# You ARE the Inspector

PART 2

WHEA
Lunch & Learn

**Bill Lauzon**
**Heather Lauzon Werner**

**Lauzon Life Safety Consulting, LLC**

**Thurs Mar 10, 2016**
**11:30-1:00**

# You ARE the Inspector

**PART 1**

## WHEA Annual Conference

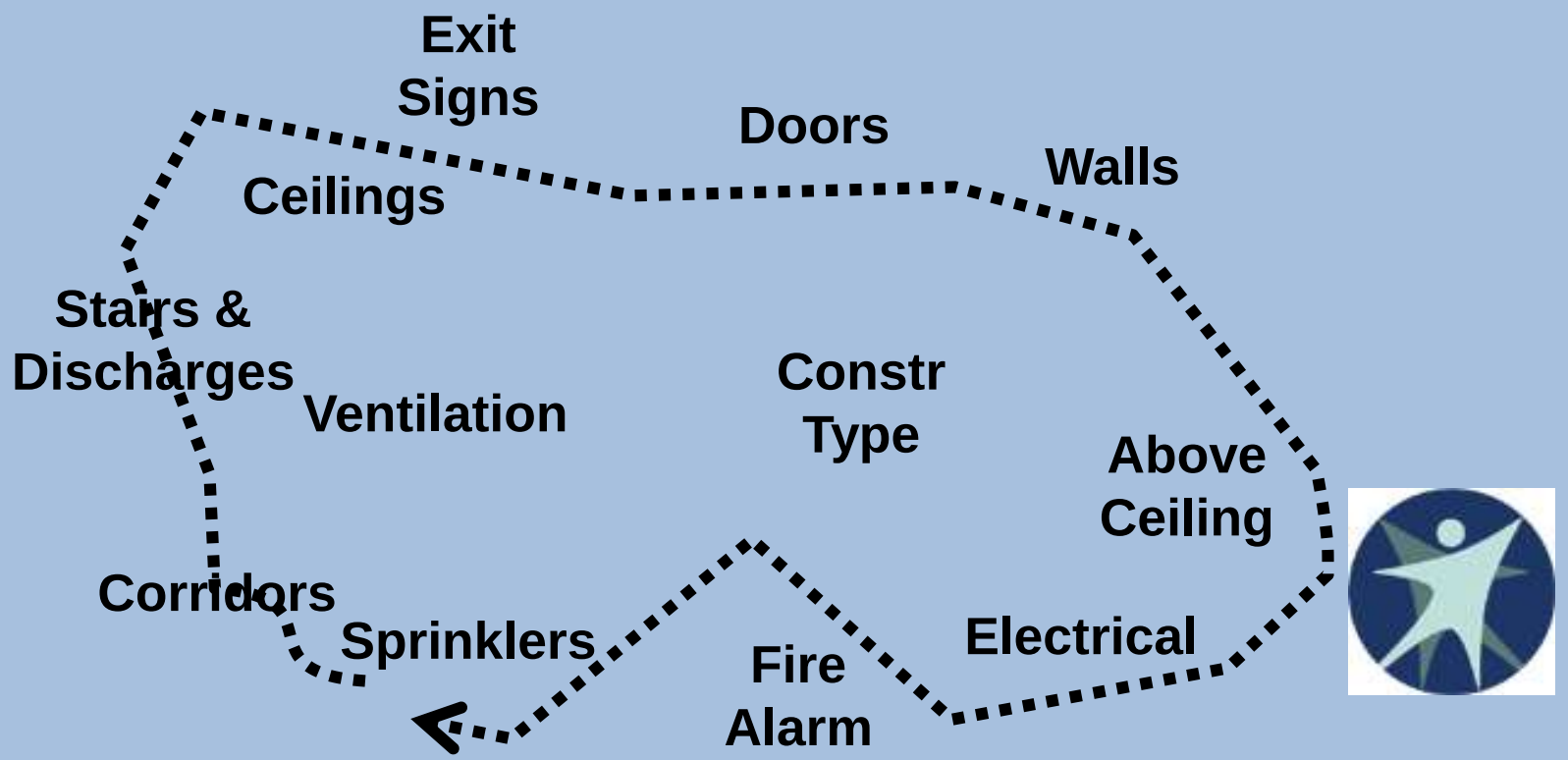
**Friday Sept 25, 2015**
**8:30-10:30 am**

Rocketing into the next 50 years!

