



# Life Safety Drawings 101

Codes and Regulatory Compliance Track

# Course Learning Objectives

1. List building components and information that are **required on life safety drawings** by regulatory authorities including the National Fire Protection Association, The Joint Commission, and the local authority having jurisdiction (AHJ)
2. Demonstrate how to **read** and **interpret** life safe drawings
3. Locate Novant Health life safety drawings on **ATG**

learning objective 1:  
required building components and  
information

# What organizations publish and regulate life safety drawing requirements?

The **National Fire Protection Association (NFPA)** publishes requirements specifically for life safety drawings in NFPA 101: *The Life Safety Code* (2012).

During **The Joint Commission's** triennial survey, life safety drawings are requested and used during the survey process.

The local **authority having jurisdiction (AHJ)** requires certain colors to designate wall separations, hazardous areas, etc.



# The *Life Safety Code* requires that hospitals maintain current and accurate life safety drawings with certain denotations.

## As required by NFPA, fire safety denotations include:

- areas of the building that are fully sprinklered (if the building is partially sprinklered)
- smoke-rated barrier locations
- fire-rated barrier locations
- locations of designated smoke compartments
- sleeping and non-sleeping suite boundaries, including the size of the identified suites
- hazardous storage area locations
- locations of chutes and shafts
- any approved equivalencies or waivers



# The Joint Commission Requirements

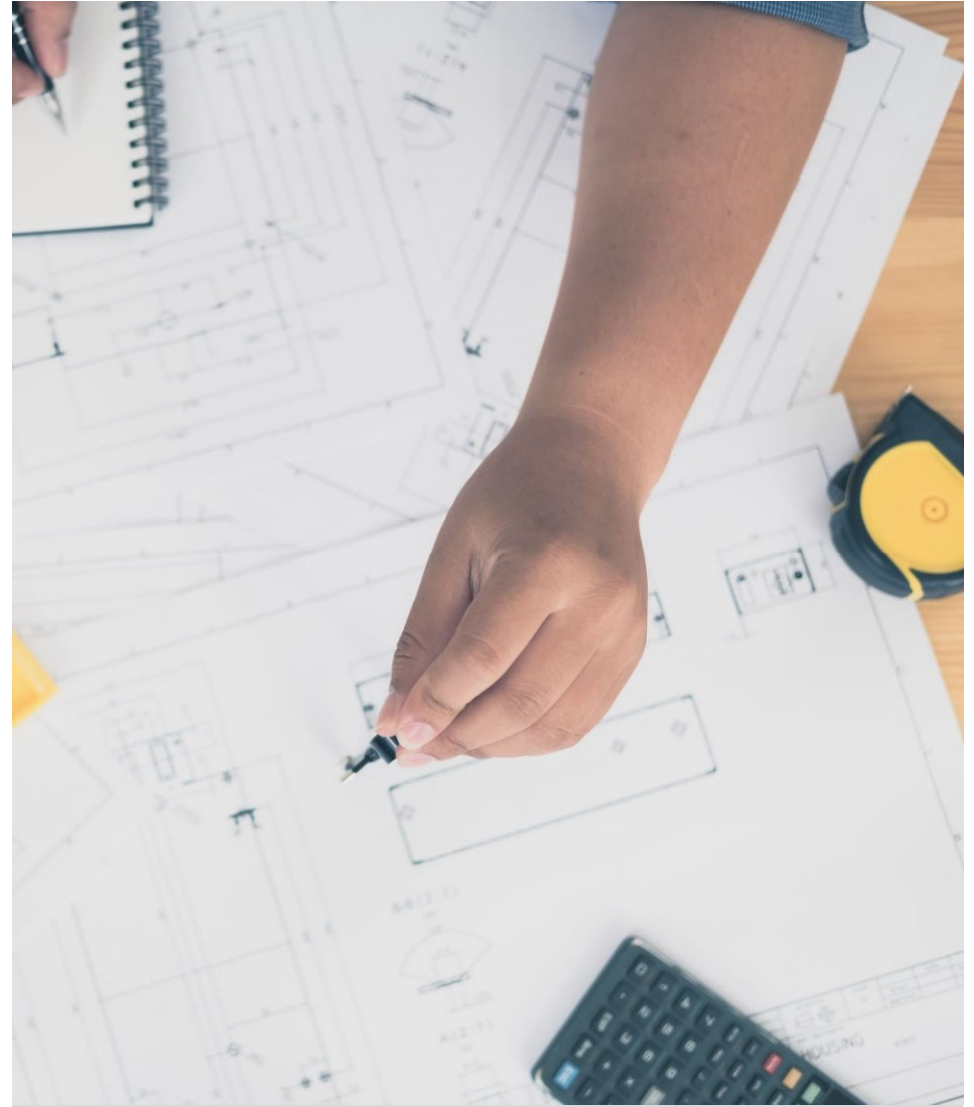
Similar to NFPA, TJC requires certain markings and designation on all life safety drawings.

On the Life Safety drawings, **provide the floor areas** (in square feet) for the following spaces:

- smoke compartment
- fire compartment
- suite

With **distinct markings**, designate the following spaces:

- suites
- hazardous areas
- non-sprinklered areas



learning objective 2:  
read and interpret life safety drawings

# Reading and Interpreting Life Safety Drawings

Life Safety drawings are **color-coded** and marked to designate **life safety building elements**. A legend is provided to define the meaning of each color, marking, or symbol.

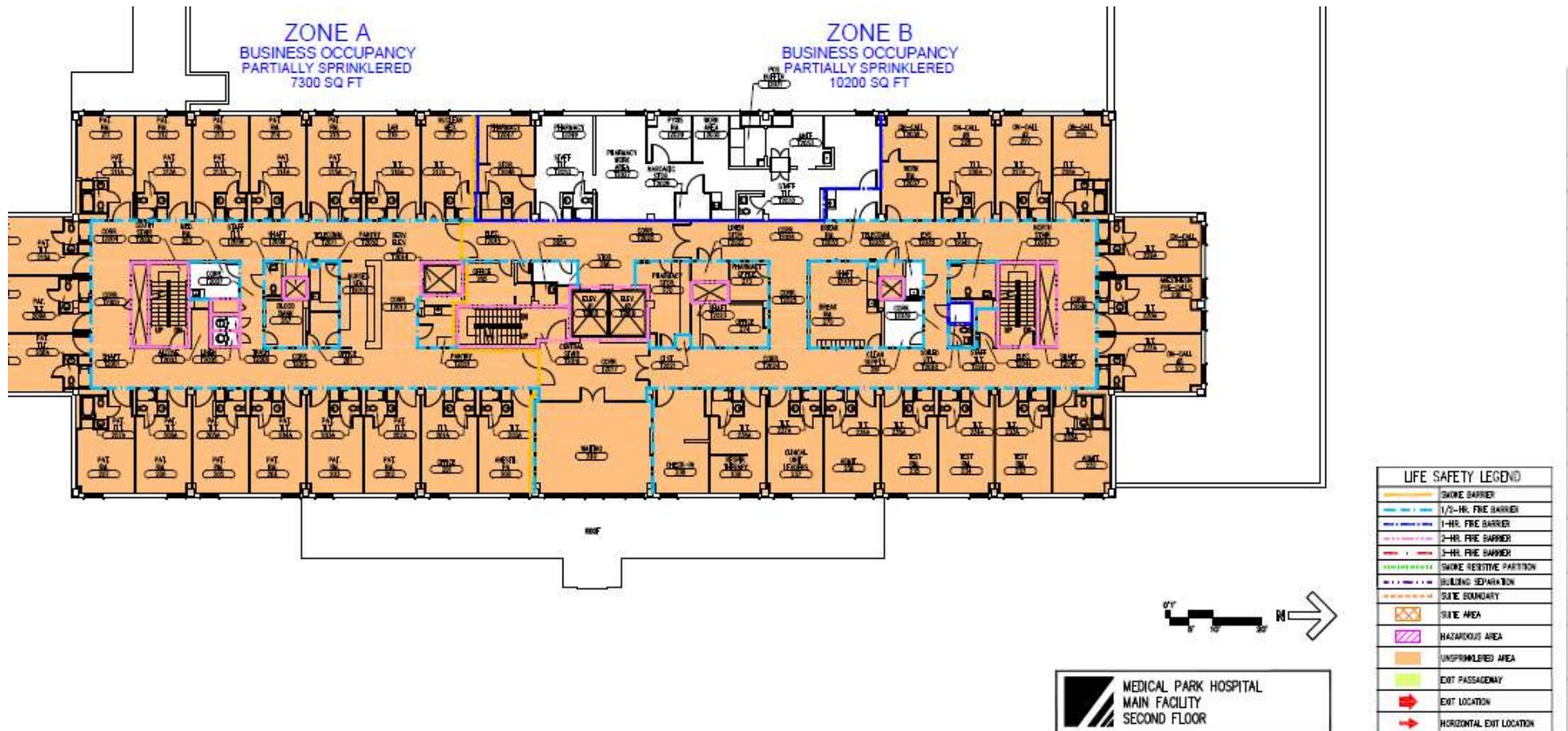


LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
	3-HR. FIRE BARRIER
	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
	SUITE BOUNDARY
	SUITE AREA
	HAZARDOUS AREA
	UNSPRINKLERED AREA
	EXIT PASSAGEWAY
	EXIT LOCATION
	HORIZONTAL EXIT LOCATION

