

GUIDANCE ON ADUs AND FIRE SAFETY

*Reference of related Massachusetts
Fire Code (527 CMR) and Building Code (780 CMR)*

Published: December 11, 2023

What is in this document?

This document is meant to explain visually and in plain language common building code and fire code requirements (not zoning code) that impact design and construction of external ADUs. If you are considering building an ADU this information may help you understand what type of ADU can work best on your property.

This is not a comprehensive list of all fire and building codes. We recommend that you hire a design professional to advise you further. You can find the full code books below:

- [Massachusetts Comprehensive Fire and Safety Code \(527 CMR 1.00\)](#)
- [Massachusetts State Building Code \(780 CMR\)](#)

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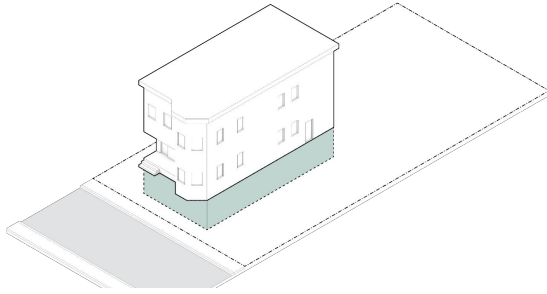
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CONTEXT

*What type of ADUs are there and
what types of ADUs do these guidelines cover?*

THIS DOCUMENT PROVIDES GUIDANCE ON EXTERNAL ADUs

Internal ADU

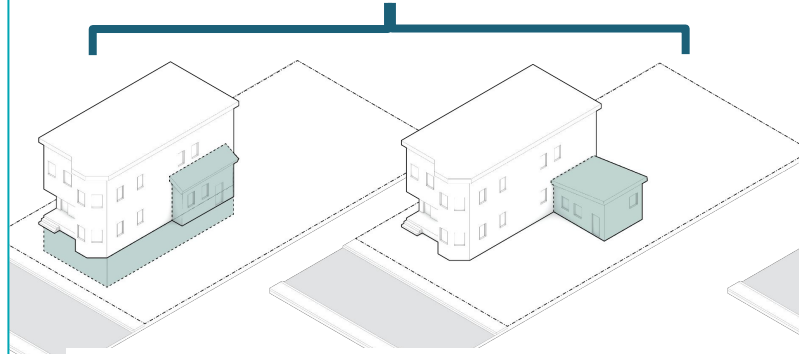


Internal ADUs are built inside the existing envelope of a home. Usually, this will look like an attic or a basement that is renovated and outfitted as a separate dwelling unit.

For more information on internal ADUs see: boston.gov/adu-toolkit

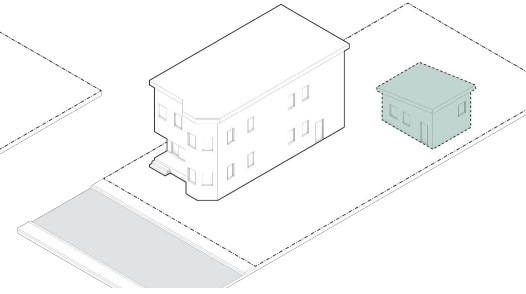
EXTERNAL ADUs

Non-Detached ADU



Non-Detached ADUs are additions to the main home. They may use pre-existing space or create an ADU with new construction or both, sometimes with a shared doorway or corridor linking them.

Detached ADU



Detached ADUs are fully separate, smaller structures that are built on the same lot as the main home. They can be either new construction or renovation of pre-existing structures.

THIS DOCUMENT DOES NOT COVER ZONING REQUIREMENTS

This document does not address zoning requirements for your property. You can learn more about the zoning for a particular site on the [Zoning Viewer](#). Here you can see how a site is currently zoned, access the Zoning Code, and view the Assessor for information about ownership.

Some ADUs are allowed as of right and others will require zoning relief. In either case, the first step is to file a permit application with the Inspectional Services Department (ISD). You will need a long-form permit for new construction or to make updates to a building. Learn more about [how to get a permit here](#).

As of Right Permits

Project complies with all Building Code and Zoning Code requirements

Example: ADUs within the the building envelope (current ADU program)

Permit with Zoning Relief

Project does not comply with all Building Code and Zoning Code requirements

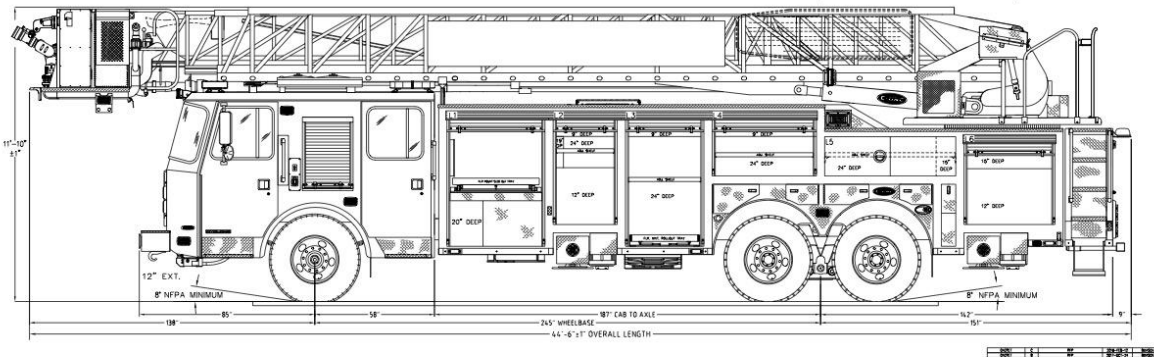
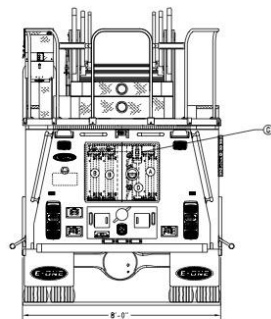
Example: External ADUs
(Except in Mattapan after zoning update)

FIRE ACCESS ROAD

What is a Fire Access Road and how are distances from a Fire Access Road measured?

BOSTON FIRE APPARATUS SPECIFICATIONS

COMP.	OPENING	INTERIOR DIMENSION
L1/R1	45W 55H	17W 20H 100R
L2	29W 45H	17W 20H 100R
R2	31W 19H	31W 19H 12D
L3	36W 55H	38W 64H NOTED
R3	38W 30H	38W 30H 24D
L4	48W 21H	50W 30H NOTED
R4	44W 19H	44W 19H 12D
L5	63W 19H	63W 19H NOTED
L6	42W 33H	44W 38H 15D
GROUND LADDERS		
ITEM	LADDER LENGTH	MODEL NUMBER QTY
A	40' 2-SECT	TEL-40 1
B	35' 2-SECT	TEL-35 2
C	28' 2-SECT	TEL-28 1
D	20' ROOF	TRL-20 1
E	16' ROOF	PRL-16 1
F	12' ROOF	PRL-12 1
G	10' FOLDING	FL-10 1
H	LITTLE GIANT	MODEL 17 1



Fire department access roads must be provided for ALL buildings constructed.

All buildings are required to have fire department access roads within a specified distance of the building.

These access roads make it possible for emergency vehicles and fire apparatus to access the building in case of emergency.

The image on the left shows specifications for Boston's Fire Apparatus. More detailed specifications are in the appendix.

APPLICABLE CODE (527 CMR Chapter 18)

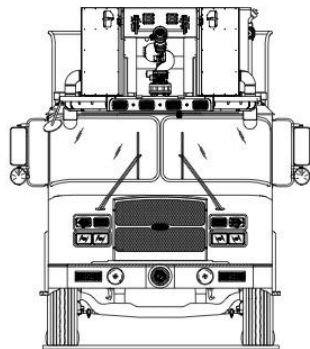
18.2.3.1.1 Fire Department Access Roads

18.2.3.1.2 Type of lane

FIRE APPARATUS

For more details on Boston Fire Apparatus specifications see Appendix A.

FIRE DEPARTMENT ACCESS ROAD



**GENERAL APPARATUS
ACCESS
Minimum 20' feet**

***Fire Department Access
Road specifications ensure
they can transport fire
trucks to an emergency.***

Some specifications include:

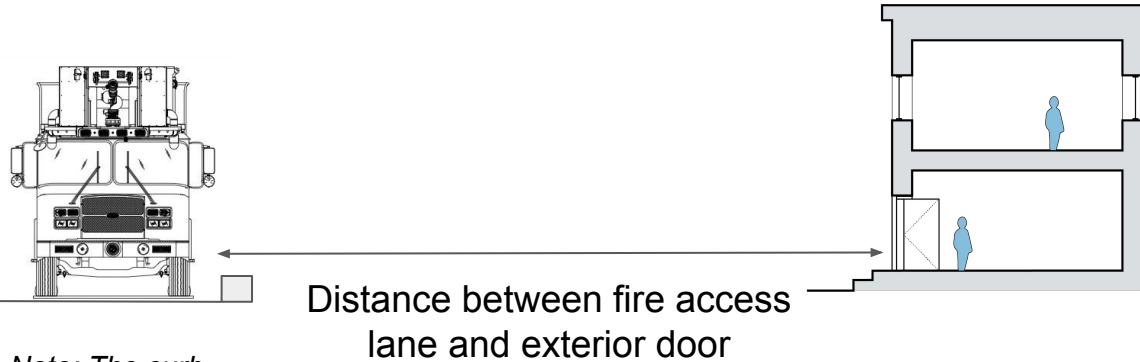
- Minimum of 20 feet wide
- Vertical clearance at least 13 ft 6 in
- Surface capable of supporting load
- Grade not exceeding 10%
- Turn radius simulation to ensure fire apparatus navigation
- Not obstructed by anything, including parking

The image shows a fire truck on a road with a minimum clearance of 20 feet.

APPLICABLE CODE (527 CMR Chapter 18)

- 18.2.3.5.1.1 Width of 20ft**
- 18.2.3.5.1.2 Height at least 13 ft 6 in**
- 18.2.3.5.2 Surface**
- 18.2.3.5.2 Permeable Surface**
- 18.2.3.5.3.3 Curb Cut**
- 18.2.3.5.6.1 Gradient less than 10%**
- 18.2.4.1.1 No parking**

1st MEASUREMENT: **EXTERIOR DOOR**



Note: The curb should be used, not the lot line, when measuring fire apparatus location on access road.

Allowable distance from a door to the access road.

