



2021 Building-related Codes Training

Mechanical Residential Code

Greater San Antonio Builders Association (GSABA)

November 2, 2022

Presented by:

Joe Frias, Chief Mechanical Inspector

2021

2021 BUILDING
RELATED CODES

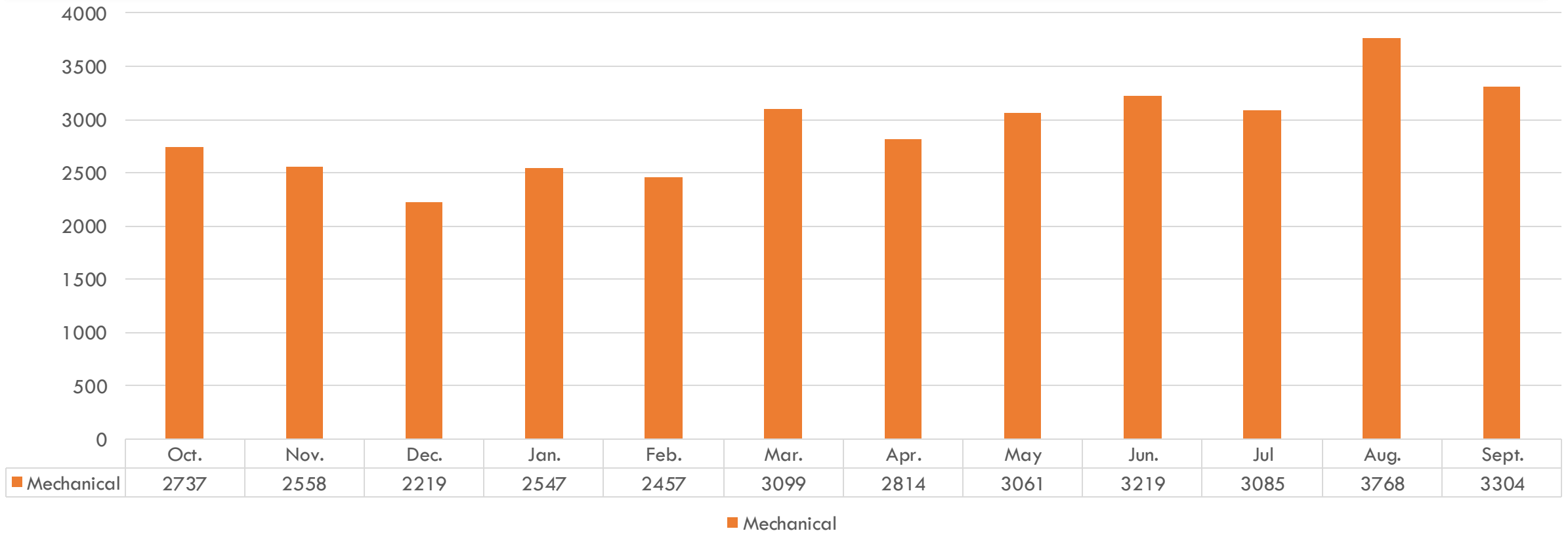
CODE UPDATES

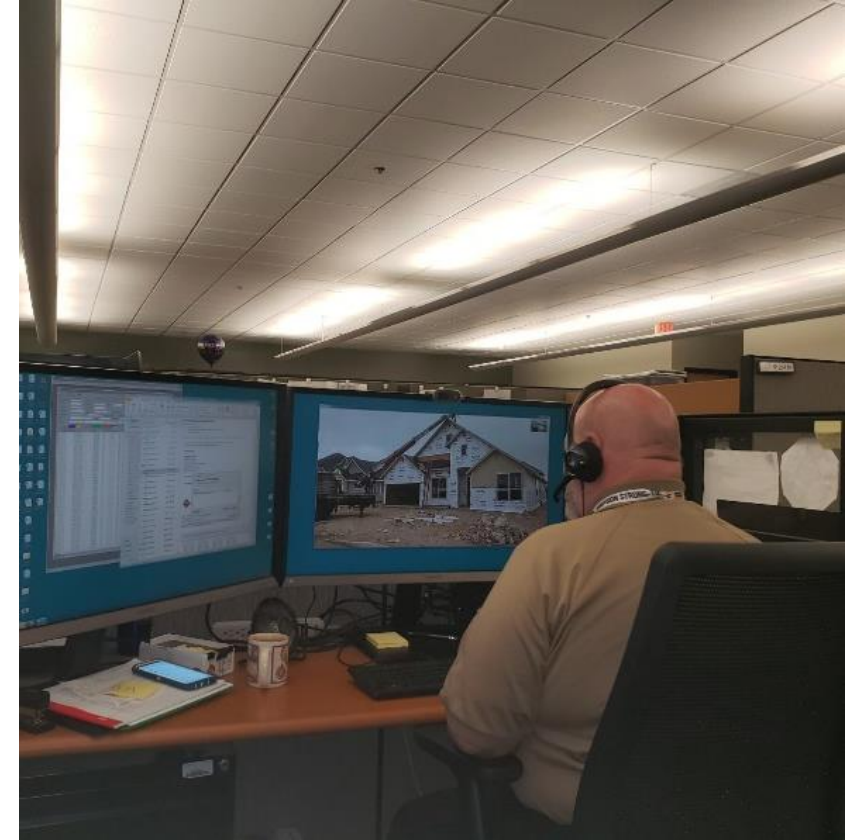
DEVELOPMENT SERVICES
DEPARTMENT



PERFORMANCE

- Performance measures on website:
 - www.sanantonio.gov/DSD
 - Under "About", "Performance"