LIFE SAFETY LEGEND  
1/2-HR. FIRE BARRIER  
1-HR. FIRE BARRIER  
2-HR. FIRE BARRIER  
3-HR. FIRE BARRIER  
SMOKE RESISTIVE PARTITION  
BUILDING SEPARATION  
SUITE BOUNDARY  
SUITE AREA  
HAZARDOUS AREA  
UNSPRINKLERED AREA  
EXIT PASSAGEWAY  
EXIT LOCATION  
HORIZONTAL EXIT LOCATION

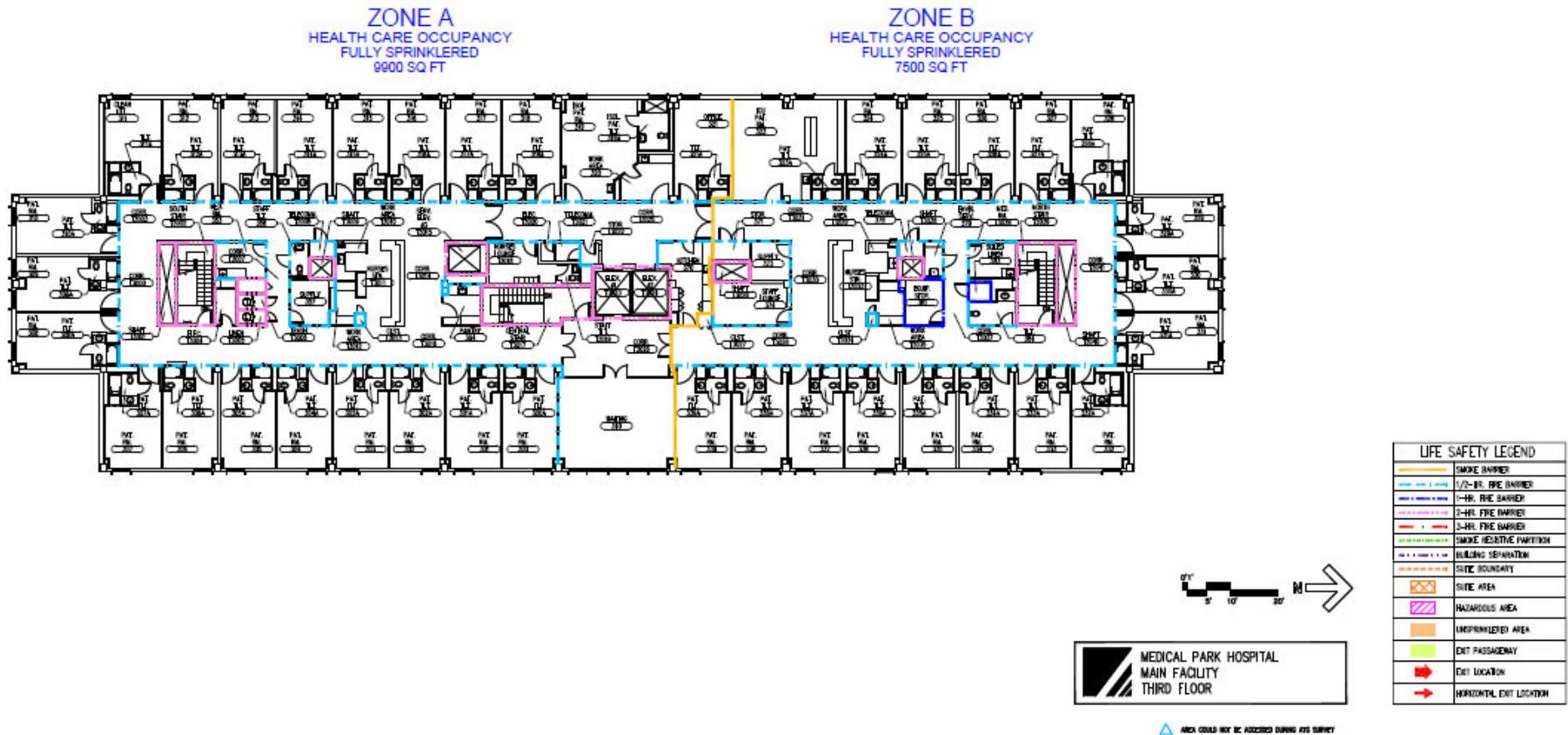
# Reading and Interpreting Life Safety Drawings

Locate the **non-sprinklered** area on this drawing.



# Reading and Interpreting Life Safety Drawings

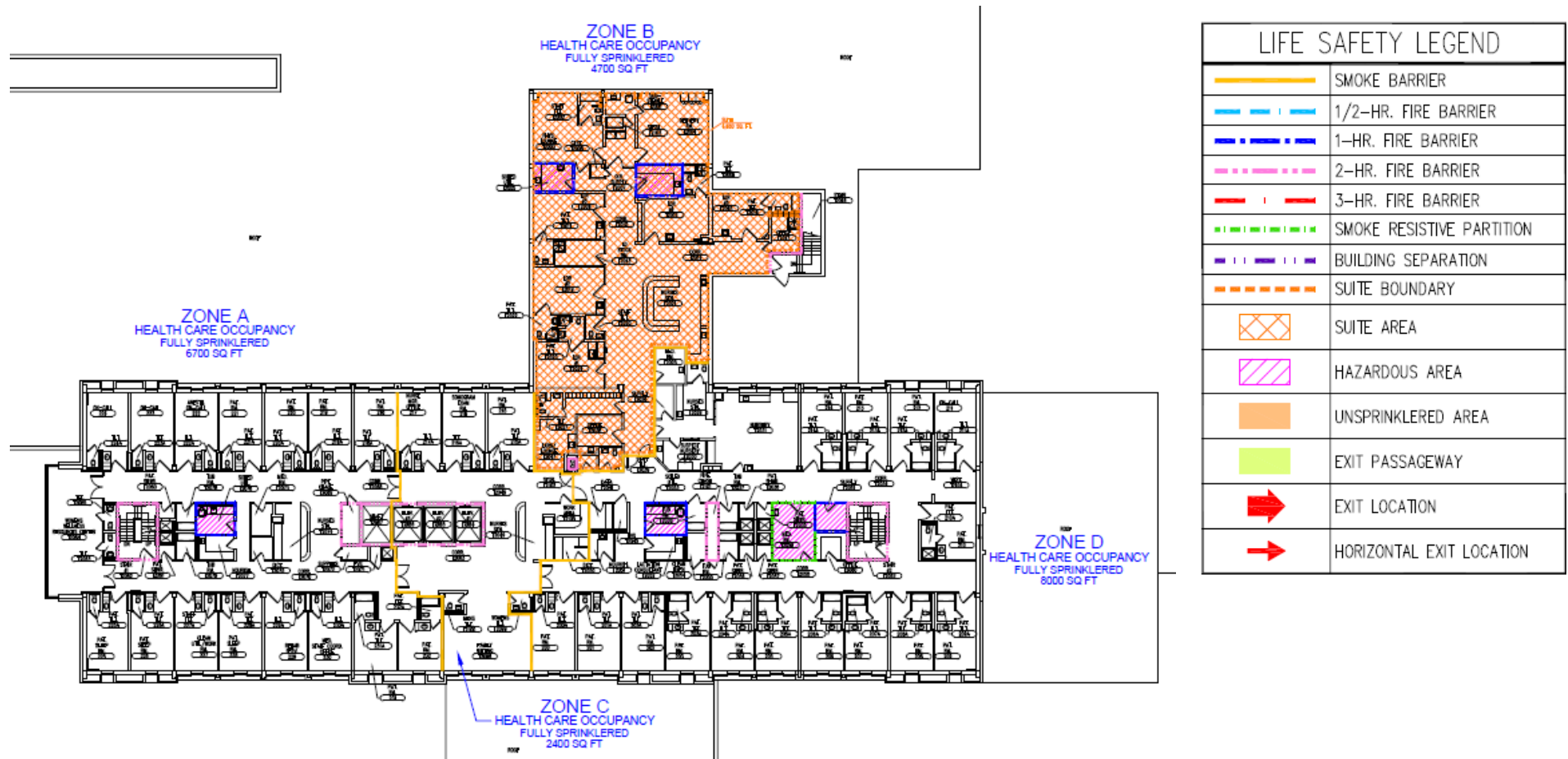
Locate the **fully sprinklered** area on this drawing.