There are two key measurements when determining allowable distance from the fire access road. The first is the distance from the access road to one exterior door. The list below shows allowable distances:

- 50 feet or less if no sprinkler in the building
- 150 feet or less with sprinkler
- 25 feet or less if the building is behind a building and does not have adequate frontage of 20 feet

The image shows how the distance to the door should be measured.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2 Access to Building and Facilities

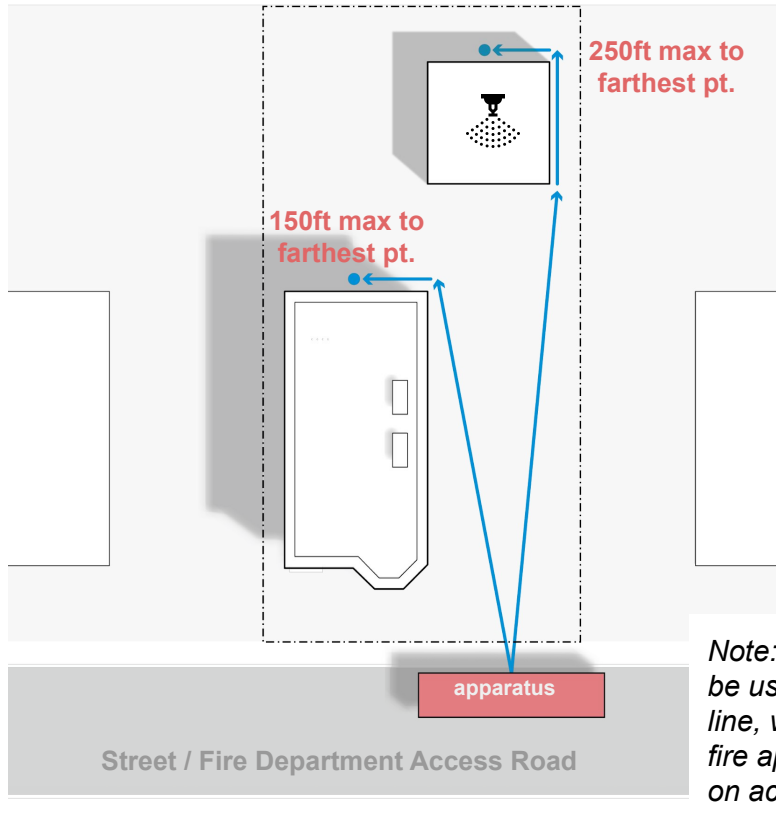
18.2.3.2.1 Door <50 ft

18.2.3.2.1.1 Door <150ft w/sprinkler

18.2.3.2.1.1 Door <25ft if behind no frontage

18.2.3.2.1.1.2 Distance to door <150ft of townhouse w/sprinkler

2nd MEASUREMENT: **EXTERIOR WALL**



Note: The curb should be used, not the lot line, when measuring fire apparatus location on access road.

Allowable distance from any portion of the exterior wall to the access road.

The second measurement is the distance from the access road to any portion of the first floor exterior wall. The list below shows allowable distances:

- 150 feet or less if no sprinkler in the building
- 250 feet or less with sprinkler
- No increase with addition of a sprinkler if the building is behind a building and does not have adequate frontage of 20 feet

The image shows how the distance should be measured.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.2 Distance to wall < 150ft

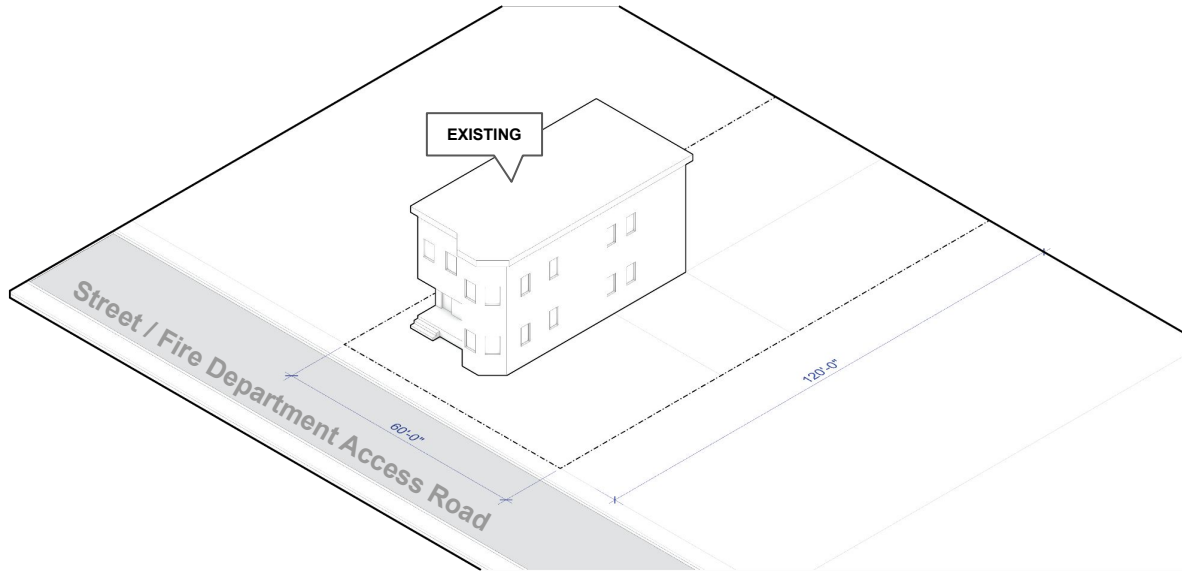
18.2.3.2.2.1 Distance to wall < 250ft w/sprinkler

18.2.3.2.2.2 No increase if behind + no frontage

FIRE CODE COMMON DEFINITIONS

*What are common definitions necessary to
interpret fire code?*

EXISTING STRUCTURE



The existing structure complies with fire access road requirements.

All buildings must have fire department access roads. Existing structures have complied with the regulation to have a door within 50 feet and any portion of the building within 150 feet. With an automatic sprinkler these numbers increase to 150 feet and 250 feet respectively.

The image shows an existing structure on a lot 60 feet wide and 120 feet deep. The fire department access road is the street in grey abutting the lot.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.1.1 Access road for every building

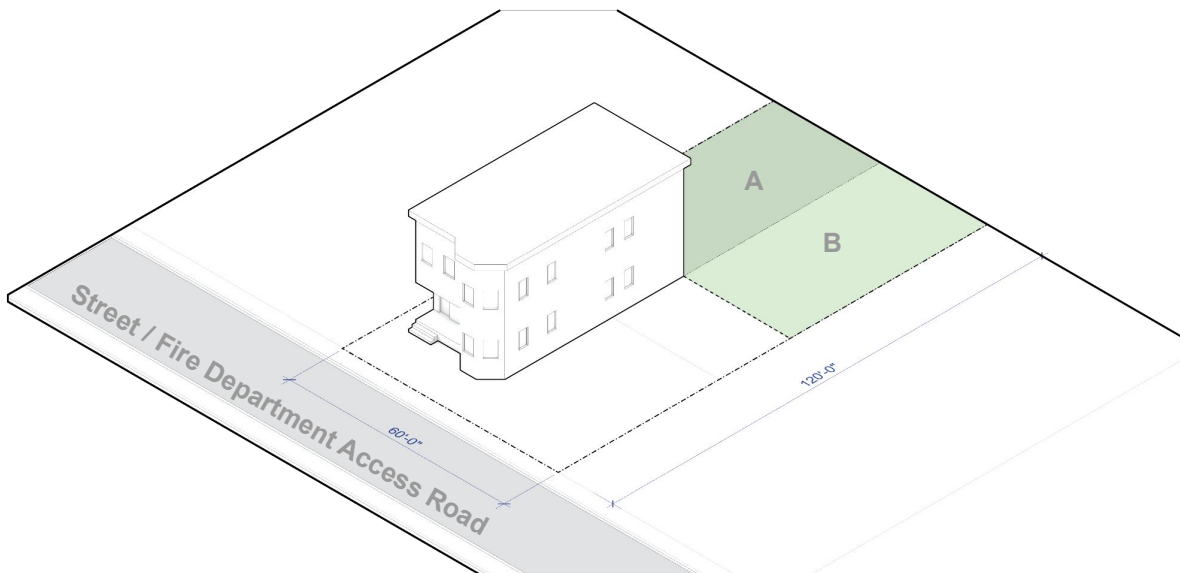
18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

COMMON DEFINITION: **BEHIND**



Understanding when an ADU is behind a building

When a building is **behind an existing building** and does not have adequate frontage the allowable distance from the access lane reduces to 25 feet. Common definition 1 will be used to determine if an ADU is behind.

The image shows the portion of the lot considered behind in dark green (section A) using the common definition.

COMMON DEFINITION

Behind

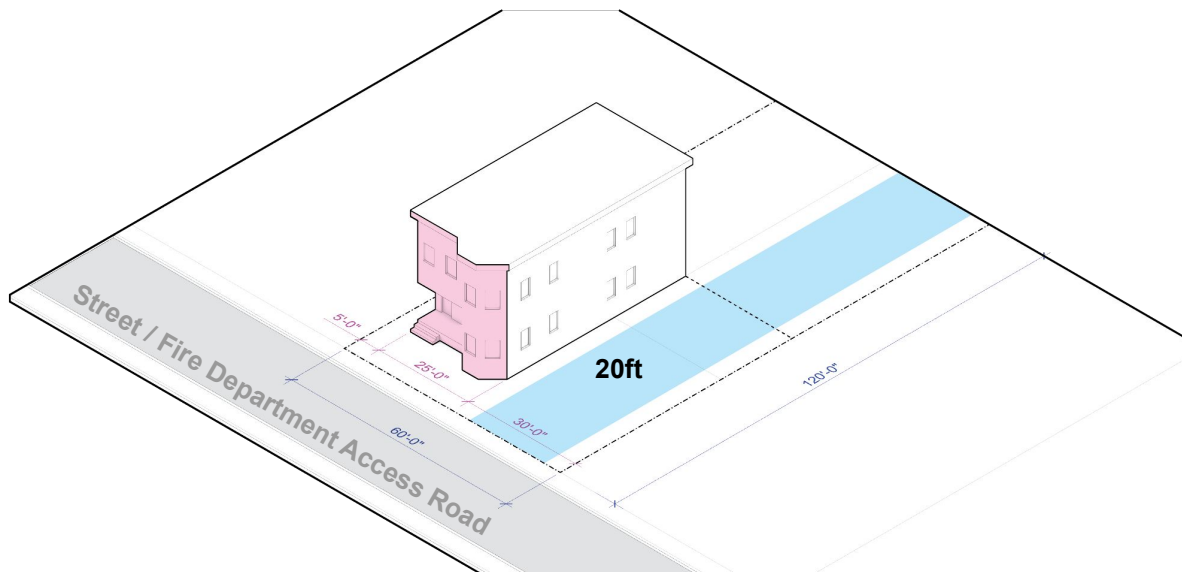
1. at or to the far side of (something), typically so as to be hidden by it. **(section A)**
2. in a line or procession, following or further back than (another member of the line or procession).
(section A and B)

APPLICABLE CODE (527 CMR Chapter 18)

18.1.1.3 New 1F or 2F behind and no frontage

18.1.1.3.1 Exempt if not behind

COMMON DEFINITION: **FRONTAGE**



Understanding adequate frontage

When a building is behind an existing building and **does not have adequate frontage** the allowable distance from the access lane reduces to 25 feet. The fire code defines frontage as “at least 20 feet or more abutting a public way.”