REMOTE VIDEO INSPECTIONS PROGRAM

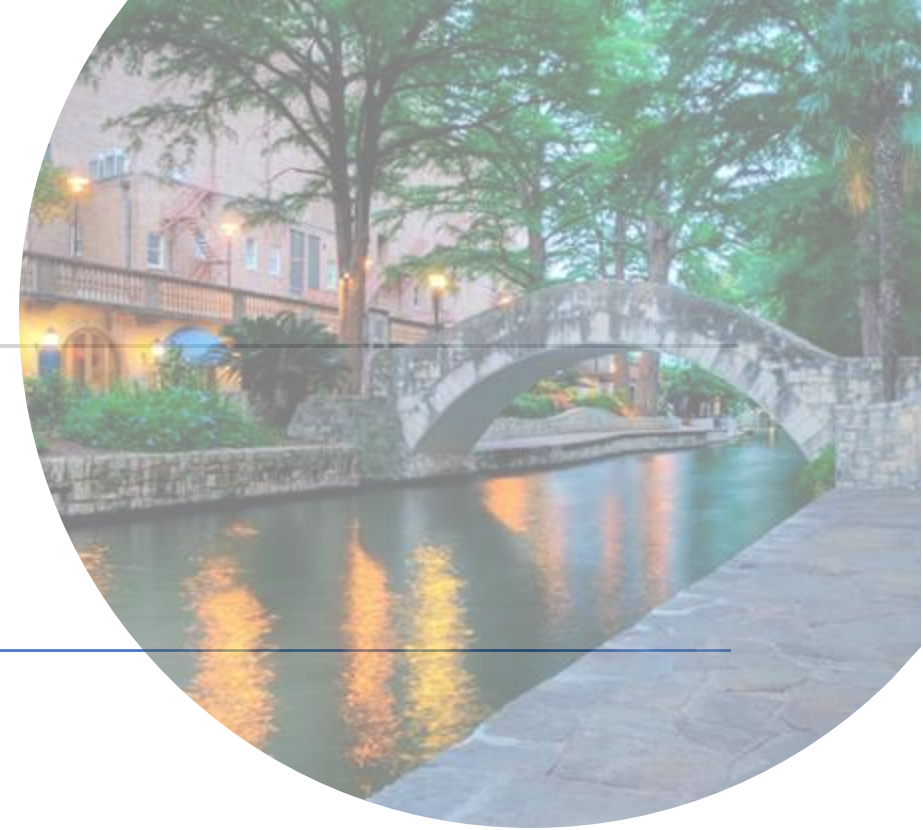
- Offer Remote Video Inspections (RVI) for construction projects at no additional cost
- Promote and facilitate local economic growth
- Another option to ensuring permitted work complies with city's building-related safety codes
- Eligible inspections include first-time inspections, and re-inspections for projects with 4 or less violations (building, mechanical, electrical, and plumbing)