# INSPECTIONS

**There are 5 methods of getting inspections done**

# 1. Let the AHJ Do it

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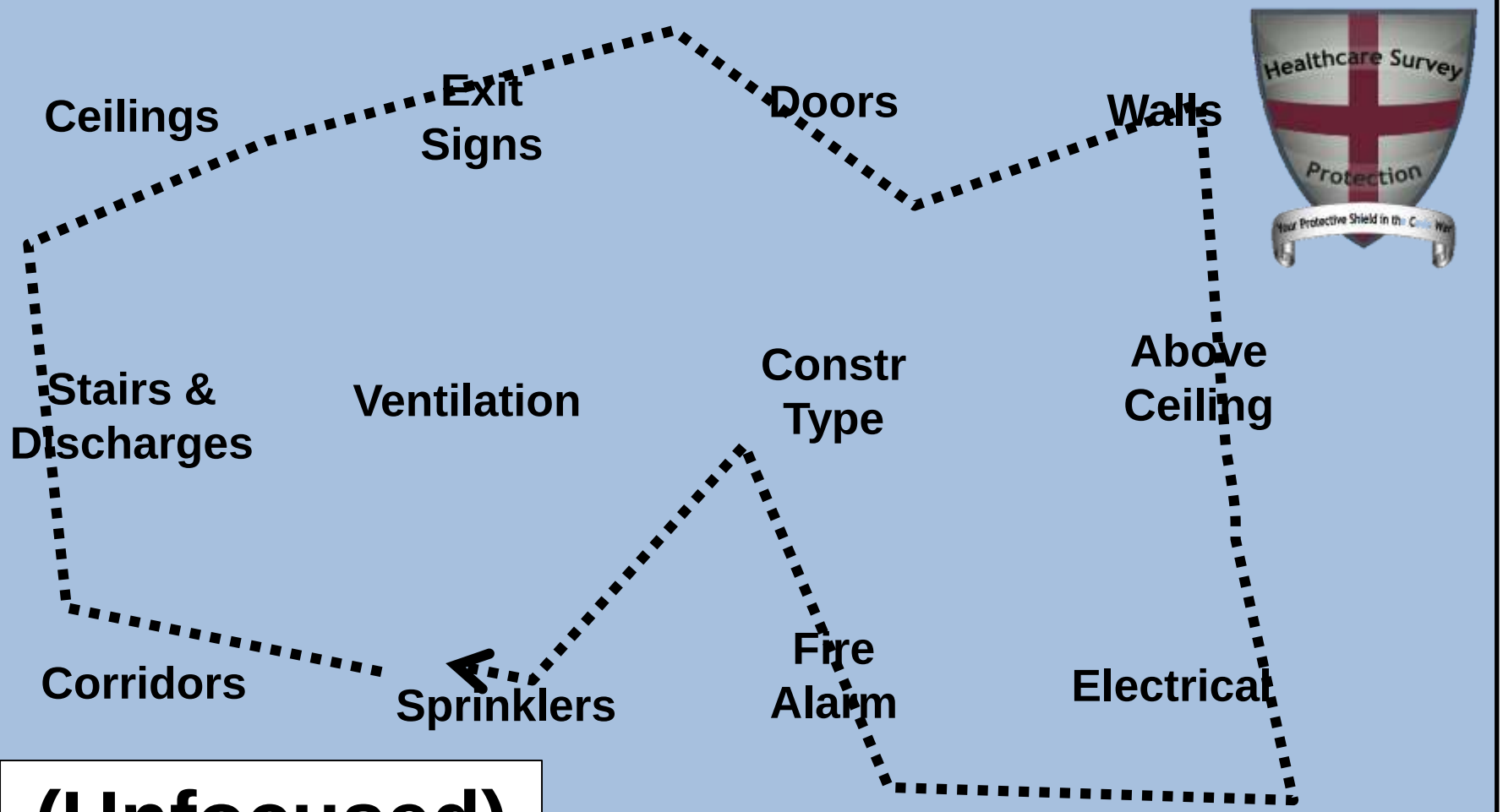
# 2. Hire an Expert