The image shows a blue strip representing 20 feet of adequate frontage.

COMMON DEFINITION

Frontage

1. the facade of a building.
2. a strip or extent of land abutting on a street or water.

APPLICABLE CODE (527 CMR Chapter 18)

18.1.1.3 New 1F or 2F behind and no frontage

18.1.1.3.1 Exempt if not behind

SCENARIOS:

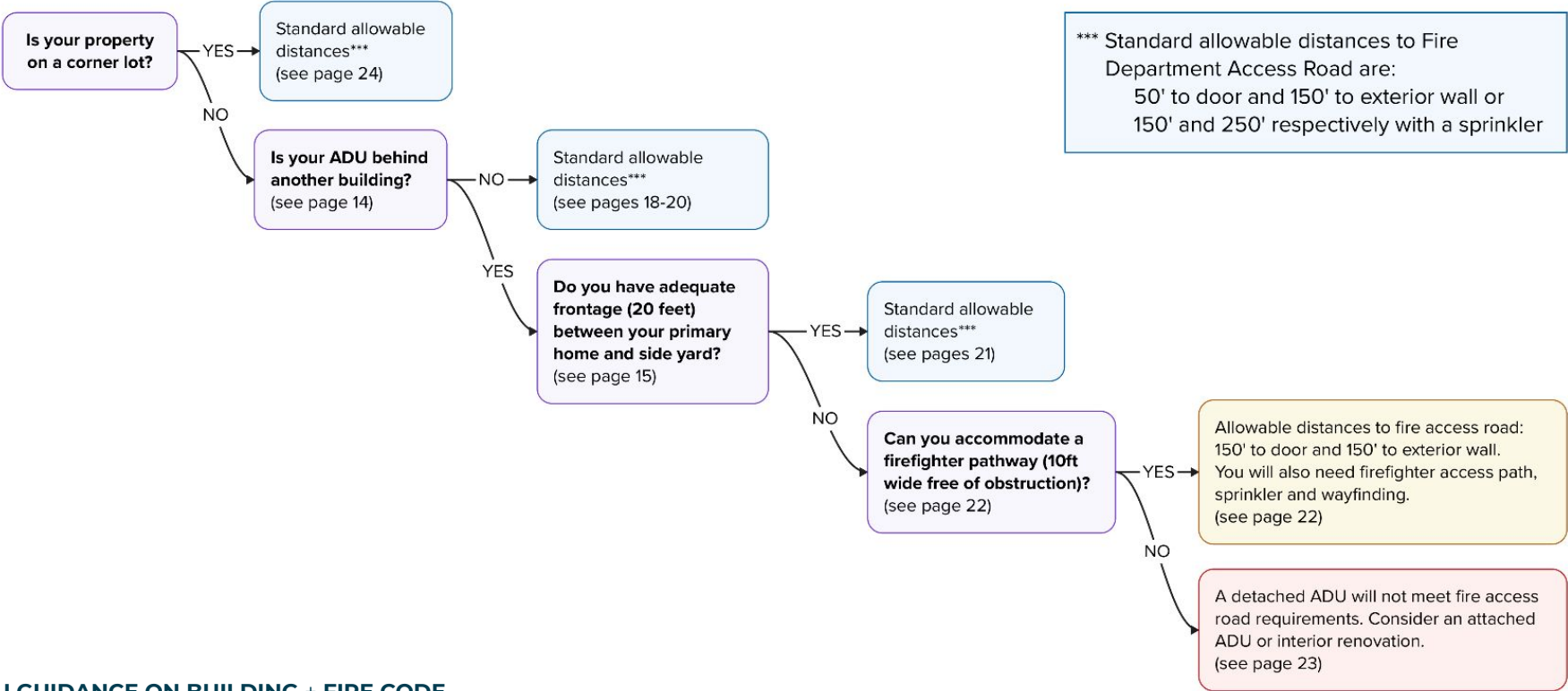
DETACHED ADUs + FIRE ACCESS ROAD

How does the fire access road requirement apply to common detached ADU scenarios?

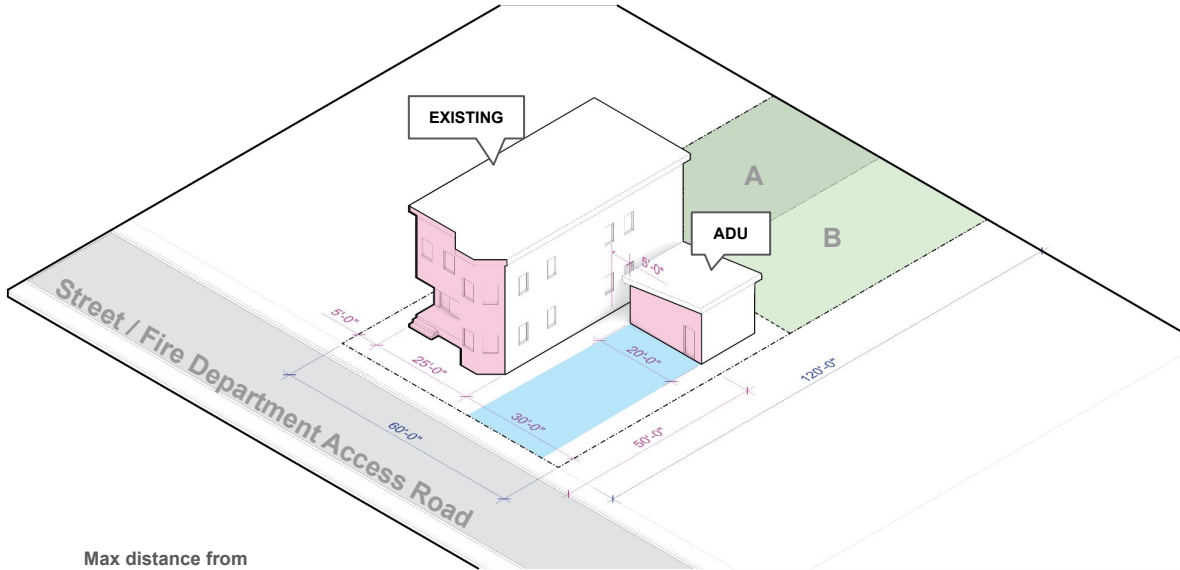
DETACHED ADU AND FIRE DEPARTMENT ACCESS ROAD

How do I know if my detached ADU meets the Fire Department Access Road requirements?

Use the questions below to help you understand if your property can meet the requirements.



DETACHED ADU: **SIDE**



Max distance from
door to Fire
Access Road



Detached ADU within 50 feet of access lane doesn't require a sprinkler

This scenario shows a detached ADU with a door within 50 feet of the fire access lane and less than 150 feet from any portion of the first floor exterior wall.

Therefore, a sprinkler will not be required to meet the fire access lane distances.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

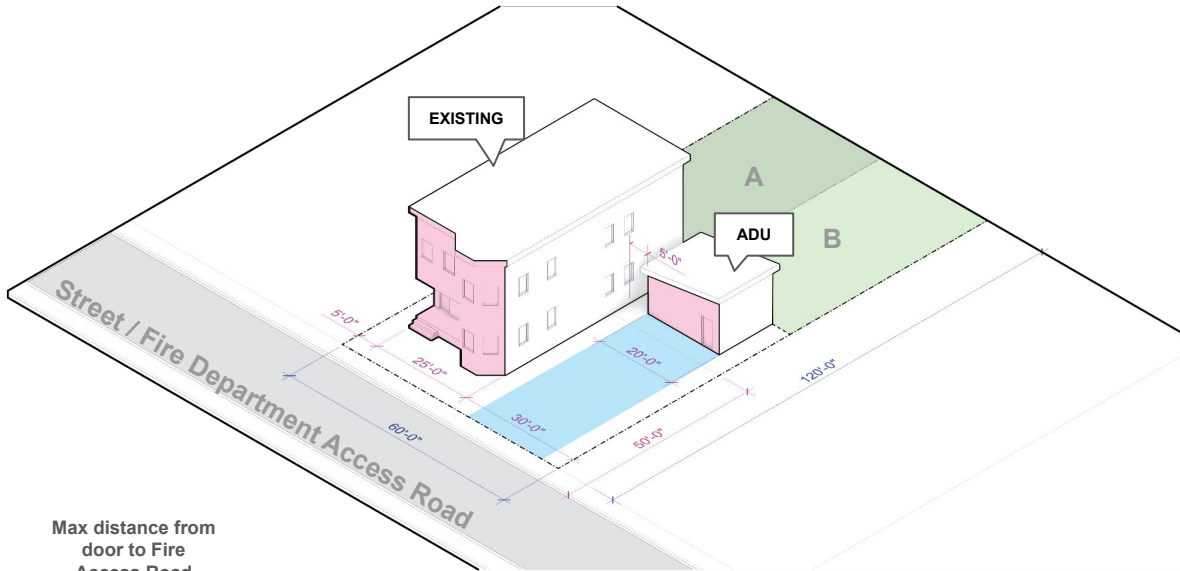
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

DETACHED ADU: **SIDE MORE THAN 50 FEET**



Max distance from
door to Fire
Access Road



Detached side yard ADU more than 50 feet back requires sprinkler

This scenario shows a detached ADU with adequate frontage but more than 50 feet from the fire access lane.

Therefore, a sprinkler is required to increase the fire access lane distances to 150 feet from a door and 250 feet from any portion of the exterior wall.