UL LISTING

- UL has tested representative sample of product and determined product meets specific, defined requirements
- Requirements often based on UL's published and national recognized standards for safety

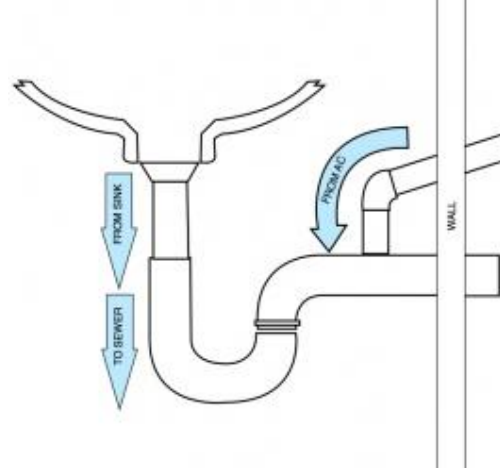


CONDENSATE DISCHARGE



SECTION	TITLE	PROPOSED
Sec. 307.2.1.1	Condensate discharge	• New section expressly lists plumbing fixtures you can drain into • Also states discharge shall be located within same occupancy, tenant space or dwelling unit as condensate source • Unless condensate is captured as per Ch. 34, Sec. 34-274 of City Code for condensate disposal (SAWS)

WHERE YOU CAN DRAIN INTO



DRYER DUCTS



SECTION	TITLE	PROPOSED
Sec. M1502.4.2	Dryer exhaust ducts	Where dryer exhaust ducts are enclosed in wall or ceiling cavities, cavities shall allow installation of the duct without deformation (12.5 square inches)