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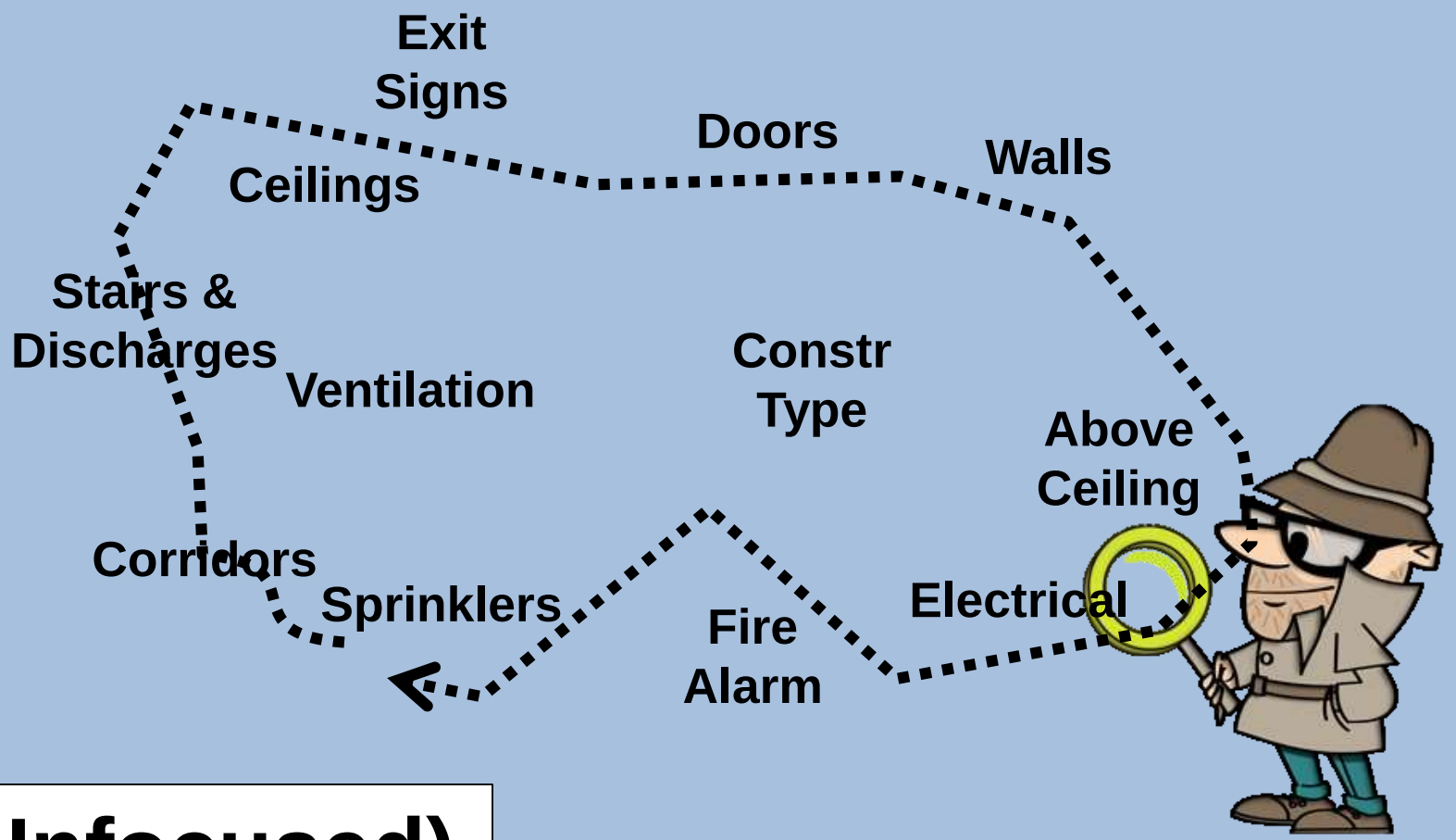
# 3. Do it Yourself