NOTE: Building code will determine the type of sprinkler system required. See later slides on sprinklers.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

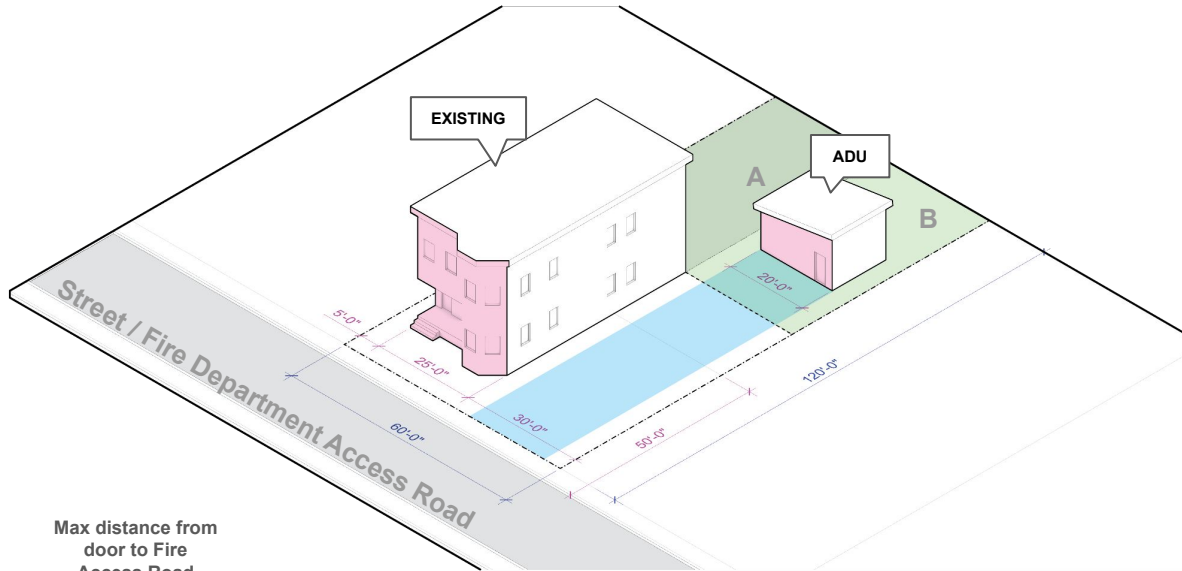
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

DETACHED ADU: **BACKYARD WITH FRONTAGE**



Max distance from
door to Fire
Access Road



Detached backyard ADU with adequate frontage requires a sprinkler

This scenario shows a detached ADU with adequate frontage but more than 50 feet from the fire access lane.

Therefore, a sprinkler is required to increase the fire access lane distances to 150 feet from a door and 250 feet from any portion of the exterior wall.

NOTE: Building code will determine the type of sprinkler system required. See later slides on sprinklers.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

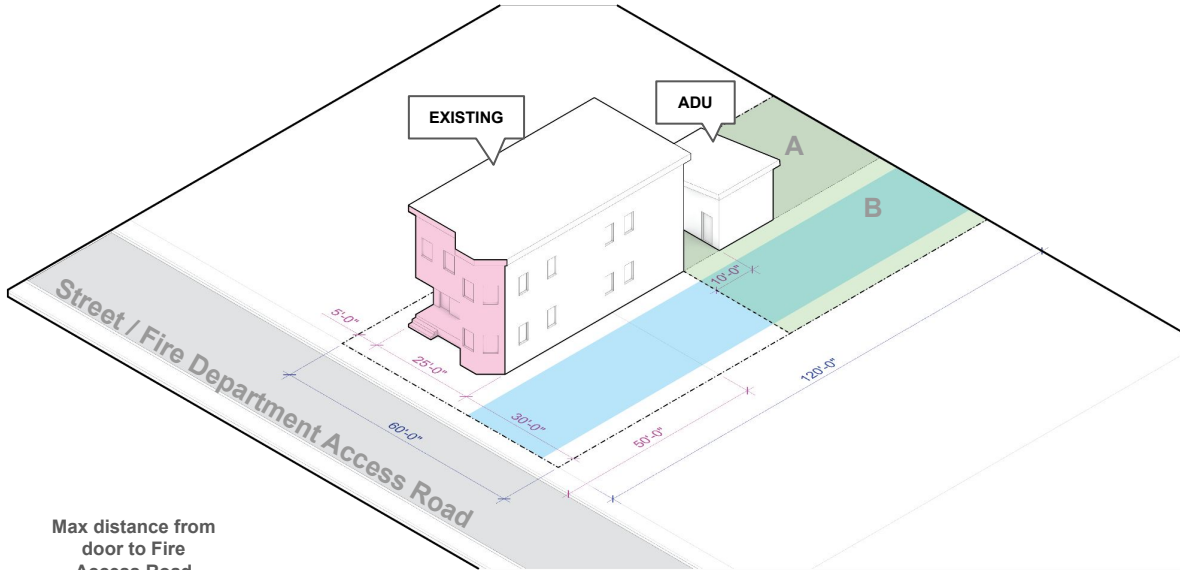
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

DETACHED ADU: **BEHIND WITH FRONTAGE**



Max distance from
door to Fire
Access Road



Detached ADU behind with adequate frontage requires a sprinkler

This scenario shows a detached ADU with adequate frontage but more than 50 feet from the fire access lane.

Therefore, a sprinkler is required to increase the fire access lane distances to 150 feet from a door and 250 feet from any portion of the exterior wall.

NOTE: Building code will determine the type of sprinkler system required. See later slides on sprinklers.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

DETACHED ADU: **BACKYARD NO FRONTAGE**



Max distance from
door to Fire
Access Road



Additional Fire Protection Features REQUIRED:

- Automatic sprinkler
- Firefighter access path
 - At least 10 feet wide,
 - Free of obstruction (no parking or trees)
- Wayfinding
 - Lighted entryway to ADU
 - Clear path to the ADU

**Detached backyard ADU
without adequate frontage
must have firefighter access
path, sprinkler, wayfinding**

This scenario shows a detached ADU behind the existing home but with only 10 feet of frontage, not the required 20. This does not meet the requirement for buildings behind buildings, without adequate frontage to have a door within 25 feet from the fire access road.

The Fire Department will accept ADUs with the following additional fire protection features: a firefighter access path, a sprinkler in the ADU, and wayfinding to the ADU.

NOTE: The firefighter access path must be at least 10 feet wide, free of obstruction such as designated parking or trees, and may be either paved or unpaved.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.1.4 AHJ permitted to accept alternatives

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

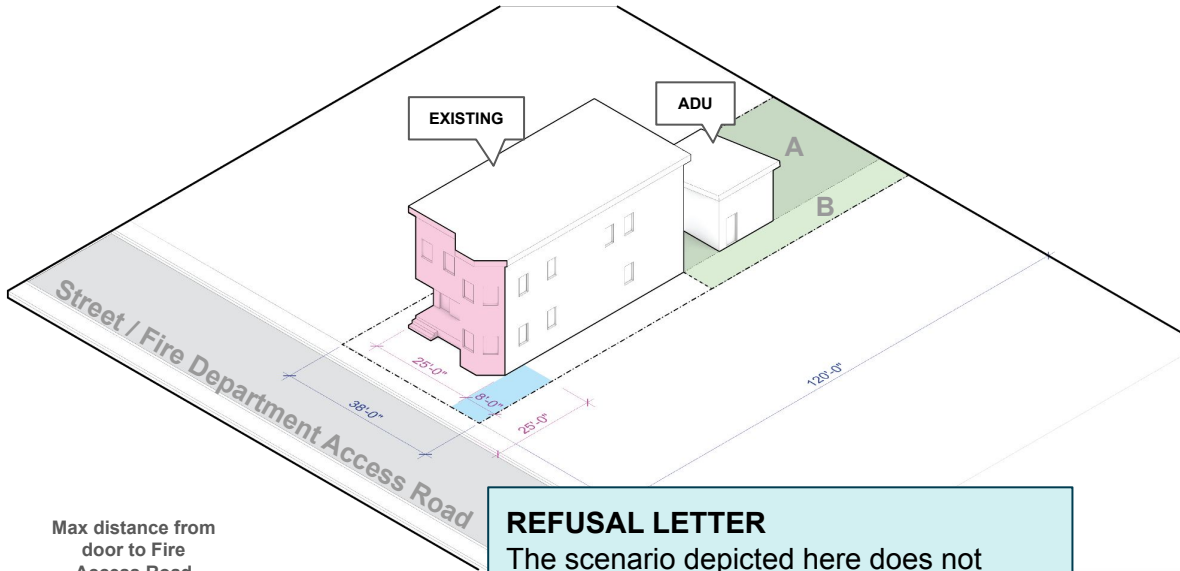
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind no frontage

DETACHED ADU: **BEHIND NO FRONTAGE**



Max distance from
door to Fire
Access Road



REFUSAL LETTER

The scenario depicted here does not meet the fire department access road requirement and would trigger a refusal letter from the fire department.

Detached ADU behind without adequate frontage will receive Fire Department Refusal

This scenario shows a detached ADU behind the existing structure, but with only 8 feet of frontage, not the required 20.

This scenario would trigger a fire department rejection letter because it does not meet the requirement for the fire access lane to be within 25 feet from a door.

The homeowner may submit an appeal to the MA Fire Prevention Appeals Board.

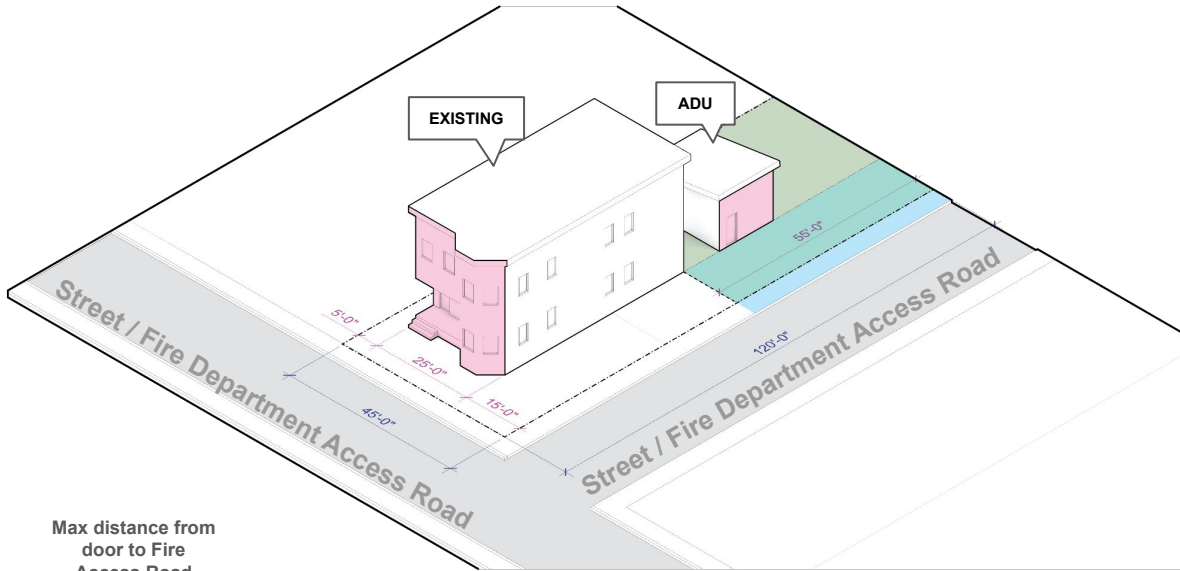
APPLICABLE CODE (527 CMR Chapter 18)

- 18.2.3.1.4 AHJ permitted to accept alternatives
- 18.2.3.2.1 Distance to door <50 ft
- 18.2.3.2.1.1 Distance to door <150ft w/sprinkler
- 18.2.3.2.1.1 Door <25ft if behind and no frontage
- 18.2.3.2.2 Distance to wall < 150ft
- 18.2.3.2.2.1 Distance to wall <250ft w/sprinkler
- 18.2.3.2.2.2 No increased to wall if behind + no frontage

APPEAL PROCESS

[Massachusetts Fire Prevention Appeals Board](#)

DETACHED ADU: **CORNER LOT**



Max distance from
door to Fire
Access Road



Detached ADU on a corner doesn't require a sprinkler

This scenario shows a detached ADU on a corner lot. The ADU door is within 50 feet of the public way and less than 150 from any portion of the first floor exterior wall.