# Reading and Interpreting Life Safety Drawings

## Knowledge Check:

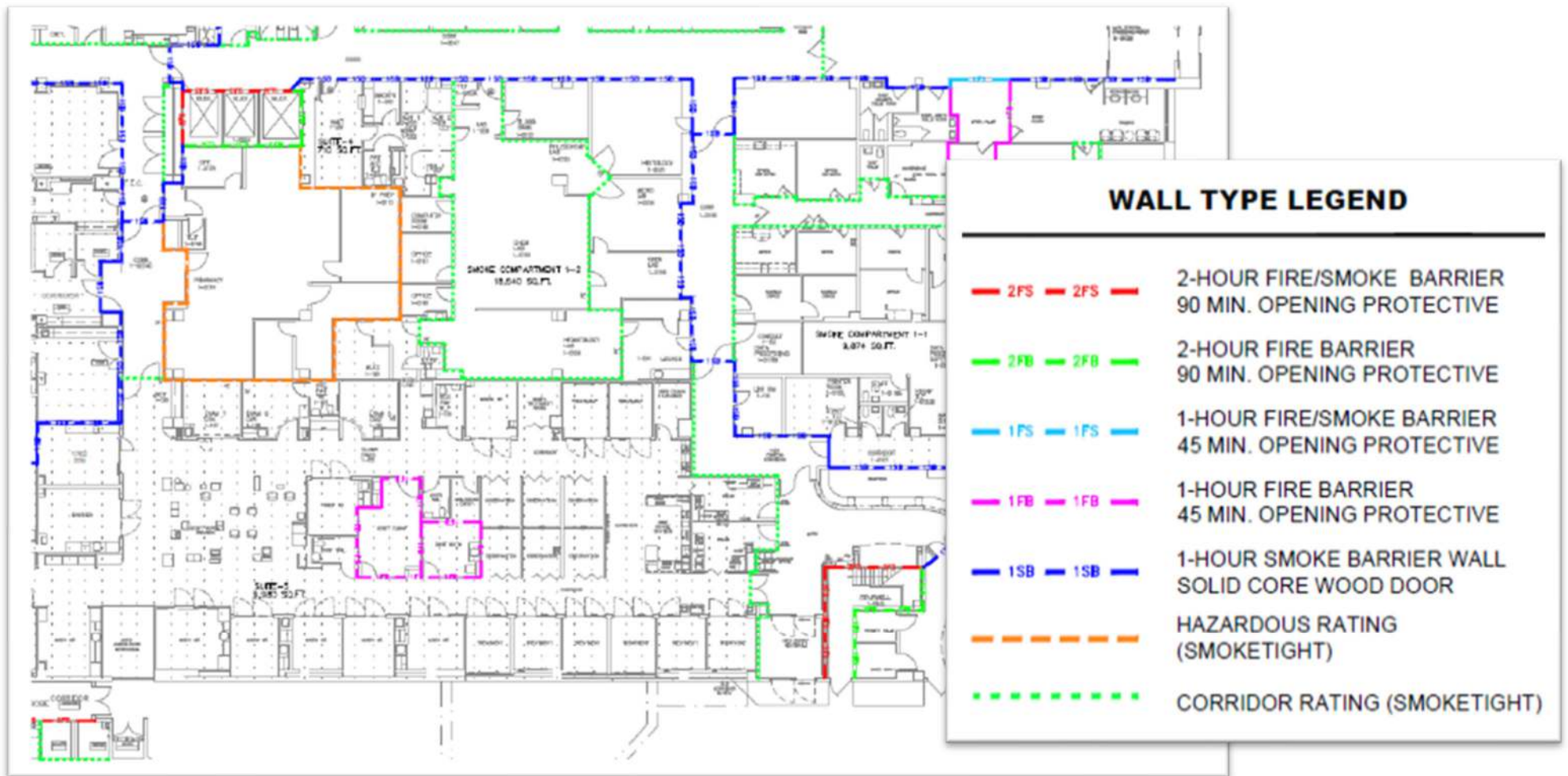
Identify the **non-sprinklered** and **fully sprinklered** areas on this drawing.



# Several different wall construction types can exist within a healthcare facility.

Wall types can be identified with both **color** and **line style**.

Name and point out the **different wall types** on the life safety drawing below.



Fire and smoke barriers are time-rated for their resistance to fire and/or smoke.

### **3.3.221.1 Fire Protection Rating**

indicated duration of the fire test exposure to which an assembly was exposed and met all NFPA criteria

### **3.3.221.2 Fire Resistance Rating**

time, in minutes or hours, that materials or assemblies have withstood a tested fire exposure



# NFPA 101 (2012) defines life safety components.

## **3.3.31.1\* Fire Barrier**

designed and constructed with a specified fire resistance rating to limit the spread of fire and restrict the movement of smoke

## **3.3.31.2\* Smoke Barrier**

restricts the movement of smoke  
(continuous membrane)

## **3.3.254\* Smoke Partition**

forms a barrier to limit the transfer of smoke (within smoke compartment, rating not required)

**smoke-tight construction:** capable of limiting the transfer of smoke



# Reading and Interpreting Life Safety Drawings

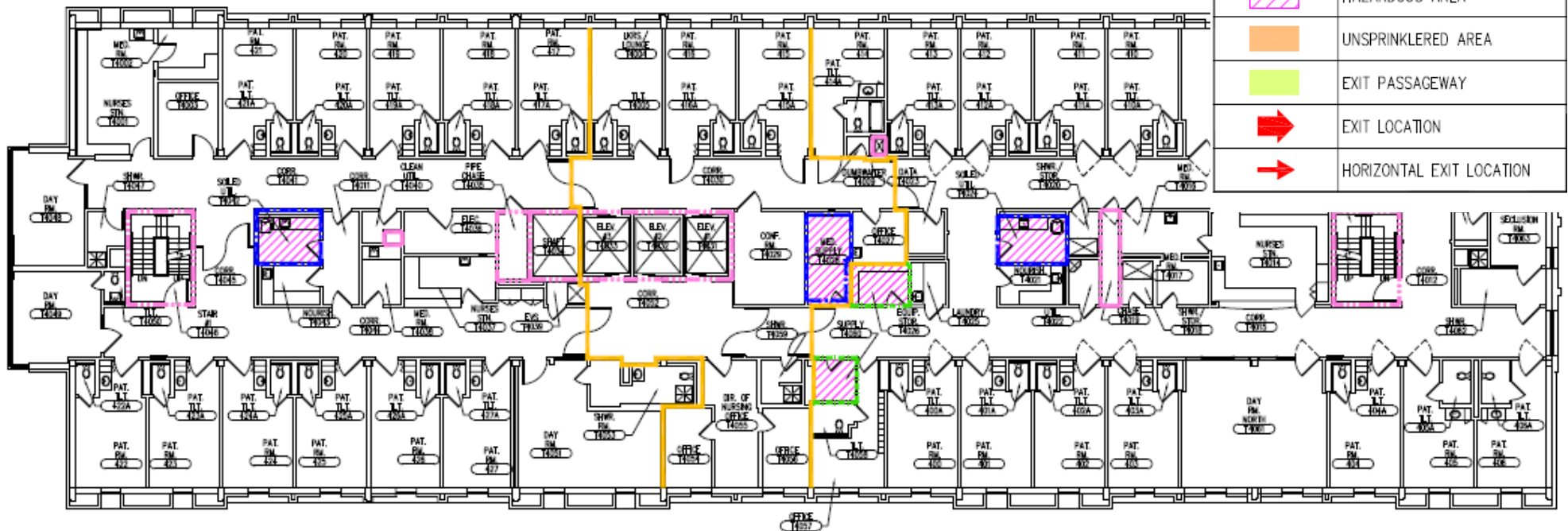
Locate the **smoke** barriers.