**(Unfocused)**

# FOCUSED INSPECTIONS

**are the BEST method for NON-PROFESSIONALS**

# FOCUSED INSPECTIONS

## What is the Focused Inspection Method?

# FOCUSED INSPECTIONS

**Conduct**
**Separate**
**Inspections**
**that are each**
**FOCUSED**
**on a single topic**

# 4. Do it All Yourself

Ceilings

Exit Signs

Doors

Walls

Above Ceiling

Electrical

Fire Alarm

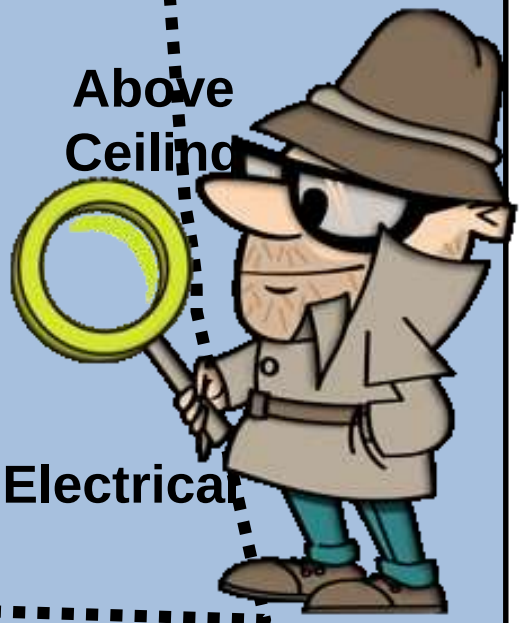
Constr Type

Ventilation

Stairs & Discharges

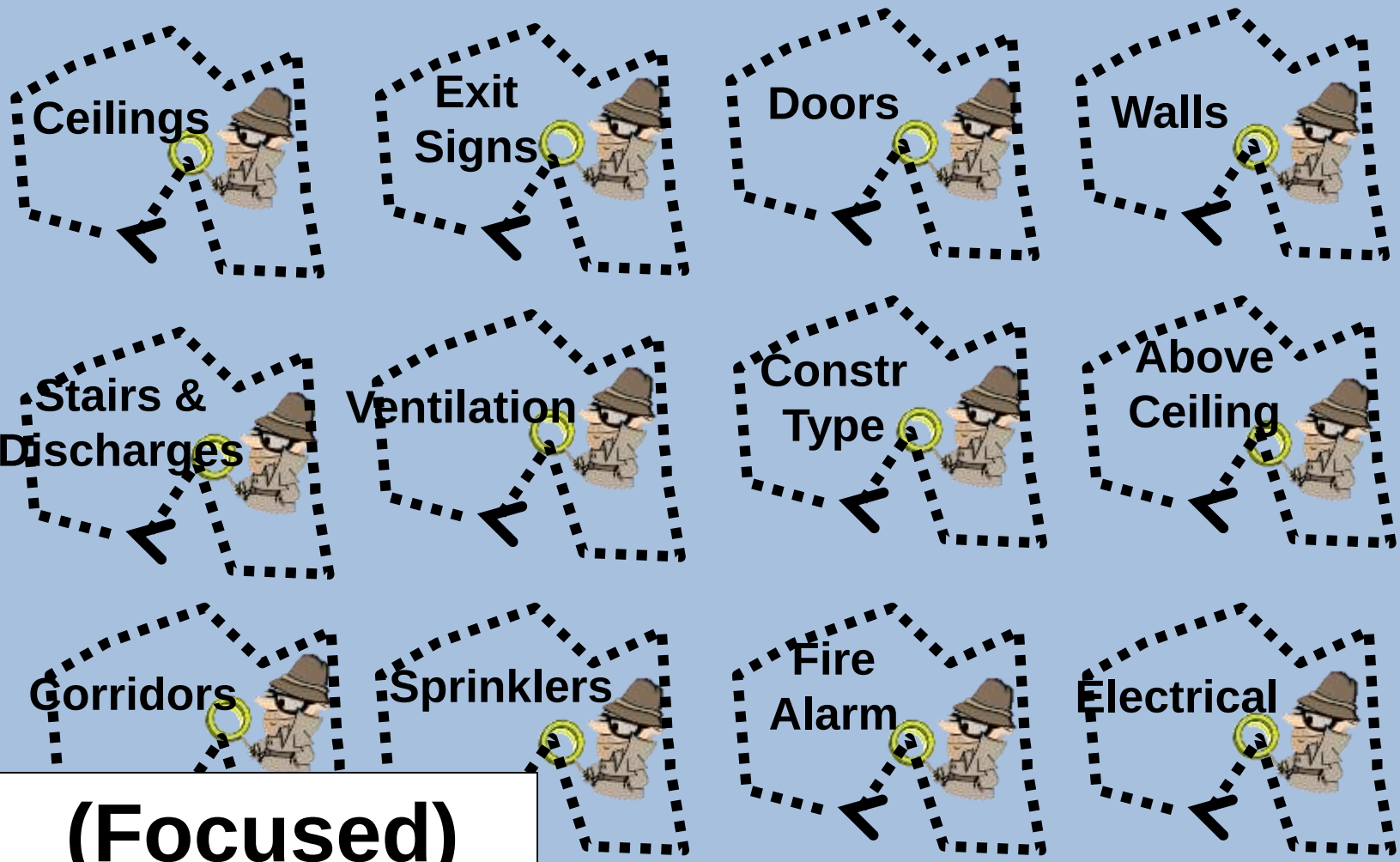
Corridors

Sprinklers



**(Focused)**

# 5.Develop Staff Experts

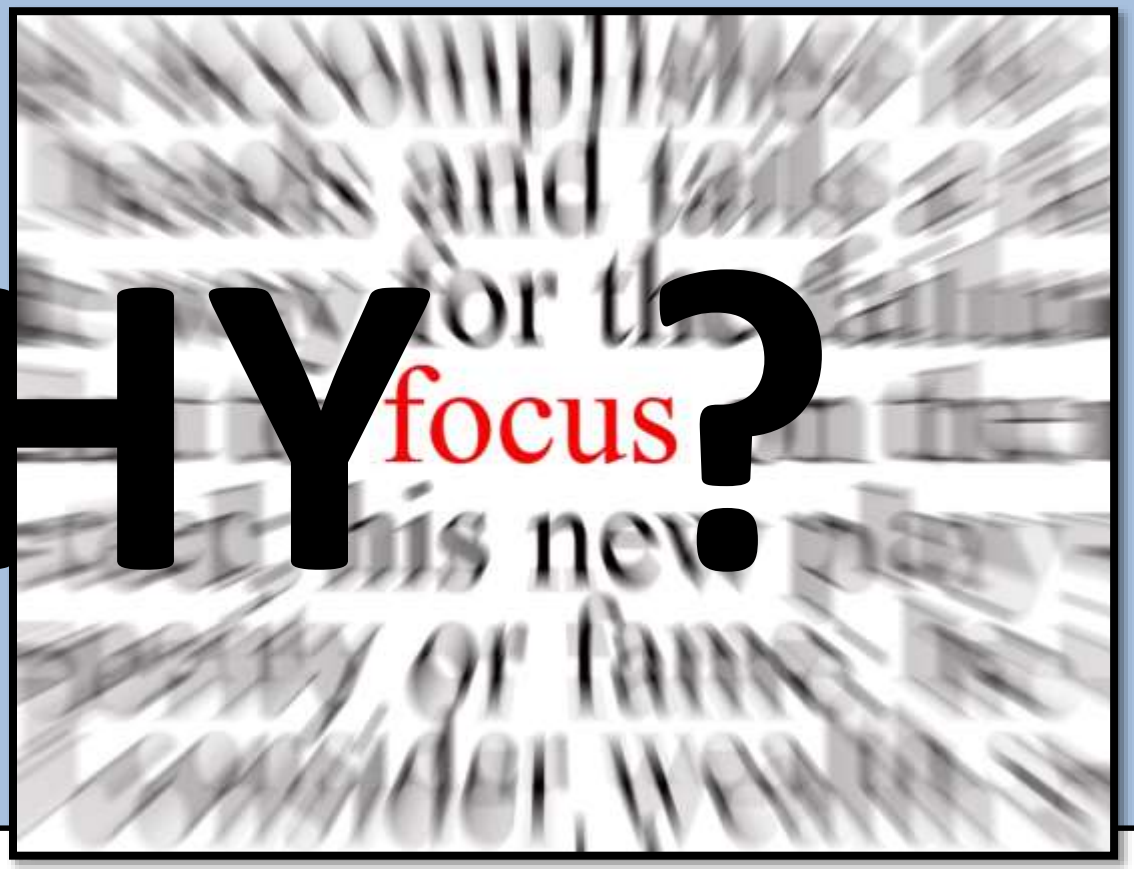



**(Focused)**

# You ARE the most important Inspector

## Focused Inspections

**WHY?**



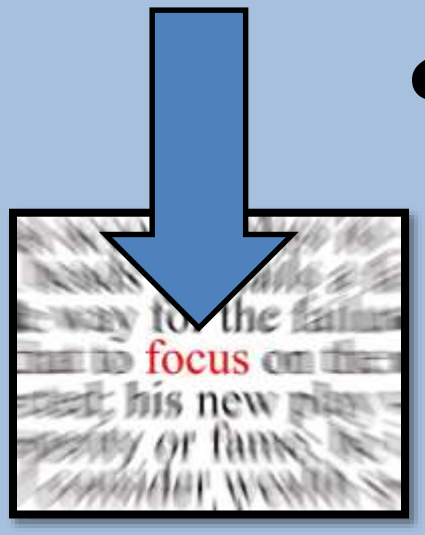