Therefore, a sprinkler will not be required to meet the fire access lane distances.

Note: A private way will require analysis to determine that they meet the specifications of a fire department access road.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

SCENARIOS:

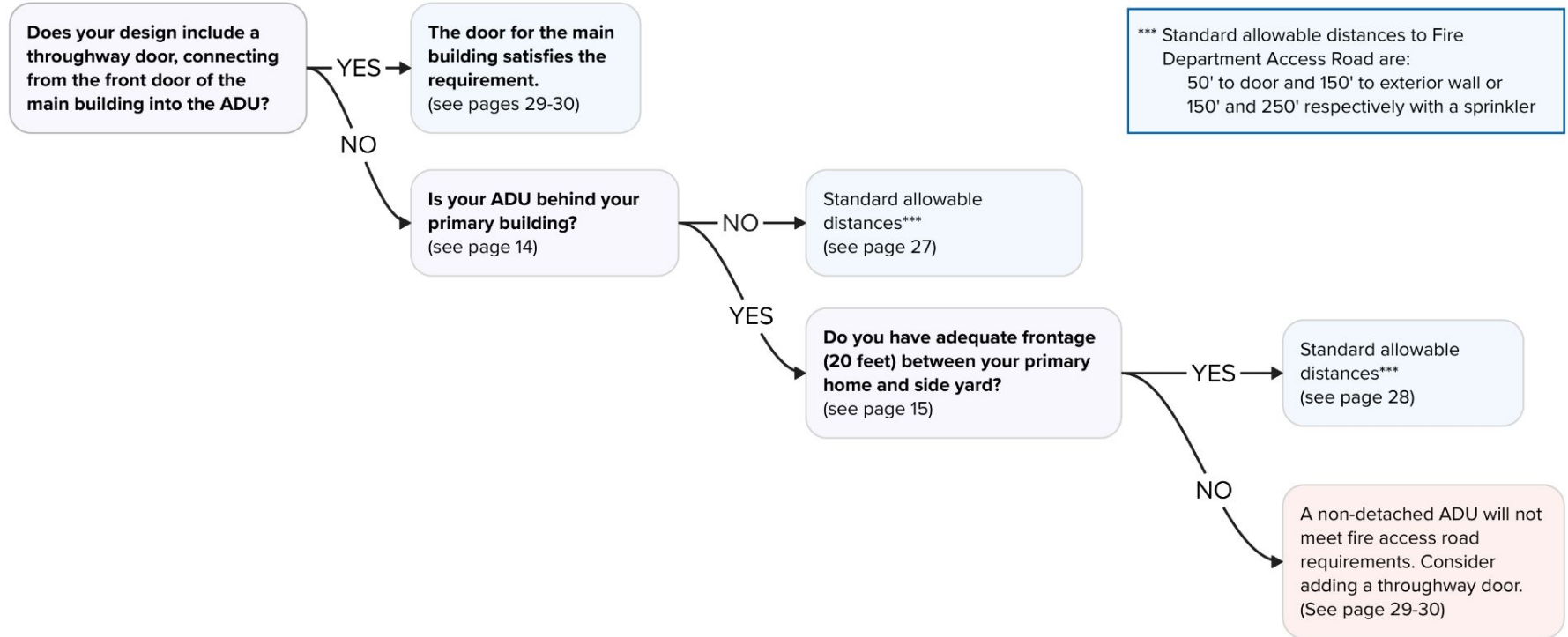
NON-DETACHED ADUs + FIRE ACCESS ROAD

How does the fire access road requirement apply to common attached ADU scenarios?

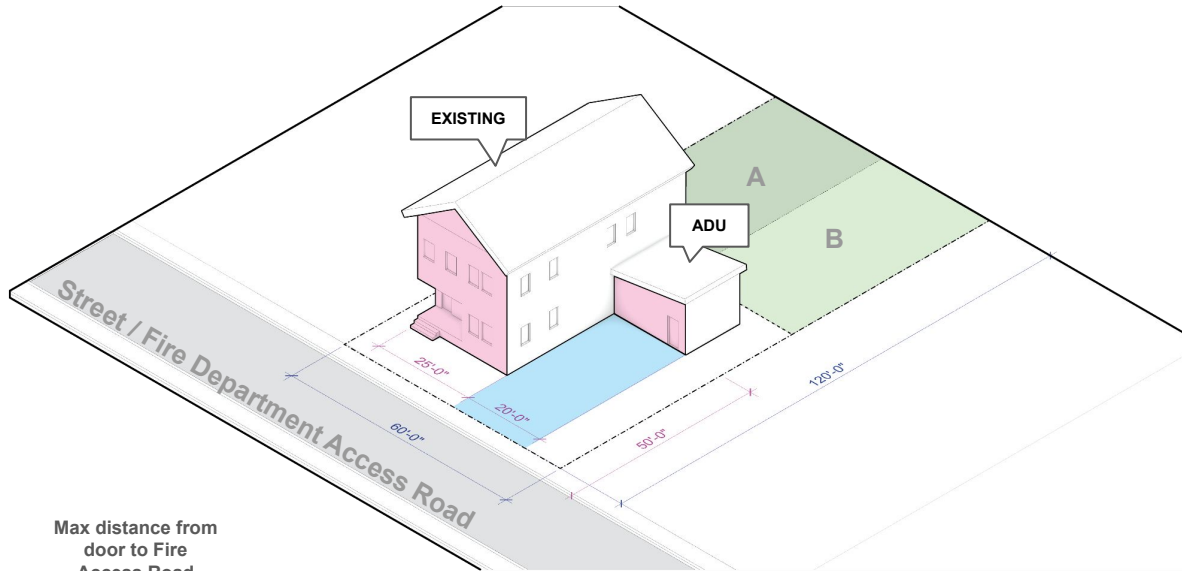
NON-DETACHED ADU AND FIRE DEPARTMENT ACCESS ROAD

How do I know if my non-detached ADU meets the Fire Department Access Road requirements?

Use the questions below to help you understand if your property can meet the requirements.



ATTACHED ADU



Max distance from
door to Fire
Access Road



Attached ADU within 50 feet of access lane doesn't require a sprinkler*

This scenario shows an attached ADU with a door within 50 feet of the fire access lane and less than 150 from any portion of the first floor exterior wall.

Therefore, a sprinkler will not be required to meet the fire access lane distances.

**Building code may require a sprinkler based on the number of units in the building. See later slides on sprinklers.*

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

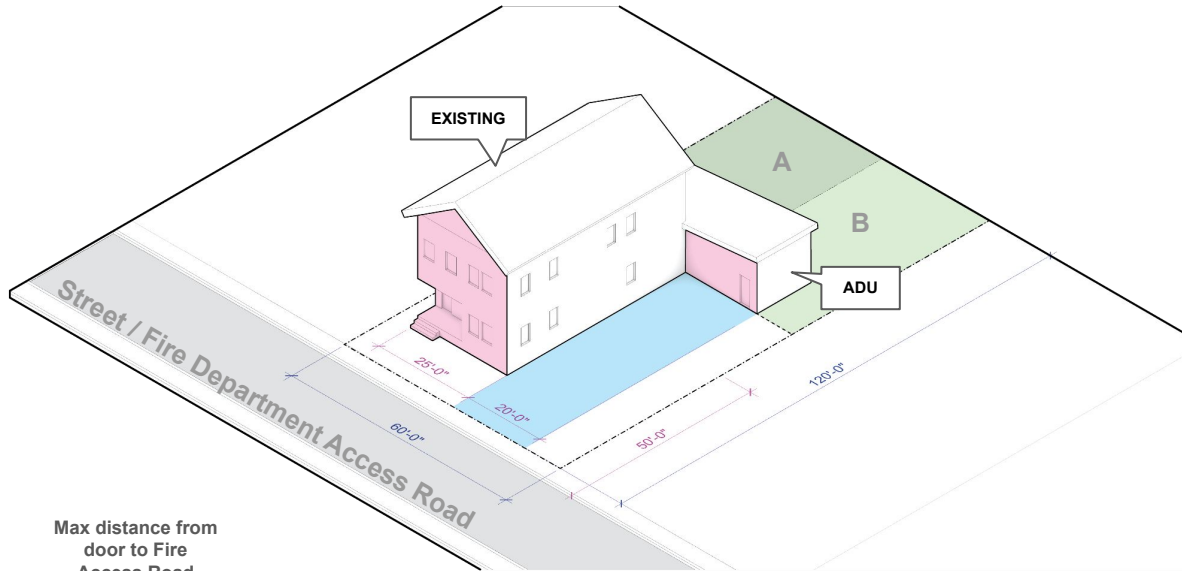
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

ATTACHED ADU



Max distance from
door to Fire
Access Road



Attached ADU more than 50 feet from access lane requires a sprinkler

This scenario shows an attached ADU with adequate frontage but more than 50 feet from the fire access lane.

Therefore, a sprinkler is required to meet the fire access lane distances.

NOTE: Building code will determine the type of sprinkler system required based on the number of units in the building. See later slides on sprinklers.