**ZONE A**  
HEALTH CARE OCCUPANCY  
FULLY SPRINKLERED  
6700 SQ FT

**ZONE B**  
HEALTH CARE OCCUPANCY  
FULLY SPRINKLERED  
2400 SQ FT

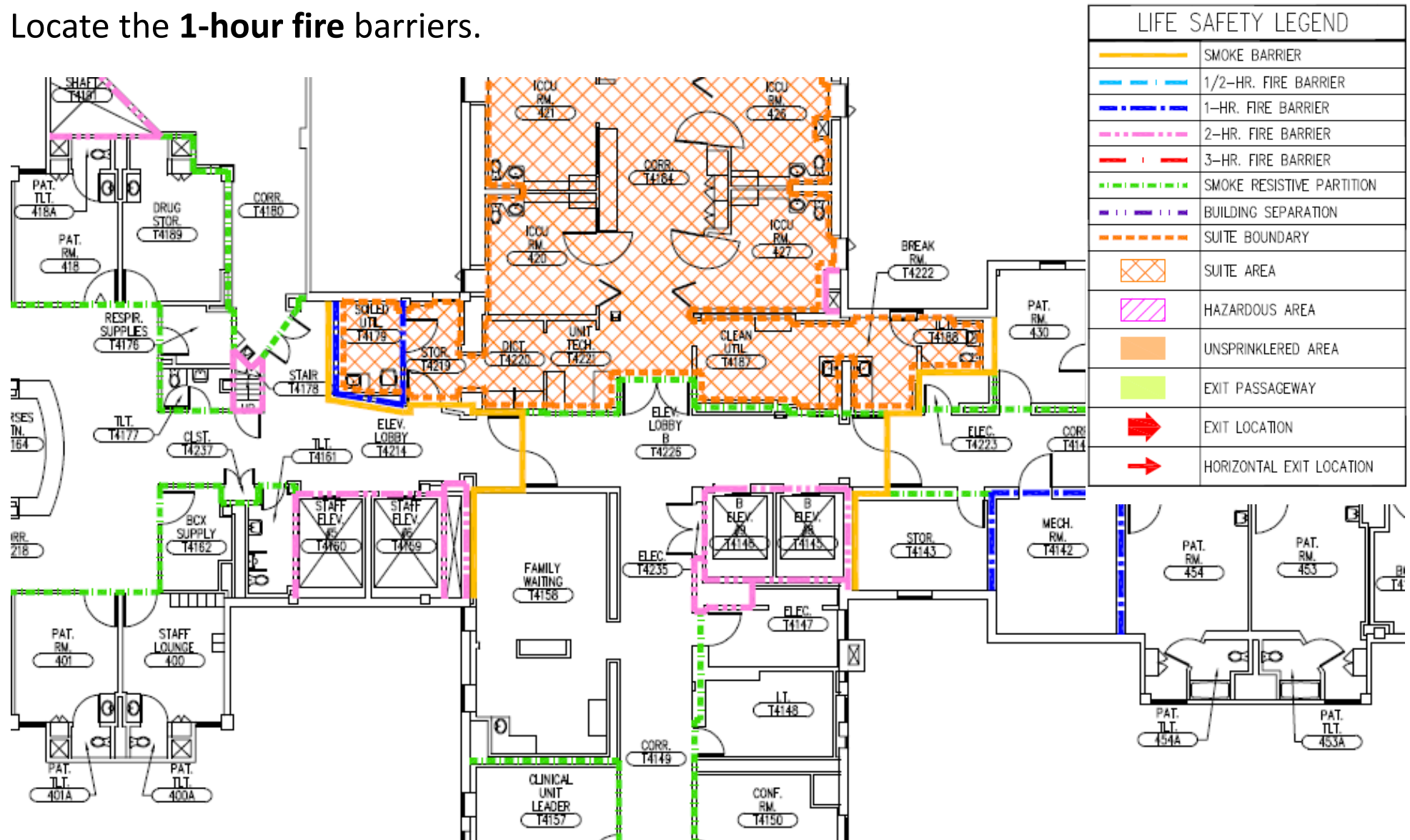
**ZONE C**  
HEALTH CARE OCCUPANCY  
FULLY SPRINKLERED  
8600 SQ FT

LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
	3-HR. FIRE BARRIER
	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
	SUITE BOUNDARY
	SUITE AREA
	HAZARDOUS AREA
	UNSPRINKLERED AREA
	EXIT PASSAGEWAY
	EXIT LOCATION
	HORIZONTAL EXIT LOCATION



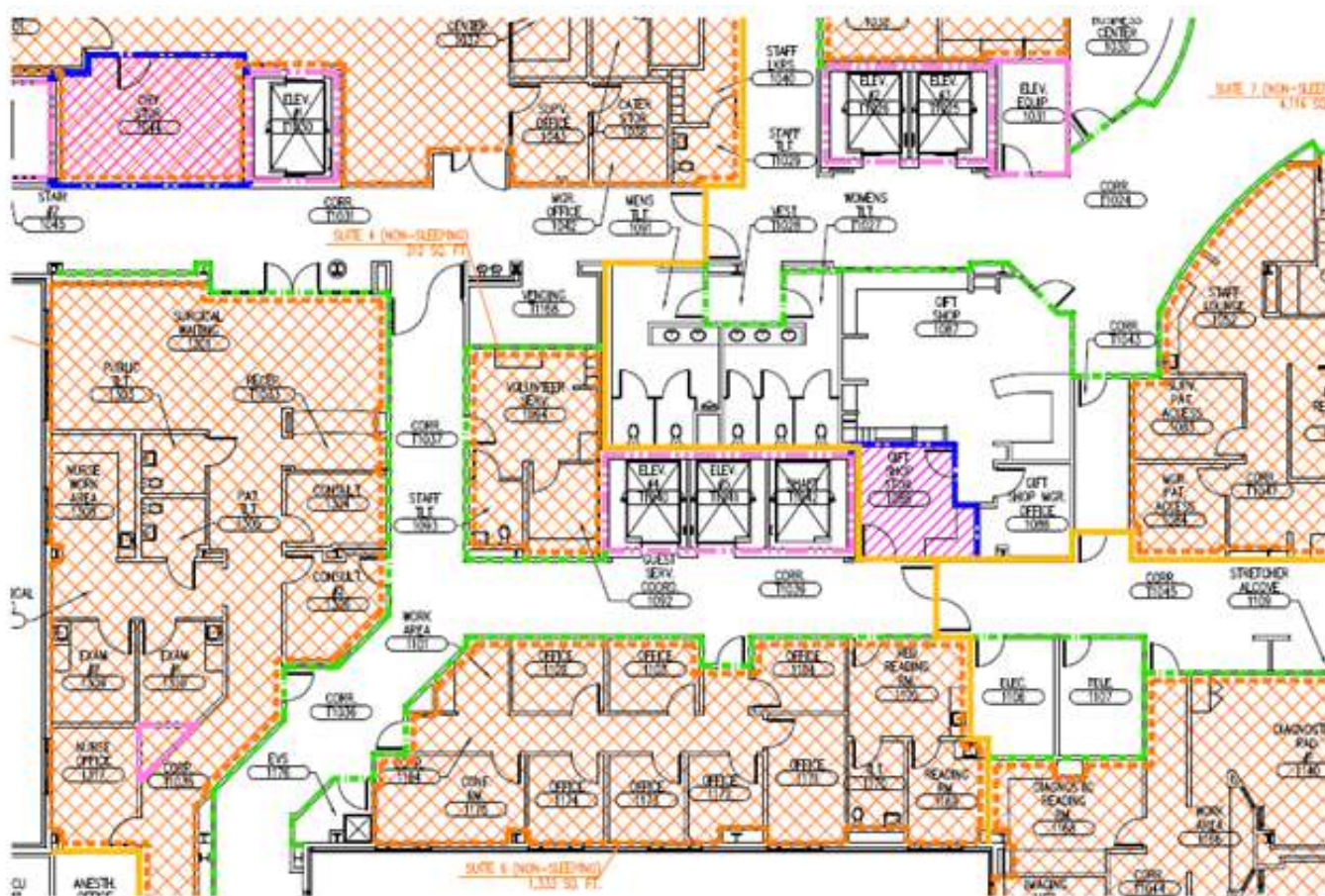
# Reading and Interpreting Life Safety Drawings

Locate the **1-hour fire barriers**.