DUCTS
CANNOT
BE
DEFORMED

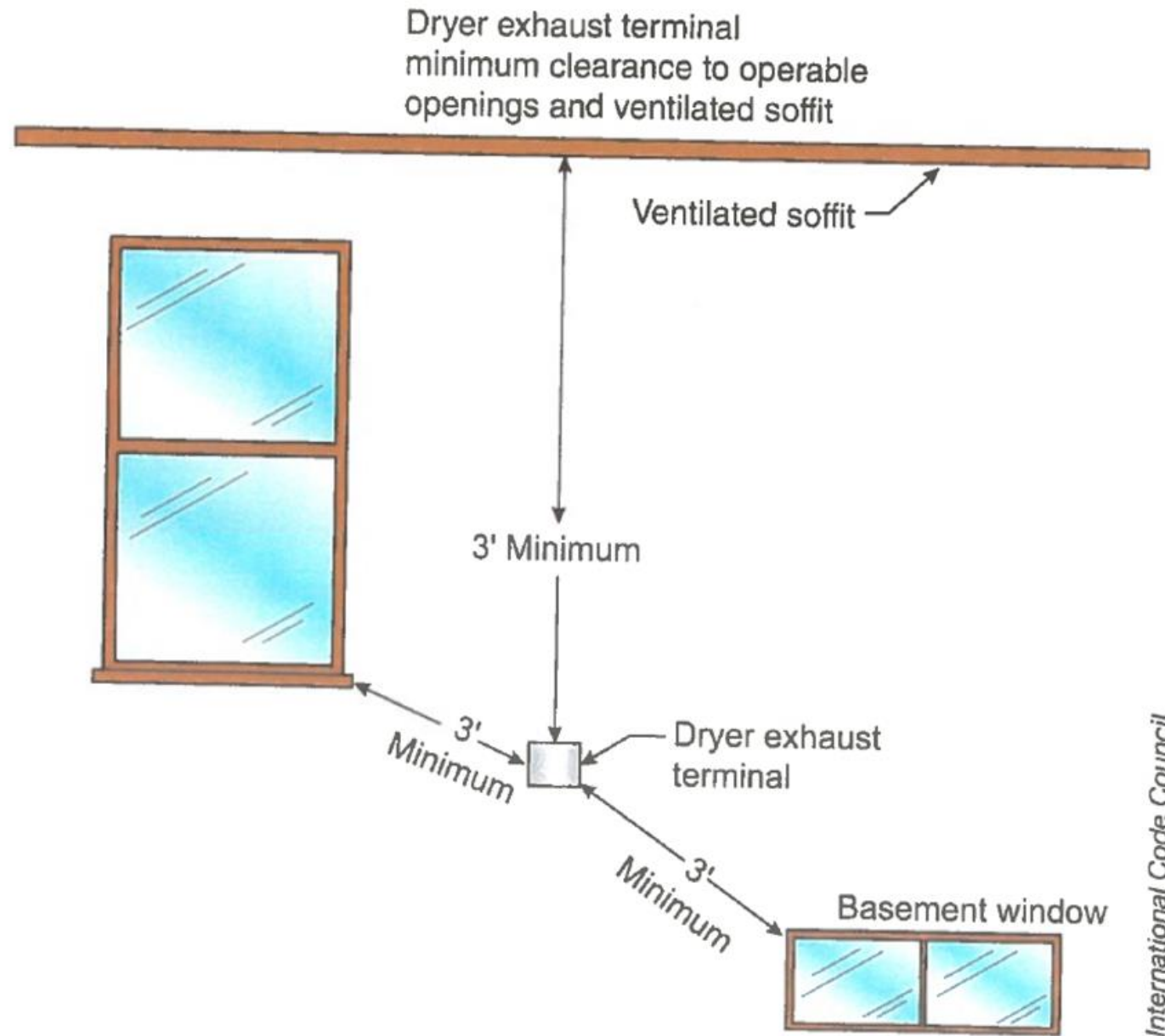


TERMINATION LOCATION

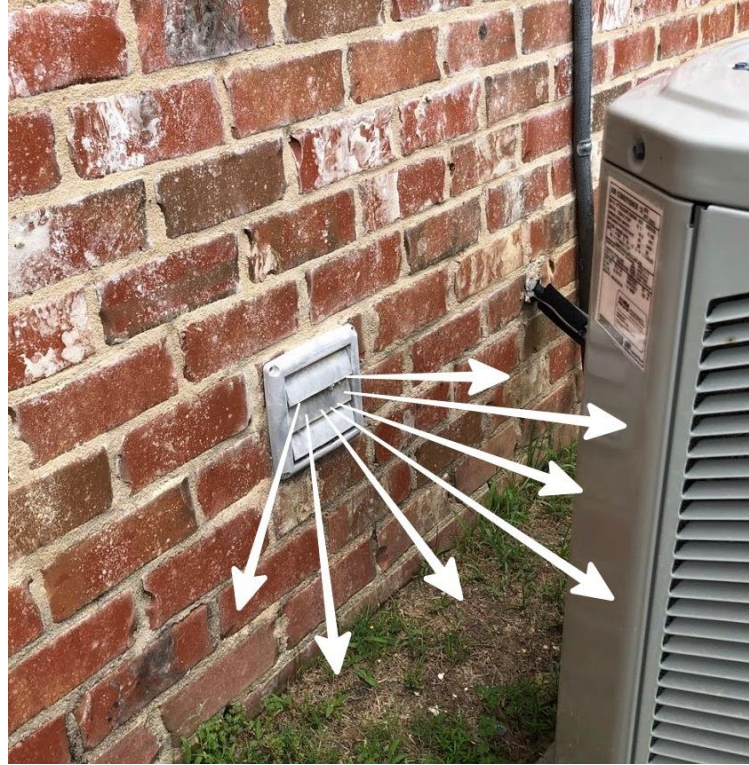
- <https://youtu.be/BU1xVUEmY-c>

SECTION	TITLE	PROPOSED
Sec. 504.4.1	Termination location	• Code did not address required separation between building openings and dryer exhaust • The appliance MFG installation instruction may or may not specify separation distances • If instructions are silent on matter, a 3' minimum separation distance is now specified • Section amended to include 3' from any mechanical equipment