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

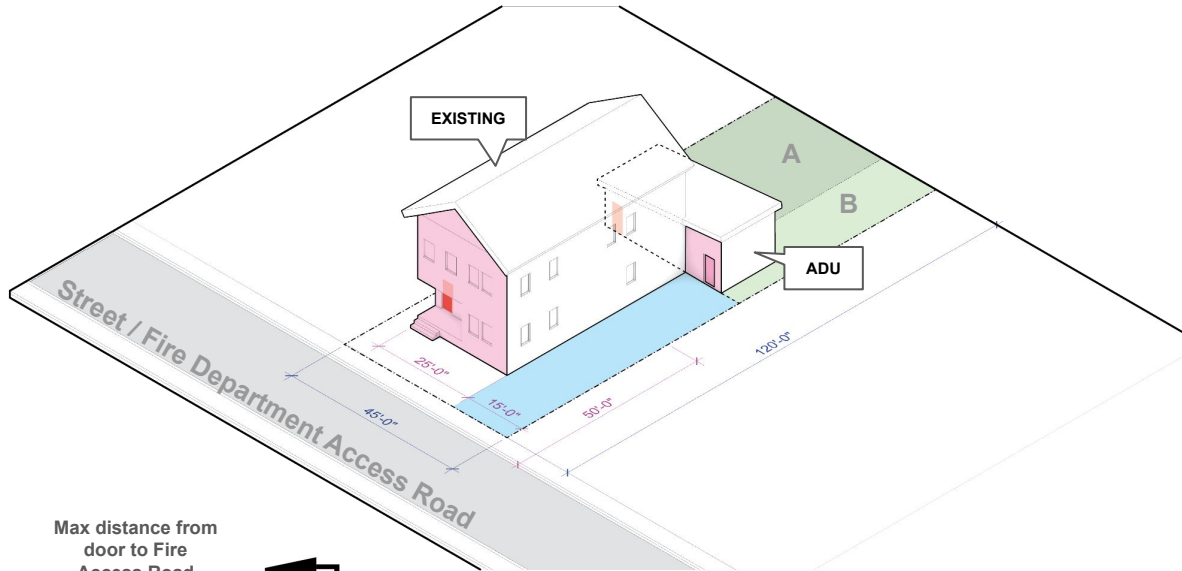
18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

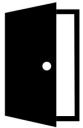
18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

ATTACHED ADU



Max distance from
door to Fire
Access Road



Interior
Throughway
Req'd

Attached ADU behind the building needs interior throughway

This scenario shows an ADU behind the building, without adequate frontage.

A throughway door connection creates access for the fire department to go from the front door of the main building into the ADU and satisfies the requirement to have "at least one exterior door that can be opened from the outside and that provides access to the interior of the building."

**Building code may require a sprinkler based on the number of units in the building. See later slides on sprinklers.*

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind

ATTACHED ADU - BREEZEWAY



Attached ADU with breezeway and interior throughway.

This scenario shows an ADU behind the existing building that is attached with a breezeway and includes an interior throughway door. To be considered an attached ADU, the breezeway connection must be an enclosed and conditioned space.

**Building code may require a sprinkler based on the number of units in the building. See later slides on sprinklers.*

APPLICABLE CODE (527 CMR Chapter 18)

18.2.3.2.1 Distance to door <50 ft

18.2.3.2.1.1 Distance to door <150ft w/sprinkler

18.2.3.2.1.1 Door <25ft if behind and no frontage

18.2.3.2.2 Distance to wall < 150ft

18.2.3.2.2.1 Distance to wall <250ft w/sprinkler

18.2.3.2.2.2 No increased to wall if behind + no frontage

BUILDING CODE:

SPRINKLER REQUIREMENTS

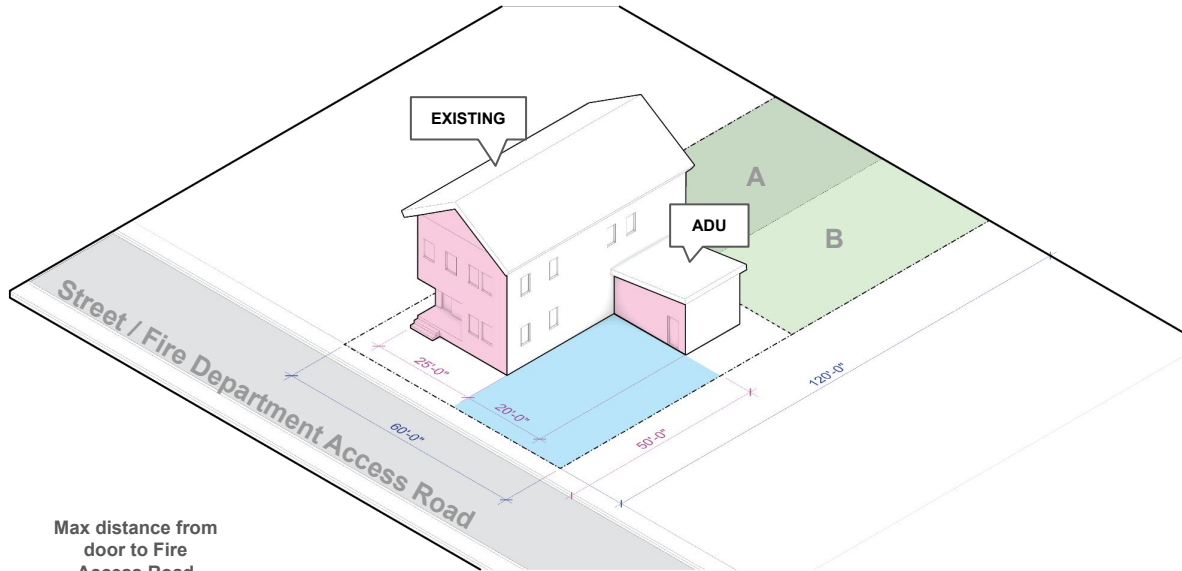
*How does the number of units in the building impact the
sprinkler requirements?*

SPRINKLER REQUIREMENTS

What kind of sprinkler do I need?

	Detached ADU	1 unit + ADU (non-detached)	2 unit + ADU (non-detached)	3 unit + ADU (non-detached)
Is an automatic sprinkler required in the ADU?	Maybe <i>Fire code may require a sprinkler based on the location of the ADU on the lot</i> (pages 36-37)	No (page 33)	Yes (page 34)	Yes (page 35)
What type of sprinkler is required?	NFPA 13D (tank system) or NFPA 13R (water line)		NFPA 13D (tank system) or NFPA 13R (water line)	NFPA 13R (water line to street)

ATTACHED ADU: 1F + ADU



Max distance from
door to Fire
Access Road



Single family plus ADU does not require a sprinkler

The building code requires buildings with 3 or more units to add a sprinkler. In this scenario, there is 1 existing unit and the ADU adds a second. Therefore a sprinkler is not required.

There must be hard-wired smoke alarms and CO2 detectors in all units including the new ADU.

**Fire code may require a sprinkler based on the location of the ADU on the lot. See earlier slides on attached ADUs for guidance.*

APPLICABLE CODE

IEBC 1012.2.1 Fire sprinkler system

IBC Chapter 9 Fire Protection and Life Safety

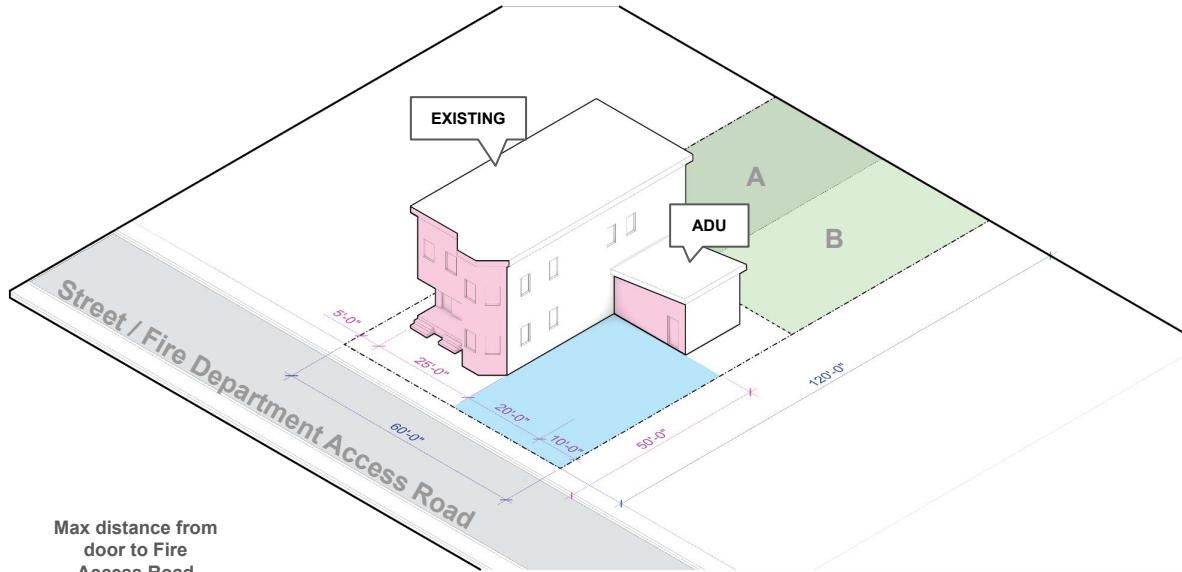
IBC 903.2.8 Group R

IBC 903.2.8.1 Group R-3

780 CMR 903.2 Where required

TABLE 903.2 Occupancy automatic sprinkler requirements

ATTACHED ADU: 2F + ADU



Max distance from
door to Fire
Access Road



Two family plus ADU requires sprinkler*

The building code requires buildings with 3 or more units to add a sprinkler. In this scenario, there are 2 existing units and the ADU adds a third. Therefore a sprinkler is required.

An NFPA 13D tank system is allowed with 3 or fewer units. The sprinkler is required in the area where the change of occupancy occurs, which is the ADU.

In addition, there must be hard-wired smoke alarms and CO2 detectors in all units including the new ADU.