# WHY Focused Inspections ?

**You catch more issues !**

# WHY <u>Focused</u> Inspections ?

## 1. Easy to get side tracked

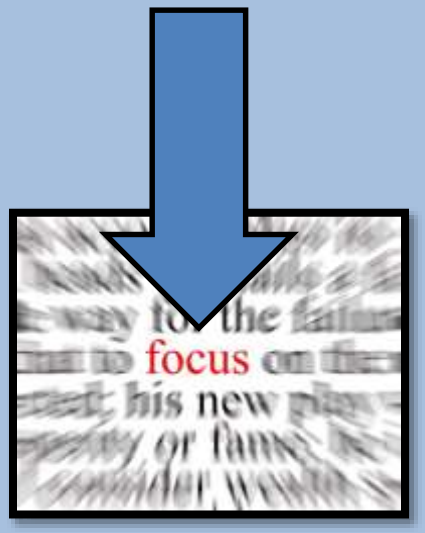
- Disruptions
- Concentrate on one thing & overlook others




# WHY Focused Inspections ?

## 2. Too familiar with building

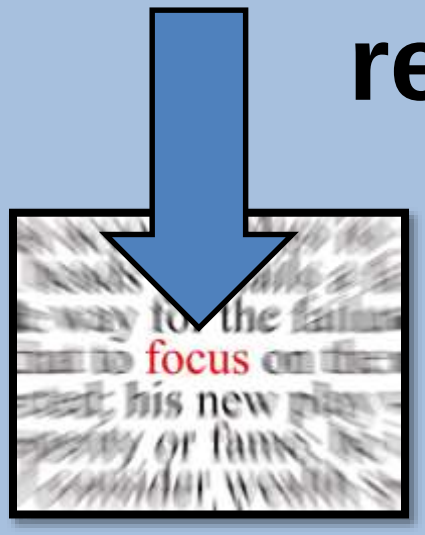
- "Always been there"
- Issues don't stand out




