4</sub>	0.14 sq.ft.
SFX10	10	9 <sup>21</sup> / <sub>32</sub>	13	11 <sup>13</sup> / <sub>16</sub>	6 <sup>29</sup> / <sub>32</sub>	3 <sup>11</sup> / <sub>32</sub>	<sup>3</sup> / <sub>4</sub>	0.24 sq.ft.
SFX12	12	11 <sup>19</sup> / <sub>32</sub>	14 <sup>1</sup> / <sub>4</sub>	13	7 <sup>15</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>4</sub>	0.31 sq.ft.

Product information is subject to change without notice. All dimensions in inches.

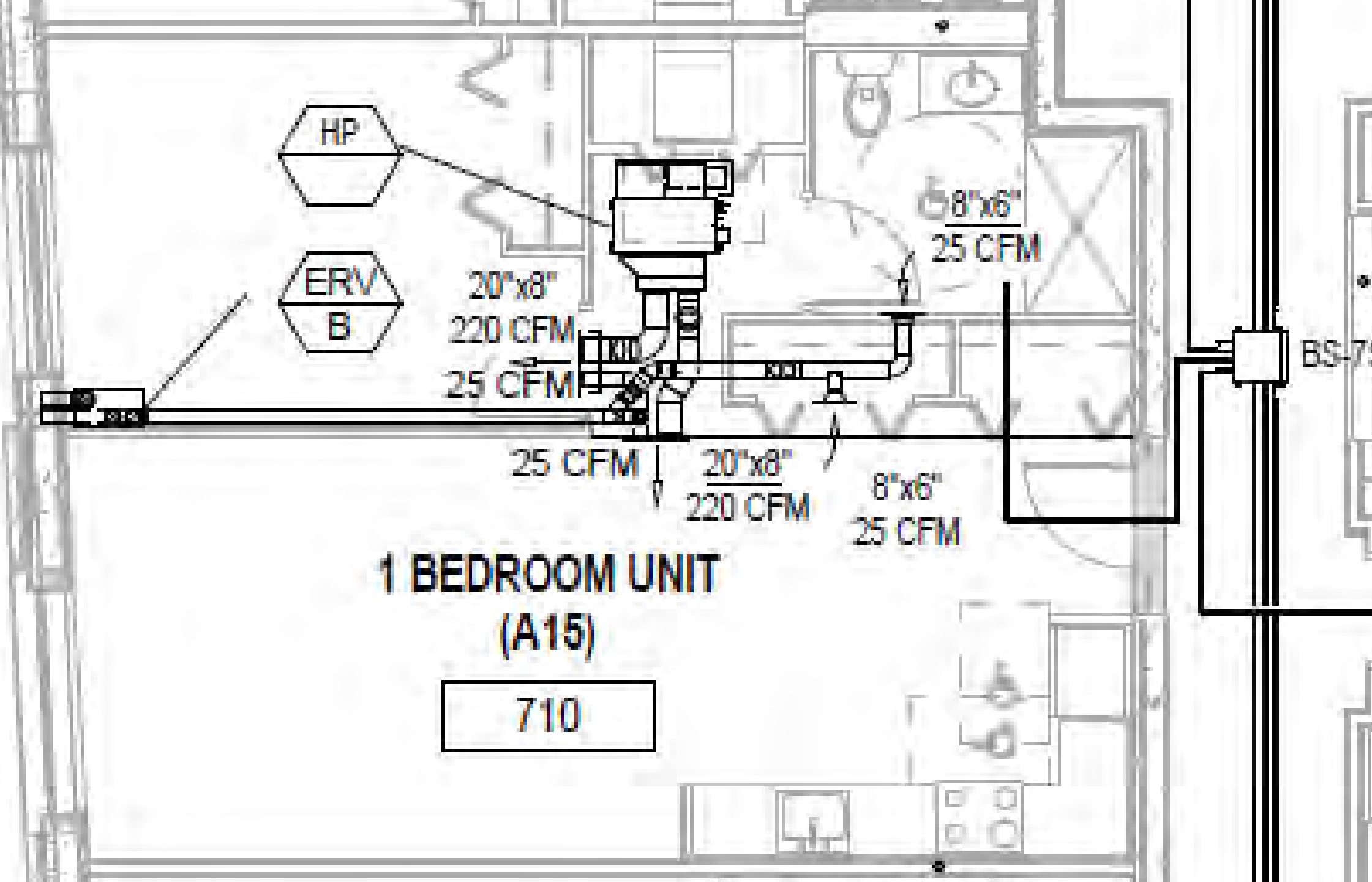




# 42 Broad Street Fleetwood, NY







HP

ERV  
B

20"x8"  
220 CFM  
25 CFM

8"x6"  
25 CFM

25 CFM

20"x8"  
220 CFM

8"x6"  
25 CFM

1 BEDROOM UNIT  
(A15)

710

BS-7

A tall, modern skyscraper with a curved facade and a glass-enclosed lower section, set against a clear blue sky. The building features a series of horizontal bands of windows and a prominent corner. The lower part of the building is encased in a glass structure, possibly a atrium or a public space. The sky is a clear, vibrant blue.

# World's Tallest Passive House Building