# Reading and Interpreting Life Safety Drawings

Identify the **hazardous areas** on the life safety drawing below.



LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
	3-HR. FIRE BARRIER
	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
	SUITE BOUNDARY
	SUITE AREA
	HAZARDOUS AREA
	UNSPRINKLERED AREA
	EXIT PASSAGEWAY
	EXIT LOCATION
	HORIZONTAL EXIT LOCATION

A Hazardous Area poses a degree of hazard greater than normal to the general occupancy of the building/structure.

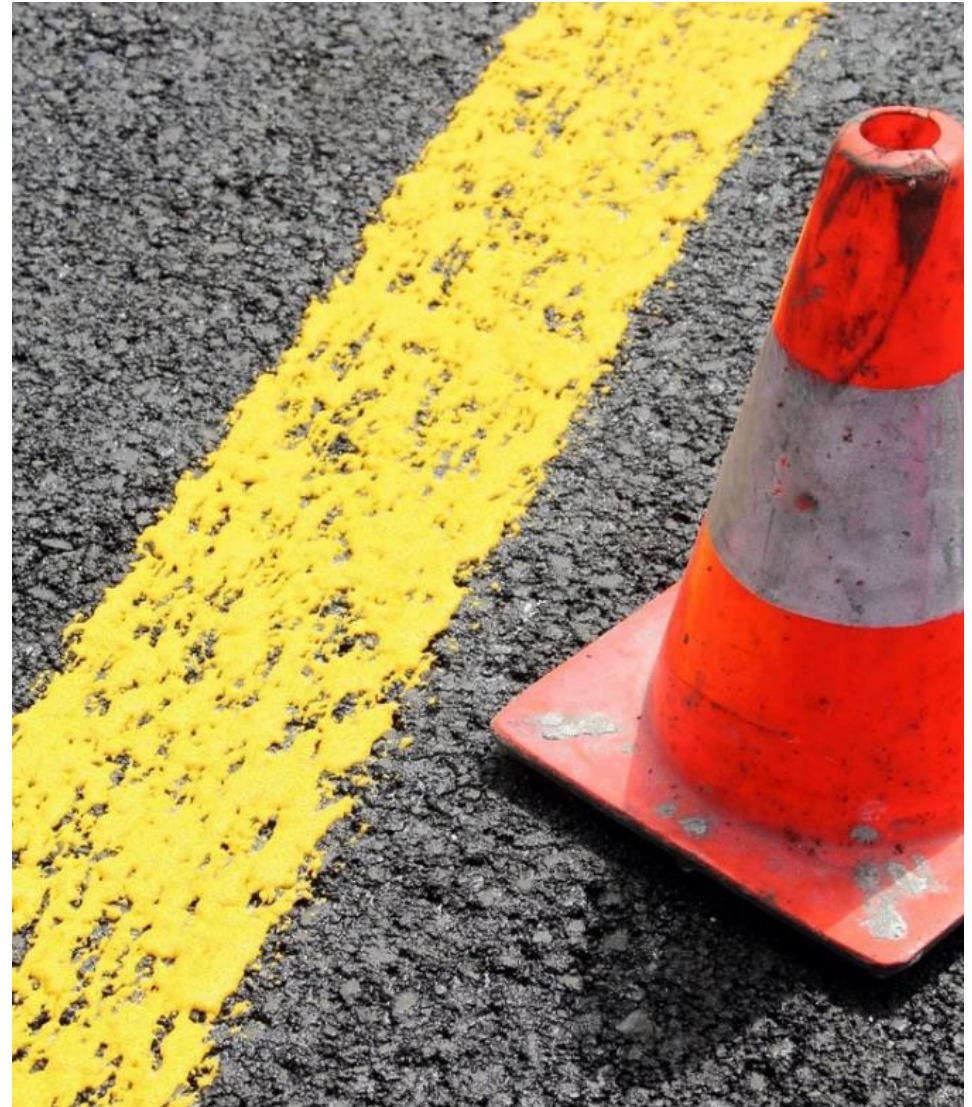
**NFPA 101** includes regulations that are specific to hazardous areas.

### **3.3.21.4\* Hazardous Area**

building area that poses a degree of hazard greater than that normal to its general occupancy

**A.3.3.21.4 Hazardous Areas include storage or use of:**

- combustibles or flammables
- toxic, noxious, or corrosive materials
- heat producing appliances



# Reading and Interpreting Life Safety Drawings

Identify the **suite** areas on the life safety drawing below.



LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
	3-HR. FIRE BARRIER
	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
	SUITE BOUNDARY
	SUITE AREA
	HAZARDOUS AREA
	UNSPRINKLERED AREA
	EXIT PASSAGEWAY
	EXIT LOCATION
	HORIZONTAL EXIT LOCATION

A **suite** is a unique type of healthcare space that is effectively a room comprised of smaller rooms.

Think of suites as a large room.

Examples: *OR, ED, Radiology*

Suites can be one of several different classifications.

- **Non-Patient Care Suite:** not intended for sleeping or treating patients
- **Patient Care Non-Sleeping Suite:** used to treat patients with or without patient beds not intended for overnight sleeping
- **Patient Care Sleeping Suite:** contains one or more patient beds for overnight sleeping
- **Patient Care Suite:** series of rooms/spaces or a subdivided room that is separated from the rest of the building by walls and doors



*NFPA 101* includes regulations that are specific to suites.

### **Construction Requirements**

- must be separated from the corridor by appropriate corridor construction (doors, windows, walls, etc.)
- self-closing and positively latching entrance doors to the suite from the corridors

### **Size Restrictions:**

- 5,000 square feet, patient care sleeping suites
- 10,000 square feet, non-patient sleeping suite



*NFPA 101* includes regulations that are specific to suites.

### 19.2.5.6.2

**Exit access from a patient sleeping room** with not more than 8 patient beds shall be **permitted to pass through 1 intervening room** to reach an exit access corridor, provided that:

- The intervening room is equipped with an approved **automatic smoke detection** system in accordance with Section 9.6.
- Or, the furnishings and furniture, in combination with all other **combustibles** within the area, are of such **minimum quantity** and arrangements that a fully developed fire is unlikely to occur.



# Reading and Interpreting Life Safety Drawings

A **smoke compartment** is enclosed by **smoke barriers** on all sides, including top and bottom. Identify the **5 smoke compartments** on the life safety drawing below.



LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
	3-HR. FIRE BARRIER
	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
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	SUITE AREA
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	EXIT PASSAGEWAY
	EXIT LOCATION
	HORIZONTAL EXIT LOCATION

A hospital is sectioned into **smoke compartments** that assist with safe evacuation during a fire event.

**Smoke compartment requirements and limitations include the following:**

- Up to **22,500 square feet** (NFPA 2012)
- **A smoke compartment consists of physical infrastructure components:** walls, doors, dampers, etc.
- **Every floor** of a health care occupancy must include **at least 2** smoke compartments
- In the event of a fire in a smoke compartment, the **facility staff are responsible for evacuating patients** to a different smoke compartment.



# Reading and Interpreting Life Safety Drawings

Identify the **means of egress** on the life safety drawing below.