APPLICABLE CODE

IEBC 1012.2.1 Fire sprinkler system

IBC Chapter 9 Fire Protection and Life Safety

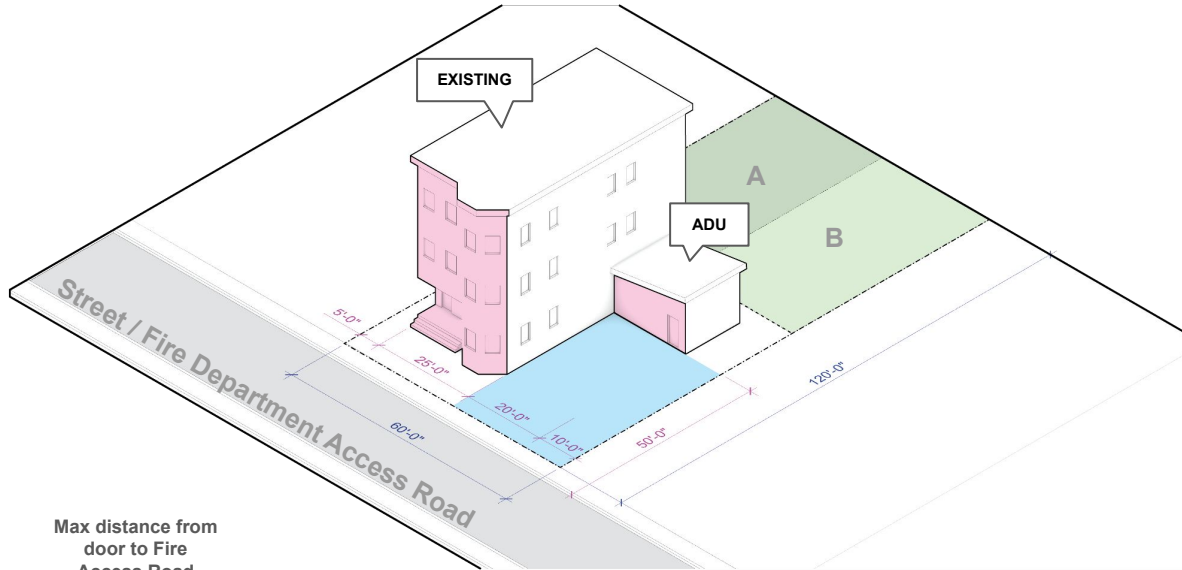
IBC 903.2.8 Group R

IBC 903.2.8.1 Group R-3

780 CMR 903.2 Where required

TABLE 903.2 Occupancy automatic sprinkler requirements

ATTACHED ADU: 3F + ADU



Max distance from
door to Fire
Access Road



Three family plus ADU requires sprinkler

The building code requires buildings with 3 or more units to add a sprinkler. In this scenario, there are 3 existing units and the ADU adds a fourth. Therefore a sprinkler is required.

With 4 or more units, an NFPA 13R type sprinkler with a water line to the street is required. The sprinkler is required in the area where the change of occupancy occurs, which is the ADU.

In addition, there must be hard-wired smoke alarms and CO2 detectors in all units including the new ADU.

APPLICABLE CODE

IEBC 1012.2.1 Fire sprinkler system

IBC Chapter 9 Fire Protection and Life Safety

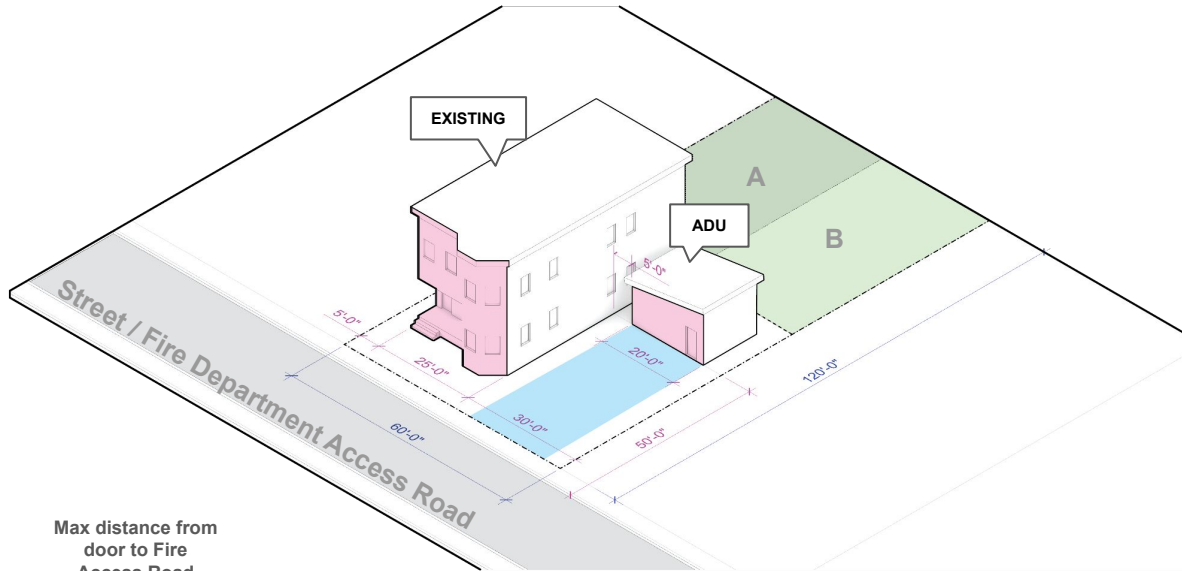
IBC 903.2.8 Group R

IBC 903.2.8.1 Group R-3

780 CMR 903.2 Where required

TABLE 903.2 Occupancy automatic sprinkler requirements

DETACHED ADU: **SIDE**



**Max distance from
door to Fire
Access Road**

50/150

Door/Wall

Detached ADU is a single unit and building code doesn't require sprinkler

The building code requires buildings with 3 or more units to add a sprinkler. In this scenario the detached ADU is separate from the existing building. The ADU is only 1 unit and therefore a sprinkler is not required.

There must be hard-wired smoke alarms and CO2 detectors in the ADU.

**Fire code may require a sprinkler based on the location of the ADU on the lot. See earlier slides on detached ADUs for guidance.*

APPLICABLE CODE

IEBC 1012.2.1 Fire sprinkler system

IBC Chapter 9 Fire Protection and Life Safety

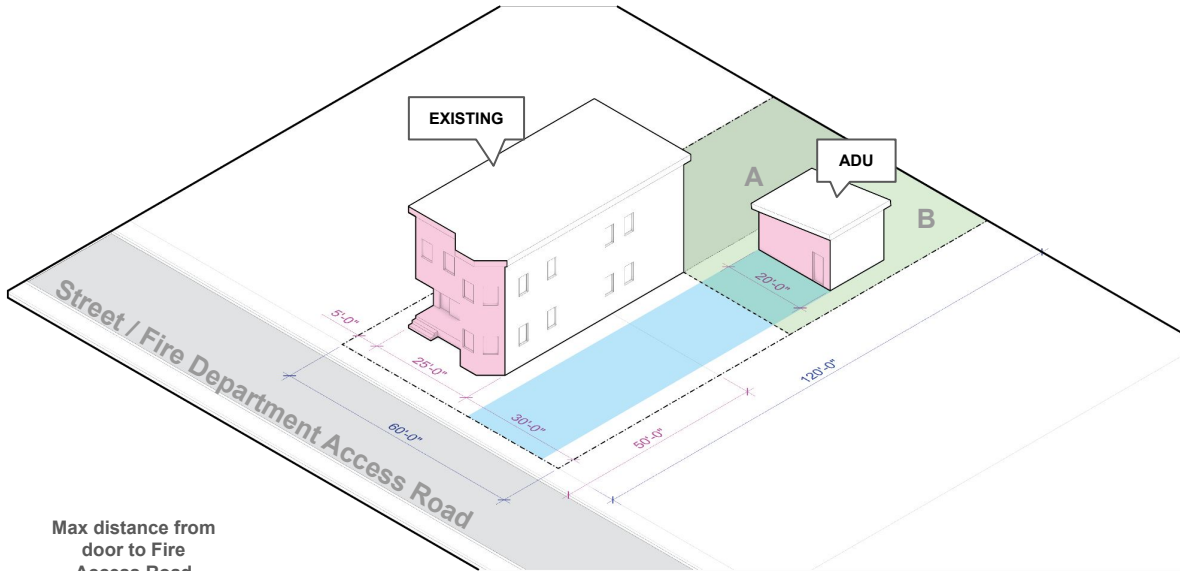
IBC 903.2.8 Group R

IBC 903.2.8.1 Group R-3

780 CMR 903.2 Where required

TABLE 903.2 Occupancy automatic sprinkler

DETACHED ADU: **BACKYARD WITH FRONTAGE**



Max distance from
door to Fire
Access Road



Detached ADU may require sprinkler to meet fire code

The building code requires buildings with 3 or more units to add a sprinkler. However, in this scenario the door to the detached ADU is further than 50 feet from the Fire Department Access Road and therefore requires a sprinkler.

Since the ADU is a single unit an NFPA 13D tank system is allowed.

There must be hard-wired smoke alarms and CO2 detectors in the ADU.

APPLICABLE CODE

IEBC 1012.2.1 Fire sprinkler system

IBC Chapter 9 Fire Protection and Life Safety

IBC 903.2.8 Group R

IBC 903.2.8.1 Group R-3

780 CMR 903.2 Where required

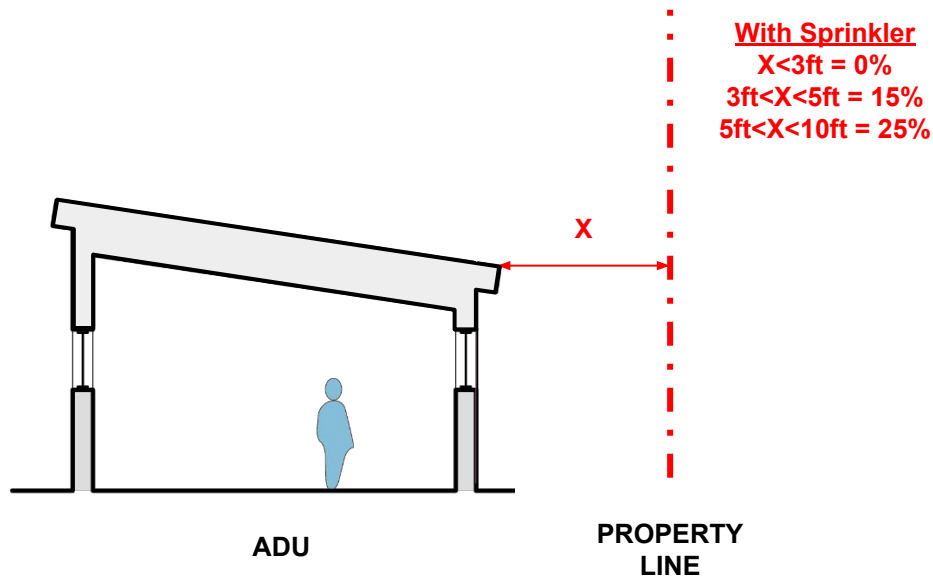
TABLE 903.2 Occupancy automatic sprinkler

BUILDING CODE:

ALLOWABLE OPENINGS

How does the distance from the lot line impact the amount of openings allowed?