IN ADDITION, SECTION IS
AMENDED TO INCLUDE
3FT AWAY FROM ANY
MECHANICAL
EQUIPMENT



Dryer exhaust terminal minimum clearance to operable openings and soffit vents



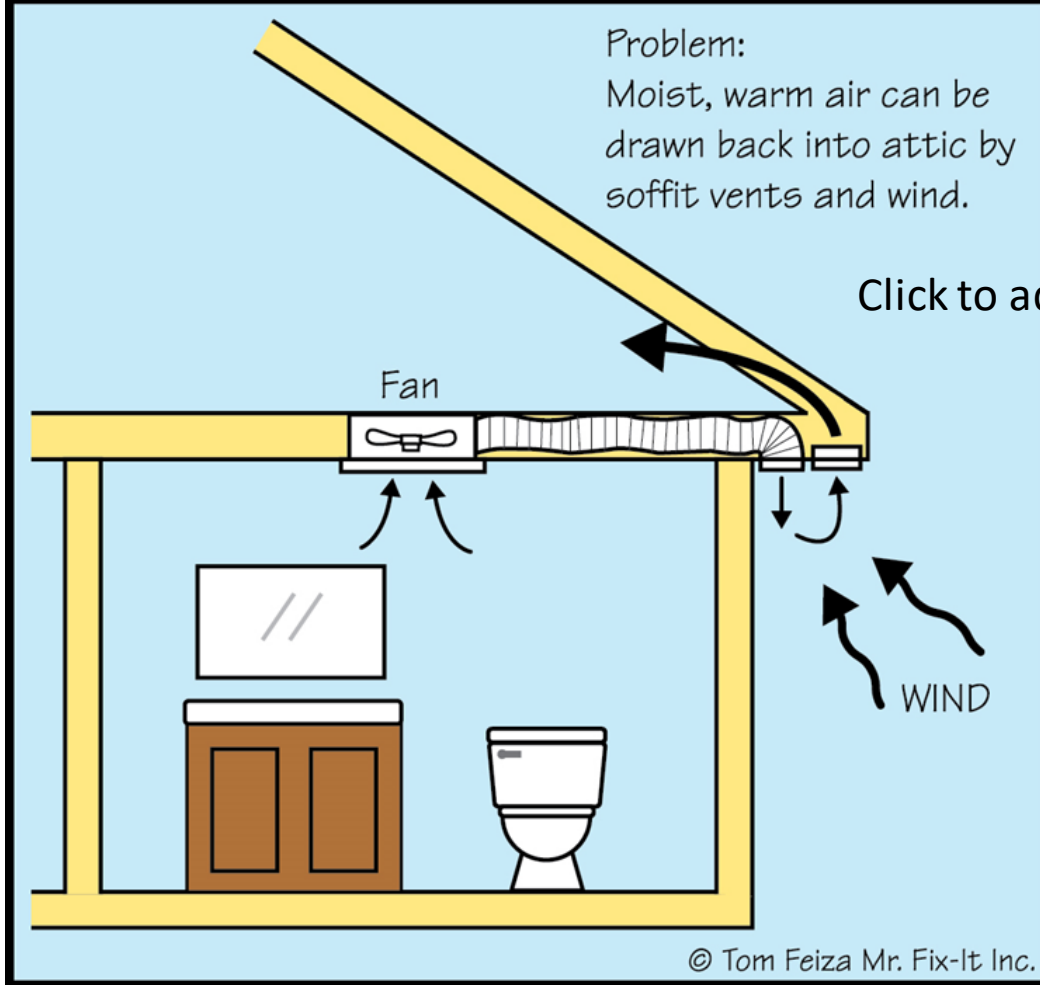
TERMINATION LOCATION

- Dryer vent must terminate 3' away

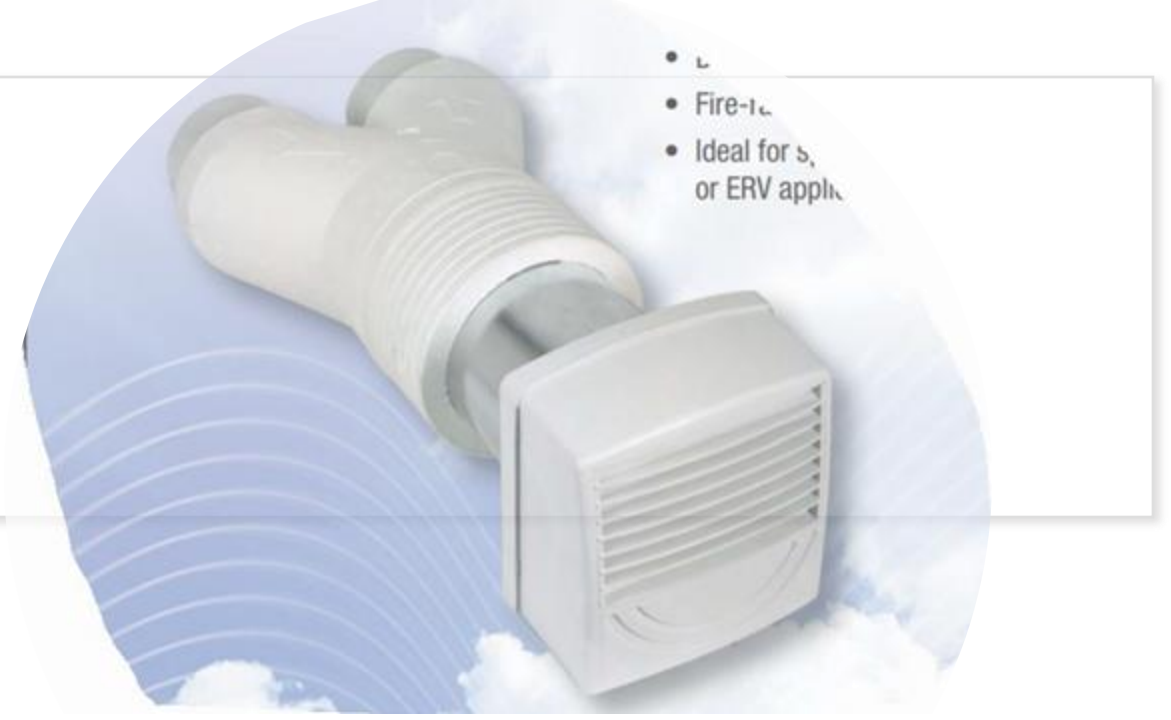
Sec. M1501.1 Outdoor discharge.

THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED TO THE OUTDOORS IN ACCORDANCE WITH SEC M1504.3. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC, SOFFIT, RIDGE VENT OR CRAWL SPACE.

Bath Exhaust Fan – Soffit Problems



INTAKE AND EXHAUST



SECTION	TITLE	PROPOSED
Sec. 401.4 & 501.3.1	Intake openings & exhaust outlet locations	The code now allows factory built dual purpose fittings to be used as an alternate to separation between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit.

SECTION	TITLE	PROPOSED
Table C403.12.3	Pipe insulation on commercial sites	• Pipe insulation as per IECC on residential will be not less than R-3 as per sec R403.4 • Most R-3 insulation is ½"

TABLE C403.11.3 MINIMUM PIPE INSULATION THICKNESS (in inches)^{a, c}

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	Conductivity Btu • in./(h • ft ² • °F) ^b	Mean Rating Temperature, °F	< 1	1 to < 1 ½	1 ½ to < 4	4 to < 8	≥ 8
> 350	0.32 – 0.34	250	4.5	5.0	5.0	5.0	5.0
251 – 350	0.29 – 0.32	200	3.0	4.0	4.5	4.5	4.5
201 – 250	0.27 – 0.30	150	2.5	2.5	2.5	3.0	3.0
141 – 200	0.25 – 0.29	125	1.5	1.5	2.0	2.0	2.0
105 – 140	0.21 – 0.28	100	1.0	1.0	1.5	1.5	1.5
40 – 60	0.21 – 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 – 0.26	50	0.5	1.0	1.0	1.0	1.5

For SI: 1 inch = 25.4 mm, °C = [(°F) - 32]/1.8.