LIFE SAFETY LEGEND	
	SMOKE BARRIER
	1/2-HR. FIRE BARRIER
	1-HR. FIRE BARRIER
	2-HR. FIRE BARRIER
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	SMOKE RESISTIVE PARTITION
	BUILDING SEPARATION
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	EXIT LOCATION
	HORIZONTAL EXIT LOCATION

**A means of egress** is a continuous and unobstructed way of travel from any point in a building or structure to a public way.

**Public Way Examples:** *sidewalks, streets, and surface parking*

### **NFPA 101 3.3.170\* Means of Egress**

A means of egress consists of **3 separate and distinct parts**, as defined in NFPA 101:

- 1. 3.3.81\* Exit:** separated from all other spaces of a building to provide a protected way of travel to the exit discharge
- 2. 3.3.82 Exit Access:** leads to an exit
- 3. 3.3.83 Exit Discharge:** portion between the termination of an exit and a public way (e.g., sidewalks, roads, surface parking, etc.)



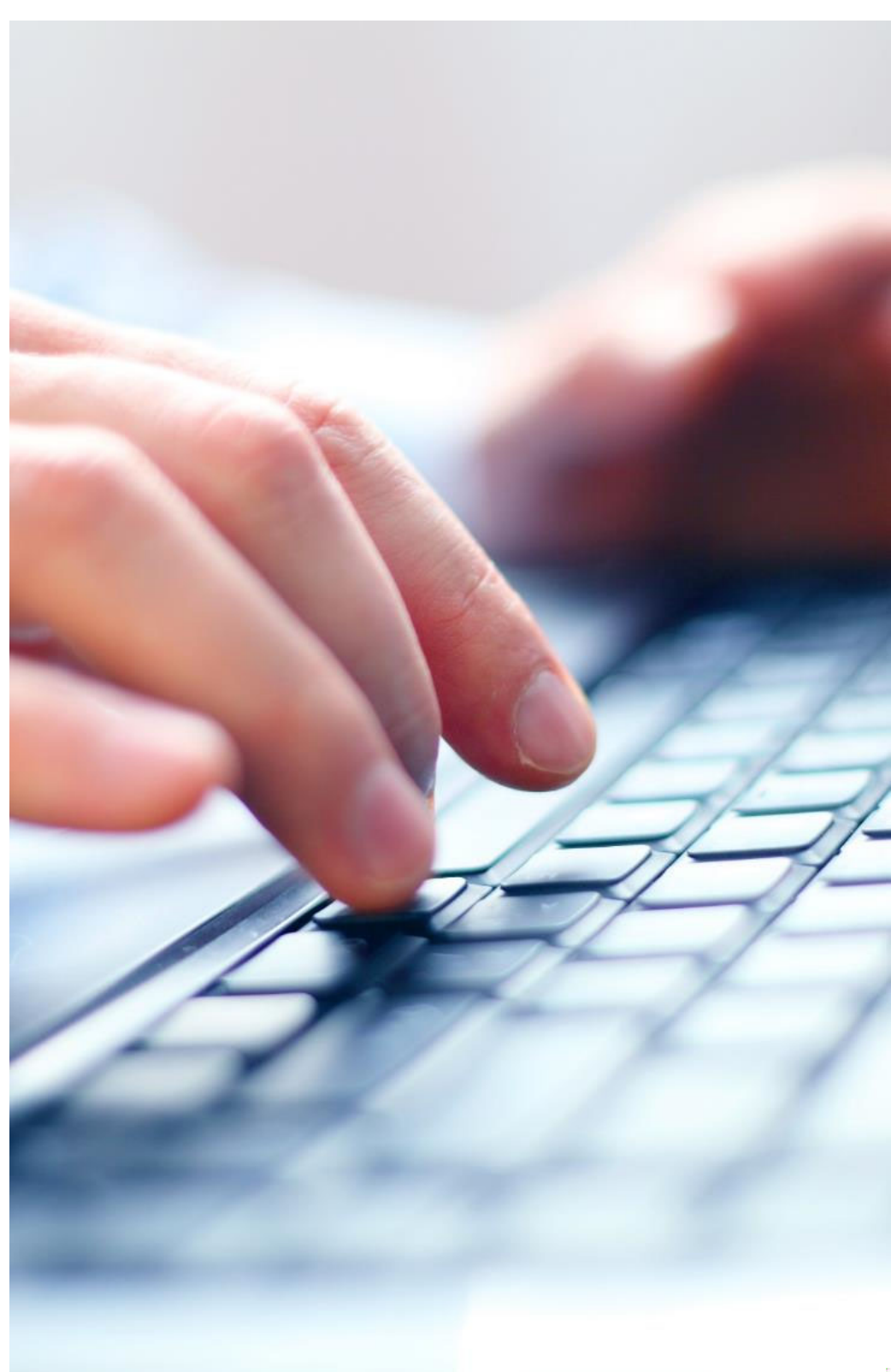
learning objective 3:  
locate life safety drawings on ATG

# Where are Novant Health's life safety drawings stored?

Current sets of Novant Health Life Safety drawings can be located on the **ATG website**.

ATG access is a **2-step** process:

1. management approval and access
2. user registration



# ATG Website | Sign-In and Navigation Process

1. ATG assigns user access

2. Start at the ATG webpage:

<http://site.atginc.com/>

3. From the home screen, enter **User Name** (email address) and **Password**

Contact your **manager** with email, login, or access issues.

Advanced Technologies Gr... x

**ATG**  
a JLL company

HOME

### Client Login

Access your facility information now. Please enter your Active Visual System® (AVS) User Name and Password below:

Sorry, your username or password is incorrect. Please try again.

If you have not registered yet, click here.

User Name:  
gamilewski@novanthealth.org

Password:

Forgot your password? | Change your password

Remember my user name (not recommended for shared computers)

**Log in** By clicking **Log in**, you acknowledge agreement with the latest **Terms and Conditions**

(Select a SSO Login) v

**Not registered?**  
Access the AVS by setting up a new user account. **Register**

**Need someone else to register?**  
Send registration information to others via email. **Email**

**Need technical assistance?**  
Call the ATG Technical Support line at: 630-829-8950

**ATG** Guide  
a JLL company  
Life Safety Management  
Life Safety Compliance  
Strategies Every Hospital  
Should Know  
**REQUEST IT NOW** →