# WHY <u>Focused</u> Inspections ?

## 3. Too Many Codes to Know

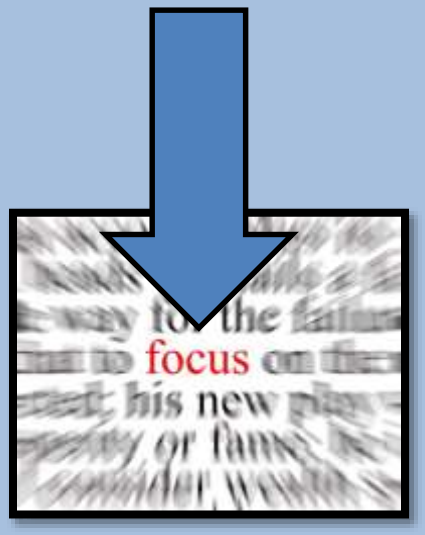
- There are dozens of codes
- There are thousands of requirements




# WHY <u>Focused</u> Inspections ?

## 4. Not Enough Time in Day

- Have dozens of things to do
- Important/Severity Matrix




# WHY Focused Inspections ?

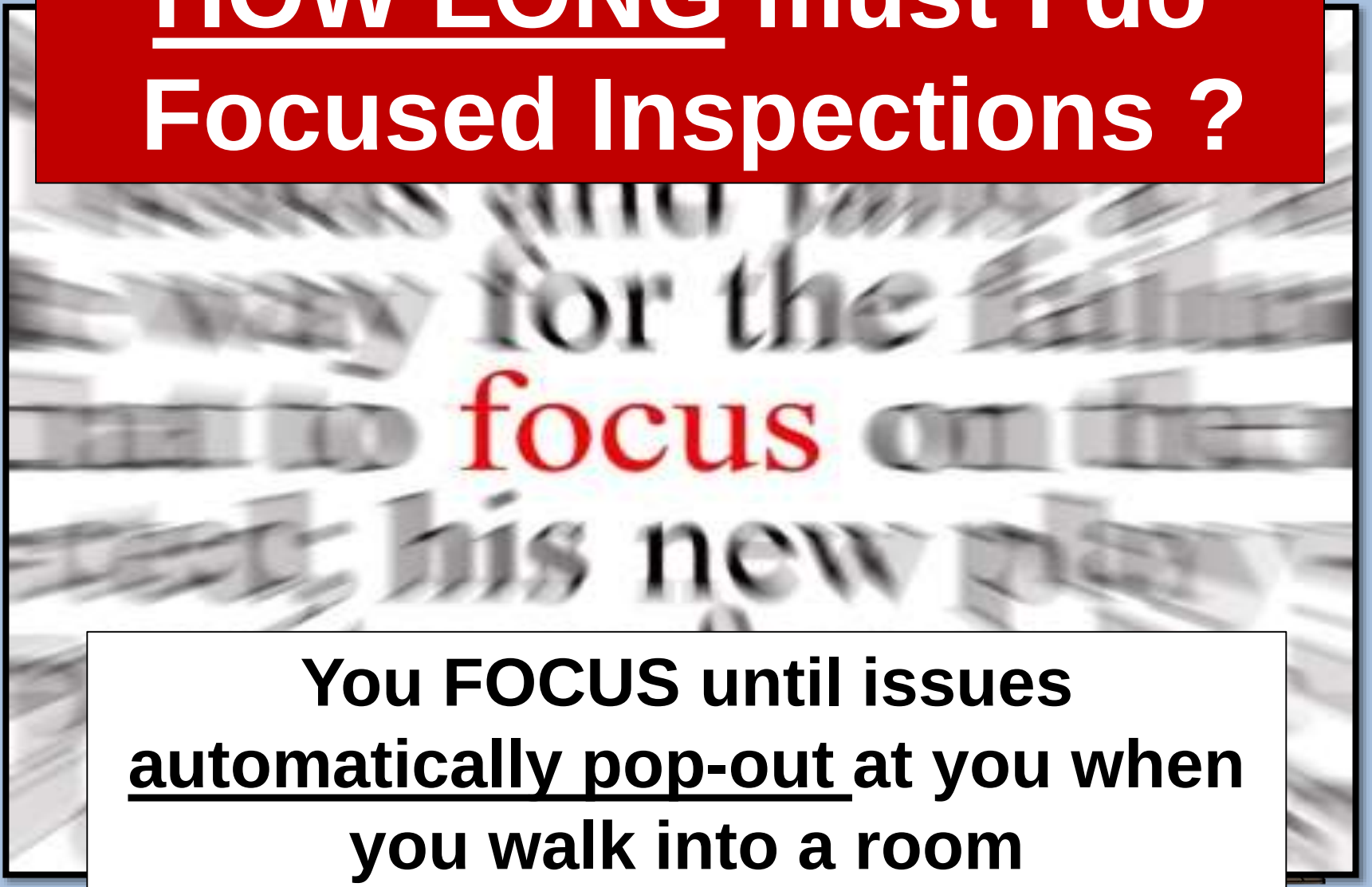
1. Easy to get side tracked
2. Too familiar with building
3. Too Many Codes to Know
4. Not Enough Time in Day