- a. For piping smaller than 1 ½ inches and located in partitions within conditioned spaces, reduction of these thicknesses by 1 inch shall be permitted (before thickness adjustment required in footnote b) but not to a thickness less than 1 inch.
- b. For insulation outside the stated conductivity range, the minimum thickness (T) shall be determined as follows:

PIPE INSULATION ON RESIDENTIAL



Section	Title	Proposed
R403.4	Mechanical system piping insulation	• Mechanical system piping capable of carrying fluids greater than 105°F or less than 55°F shall be insulated to an <i>R</i>-value of not less than <i>R</i>-3

LOCKING PORT CAPS

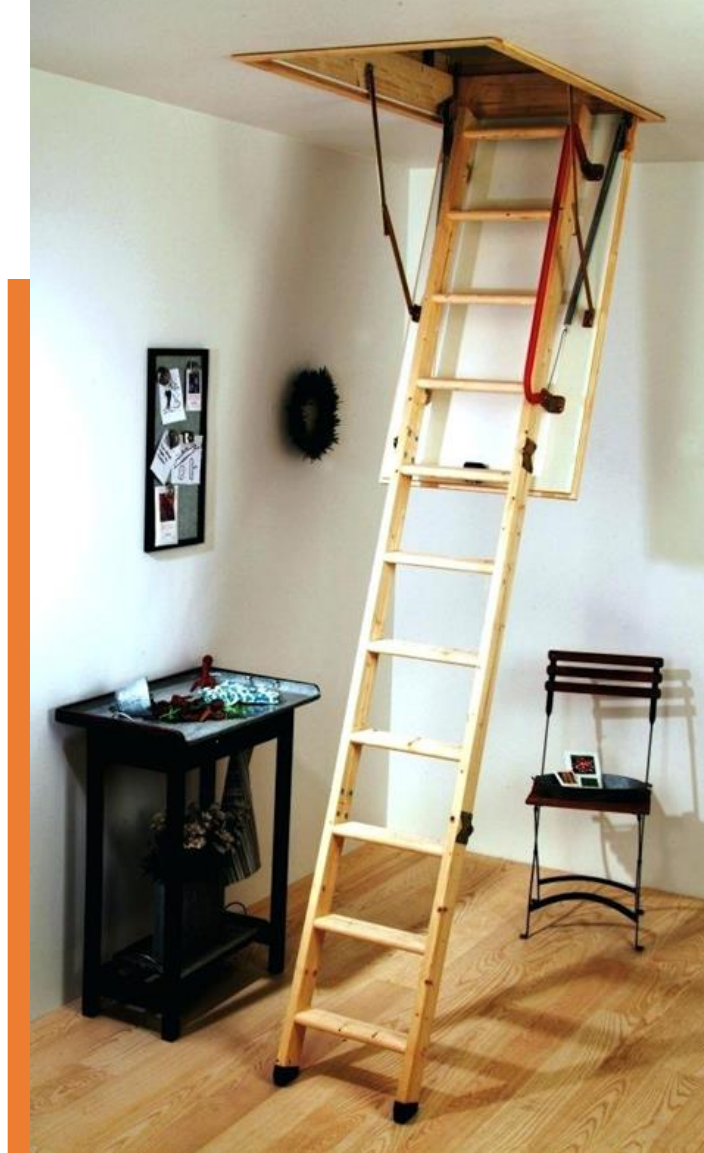


SECTION	TITLE	PROPOSED
Sec. 1101.10	Locking access port cap	• Section amended to read “refrigerant circuit access ports shall be fitted with caps”... • No more locking caps anywhere but it must have caps, indoors or outdoors

MINI-SPLITS
MAY REQUIRE
A
DISCONNECT
FOR THE
INSIDE UNIT



MUST HAVE
THE POINT
OF ENTRY
FRAMED OUT
AT ROUGH-IN



FURNACES

- Coming out of furnace with hard pipe will stay
- Even in commercial installations



CONTACT US

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