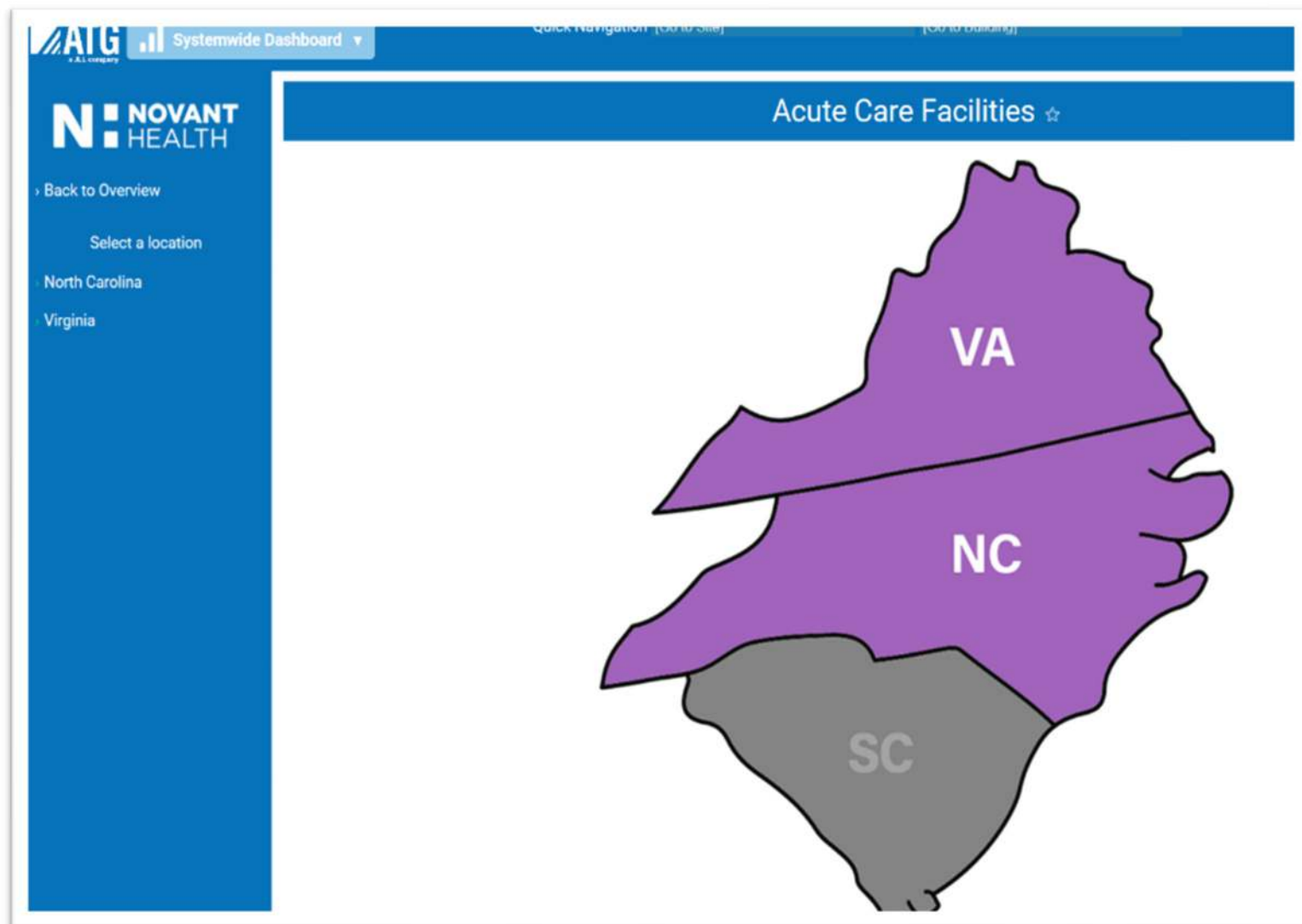
# ATG Website | Sign-In and Navigation Process

## 4. Click on **Acute Care Facilities**



# ATG Website | Sign-In and Navigation Process

5. Click on a location:  
either **VA** or **NC**



# ATG Website | Sign-In and Navigation Process

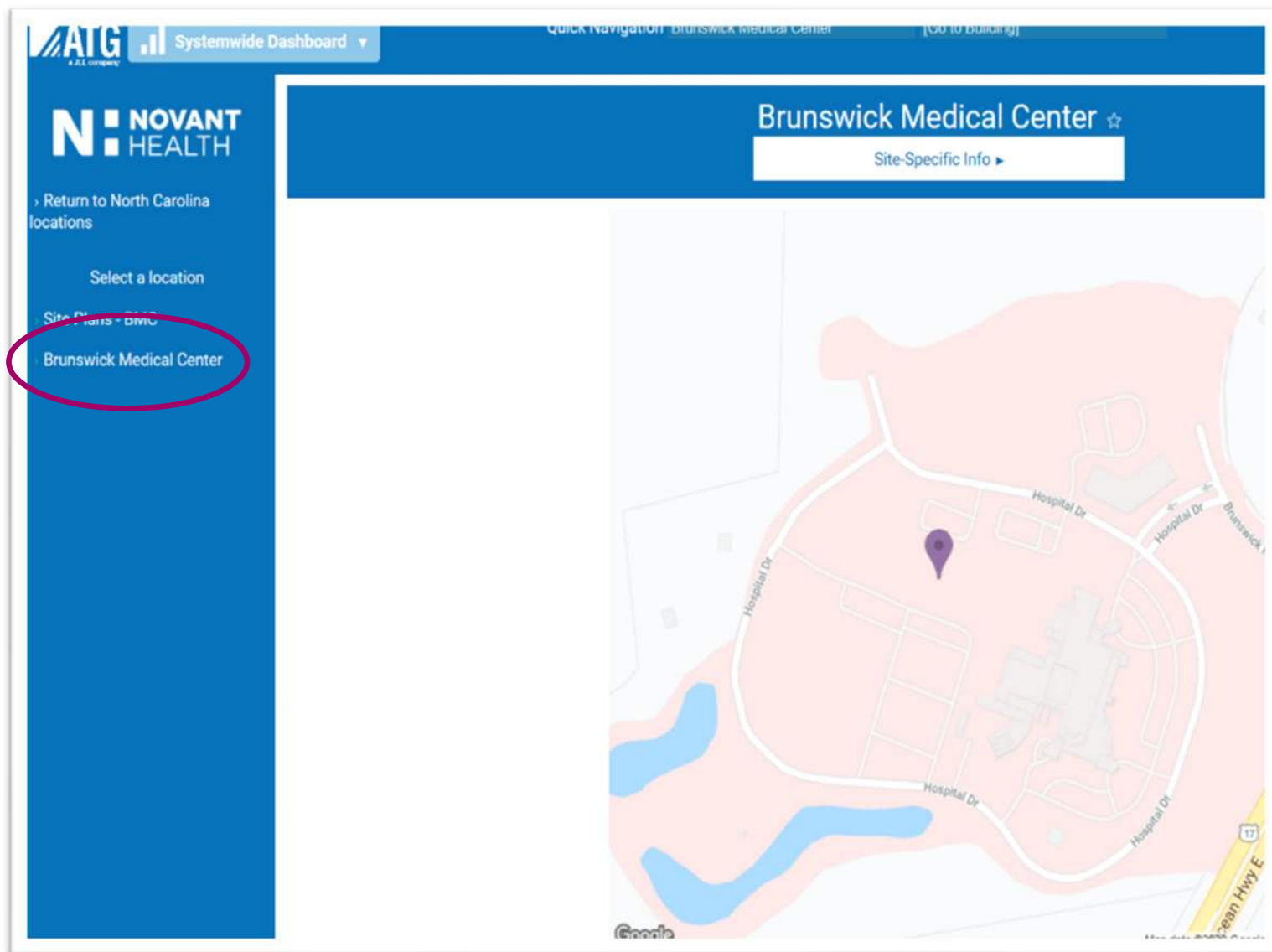
6. Select a campus location from the list provided.

The screenshot displays the ATG Systemwide Dashboard. At the top, there is a navigation bar with the ATG logo and the text "Systemwide Dashboard". Below this, the Novant Health logo is visible. A dropdown menu is open, showing a list of medical centers. The "Brunswick Medical Center" option is circled in red. To the right of the list is a map of North Carolina with several green location pins placed over various cities, including Winston-Salem, Greensboro, Durham, and Charlotte. The map is titled "North Carolina" and includes a "Site-Specific Info" button.

# ATG Website | Sign-In and Navigation Process

7. Click on a building location:  
**building/facility name**

for example,  
*Brunswick Medical Center*



# ATG Website | Sign-In and Navigation Process

## 8. Select a discipline: **Life Safety Documents**

The screenshot displays the ATG Systemwide Dashboard for the Brunswick Medical Center. The left sidebar contains a 'Select a discipline' menu with 'Life Safety Documents' circled in red. The main content area shows 'Architecture & Space' with a photo of the medical center and a table of document options for various floors. A right-hand menu contains several query options.