DETACHED ADU: **ALLOWABLE OPENINGS**



Allowable window openings is determined by distance from the lot line

When there is 3-5 feet between the ADU and the lot line, the wall in any story of the ADU facing the building can have 15% openings, refer to the IBC Table 705.8 for distances less than 3 or greater than 5 feet.

The wall facing the ADU of an existing building on the same lot, shall be treated as a lot line when the ADU is adjacent to an existing wall.

Exterior walls of the ADU must be fire resistance rated to be at least 1 hour.

APPLICABLE CODE

IBC Chapter 705.3 Buildings on the same lot

IBC Chapter 705.5 Fire separation ratings

IBC 705.8 Openings

IBC 705.8.1 Allowable area of openings

IBC Table 705.8

APPENDIX

APPENDIX A

BOSTON FIRE DEPT. BOSTON, MA

S.O. 141647 / QUOTE 83643

AERM AERIAL BODY
CYCLONE II X CHASSIS
95-PLATFORM AERIAL

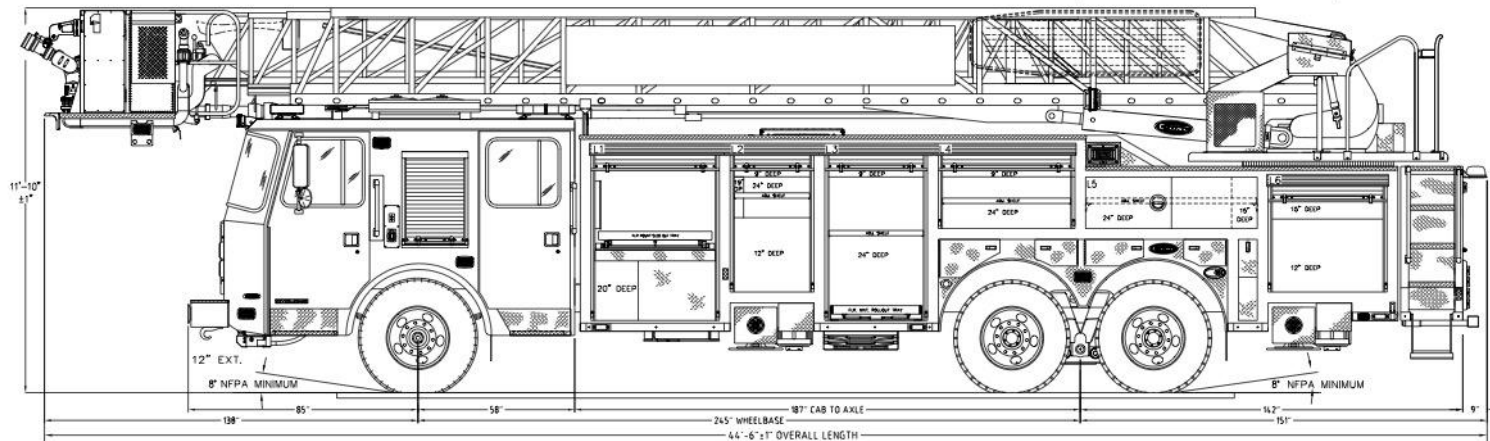
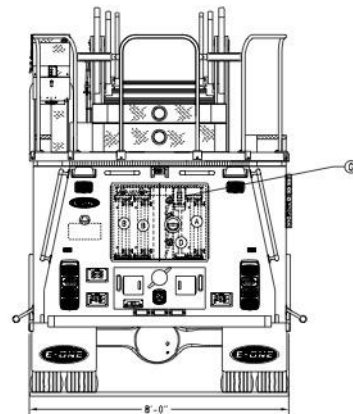
THIS DRAWING IS FOR REFERENCE PURPOSES. ALL DIMENSIONS ARE
SUBJECT TO MINOR VARIATIONS DUE TO MANUFACTURING PROCESSES.

APPROVED FOR PRODUCTION

DESIGNER: BRIAN MASON DATE: 04-AUG-2017

COMPT.	OPENING		INTERIOR DIMENSION			
L1/R1	45W	55H	47W	49H	50D	UPPER LOWER
L2	29W	45H	31W	54H	NOTED	
R2	31W	19H	31W	19H	12D	
L3	36W	55H	38W	64H	NOTED	
R3	38W	30H	38W	30H	24D	
L4	48W	21H	50W	30H	NOTED	
R4	44W	19H	44W	19H	12D	
L5	63W	19H	63W	19H	NOTED	
L6	42W	33H	44W	35H	13D	UPPER LOWER
			44W	27H	12D	
GROUND LADDERS						
ITEM	LADDER LENGTH	MODEL NUMBER	QTY			
A	40' 2-SECT.	TEL-40	1			
B	35' 2-SECT.	TEL-35	2			
C	28' 2-SECT.	TEL-28	1			
D	20' ROOF	TRL-20	1			
E	16' ROOF	PRL-16	1			
F	12' ROOF	PRL-12	1			
G	10' FOLDING	FL-10	1			
H	LITTLE GIANT	MODEL 17	1			

ON AERIAL



REV	1	BY	BM	DATE	04-AUG-2017
REV	2	BY	BM	DATE	04-AUG-2017
REV	3	BY	BM	DATE	04-AUG-2017
REV	4	BY	BM	DATE	04-AUG-2017
REV	5	BY	BM	DATE	04-AUG-2017
REV	6	BY	BM	DATE	04-AUG-2017
REV	7	BY	BM	DATE	04-AUG-2017
REV	8	BY	BM	DATE	04-AUG-2017
REV	9	BY	BM	DATE	04-AUG-2017
REV	10	BY	BM	DATE	04-AUG-2017

APPENDIX A

BOSTON FIRE DEPT. BOSTON, MA

S.O. 141647 / QUOTE 83643

AERM AERIAL BODY

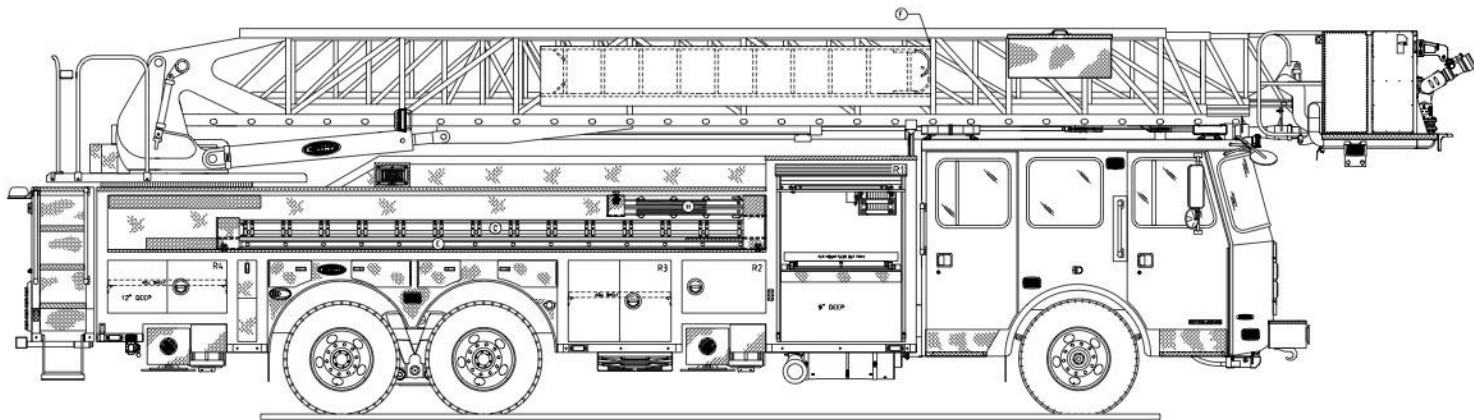
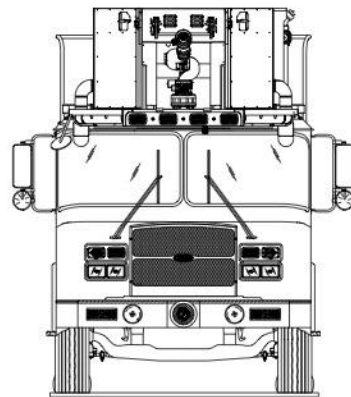
CYCLONE II X CHASSIS

95-PLATFORM AERIAL

THIS DRAWING IS FOR REFERENCE PURPOSES. ALL DIMENSIONS ARE
SUBJECT TO MINOR VARIATIONS DUE TO MANUFACTURING PROCESSES.

APPROVED FOR PRODUCTION

DESIGNER: BRIAN MASON DATE: 04-AUG-2017



REV	1	BY	BM	DATE	04-AUG-2017
REV	2	BY	BM	DATE	04-AUG-2017
REV	3	BY	BM	DATE	04-AUG-2017
REV	4	BY	BM	DATE	04-AUG-2017
REV	5	BY	BM	DATE	04-AUG-2017
REV	6	BY	BM	DATE	04-AUG-2017
REV	7	BY	BM	DATE	04-AUG-2017
REV	8	BY	BM	DATE	04-AUG-2017
REV	9	BY	BM	DATE	04-AUG-2017
REV	10	BY	BM	DATE	04-AUG-2017

APPENDIX A

Notations are specific to Boston Fire Department

SAE Turning Radius Calculations for Quote No. 83643				
Wheelbase:	245"	Front Bumper Size:	10"	
Body Width:	100" <i>96"</i>	Front Bumper Extension:	12"	
Front Axle Kingpin Center:	68.83"	Front Wheel Type:	STEEL	
Front Axle Track:	81.57"	Rear Wheel Type:	STEEL	
Front Axle Tire Width:	16.2"	Tire Brand:	MICHELIN	
Dimension Over Rear Tires:	97.654"			
Body Front Overhang:	84"			
Inside Cramp Angle	S. A. E. Turning Radius	Tire Curb Clearance	Bumper Swing Clearance	Minimum Inside Radius
44	34.3'	35'	39.3'	19.9'
45	33.7'	34.4'	38.8'	19.2'
46	33.2'	33.8'	38.3'	18.5'

Nominal Cramp Angles:	
* Meritor FL941 & FL943 axles: up to and including <u>425/65R22.5 tires</u>	45 degrees
Meritor FL941 & FL943 axles: 445/65R22.5 tires	38 degrees

This Turning Radius report reflects how the quote was configured. Any succeeding changes may slightly alter the turning radius of the vehicle and the data in this report.