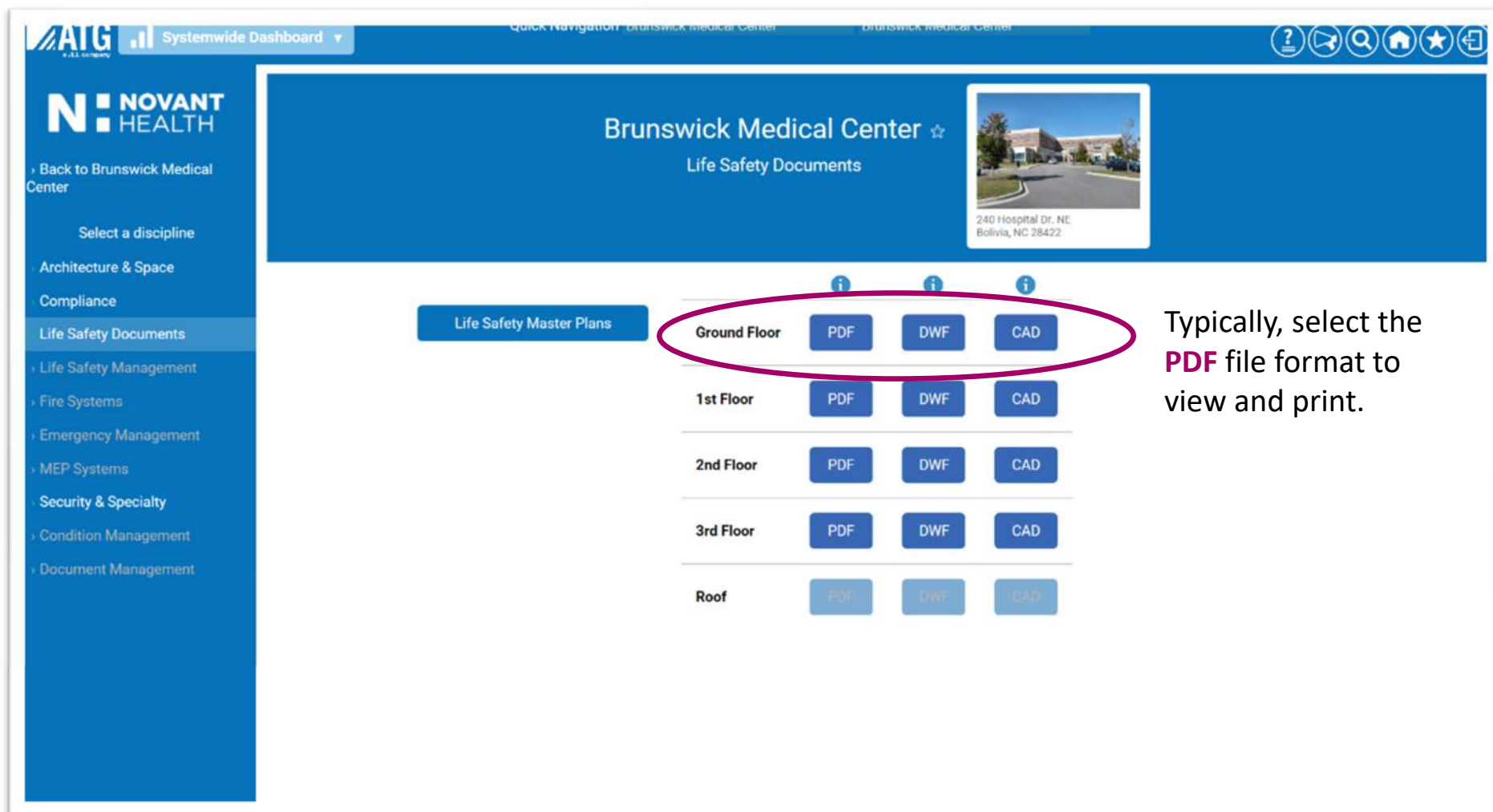
	PDF	DWF	CAD
Ground Floor	PDF	DWF	CAD
1st Floor	PDF	DWF	CAD
2nd Floor	PDF	DWF	CAD
3rd Floor	PDF	DWF	CAD
Roof	PDF	DWF	CAD

Right-hand menu items:

- Space Systemwide Dashboard
- Bed Inventory Query
- Location Query
- Cost Center Query
- Hatch Query
- Chart Query

# ATG Website | Sign-In and Navigation Process

9. Select the appropriate **floor** and **file format** (PDF, DWG, or CAD)



The screenshot shows the ATG website interface for Brunswick Medical Center. The main content area is titled "Brunswick Medical Center Life Safety Documents". A sidebar on the left lists various disciplines, with "Life Safety Documents" selected. The main content area displays a table of documents for various floors, with buttons for PDF, DWF, and CAD file formats. A red oval highlights the PDF, DWF, and CAD buttons for the Ground Floor. A text box on the right states: "Typically, select the PDF file format to view and print."

Floor	PDF	DWF	CAD
Ground Floor	PDF	DWF	CAD
1st Floor	PDF	DWF	CAD
2nd Floor	PDF	DWF	CAD
3rd Floor	PDF	DWF	CAD
Roof	PDF	DWF	CAD

pop quiz: practice exercise

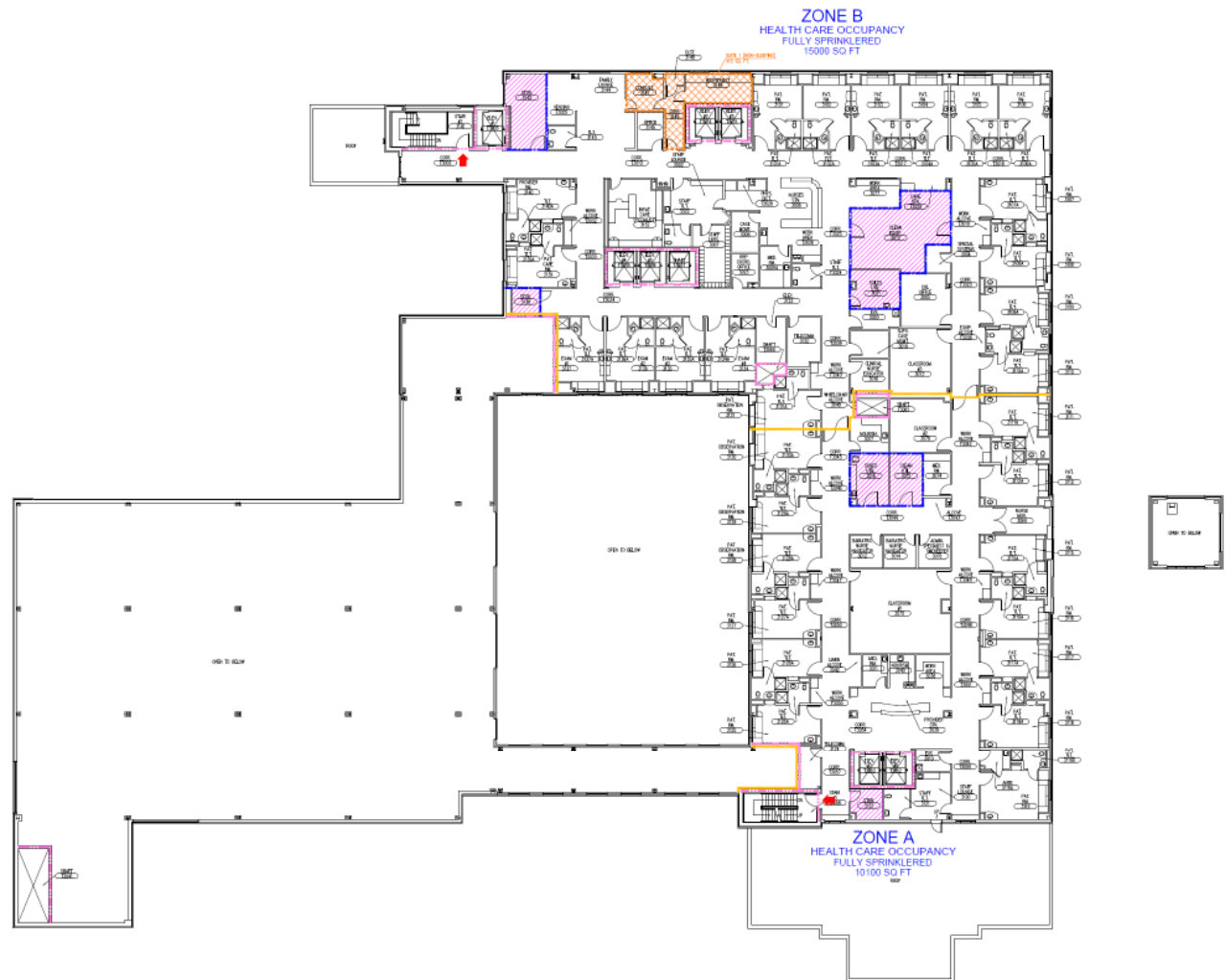
# Refer to the life safety drawing handout from Kernersville Medical Center.

Identify the floor areas (in square feet) for the following spaces:

- smoke compartment
- fire compartment
- suite

Identify the following spaces:

- suites
- hazardous areas





Q&A

End of Life Safety Drawings 101 Training Session