## THE RESULT?

# WHY Focused Inspections ?

# MISSED ISSUE IDENTIFICAITON!

# HOW LONG must I do Focused Inspections ?




**You FOCUS until issues automatically pop-out at you when you walk into a room**

# MOST COMMON CITES

| % of CMS Surveys | | % of TJC EC/LS Cites | |
|---|---|---|---|
| 1. Sprinkler Reports | 58% | 1. Fire Alarm/Sprinkler Reports | 76% |
| 2. Fire Drills | 42% | 2. Ventilation | 50% |
| 3. Electrical Issues | 35% | 3. Sprinkler Install | 40% |
| 4. Hazardous Rooms | 33% | 4. Fire Stopping | 24% |
| 5. Sprinkler Install | 29% | 5. Obstructions | 22% |
| 6. Fire Alarm Reports | 39% | 6. Hazardous Rooms | 21% |
| 7. Path of Egress | 22% | 7. Shutdown Labels | 21% |
| 8. Corridor Doors | 20% | 8. Corridor Doors | 19% |
| 9. Smoke Barriers | 13% | 9. Path of Egress Locks | 17% |
| 10. Generator Reports | 13% | 10. Smoke Barriers | 14% |
| 11. Fire Alarm Install | 13% | | |

CMS CENTERS for MEDICARE & MEDICAID SERVICES

The Joint Commission

# Remove Documentation

| % of CMS Surveys | | % of TJC EC/LS Cites | |
|---|---|---|---|
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# 12 Steps of Focused Inspections

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| 2. Fire Drills | 42% | 2. Ventilation | 50% |
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**COVERS ALL BUT 1**

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# 12 STEP FOCUSED INSPECTIONS

v4

## 6 STEP 'FOCUSED' INSPECTION CHECKLIST

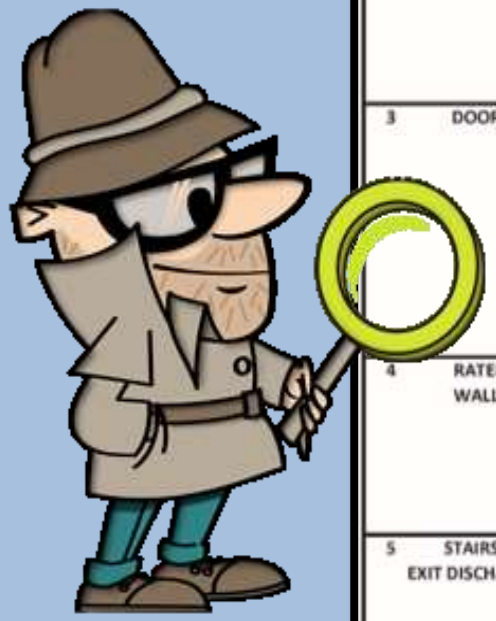
| STEP | AREA | | | THINGS TO CHECK | *Code Tool B Page # | **Code Page # |
|---|---|---|---|---|---|---|
| 1 | CEILINGS & FLOORS | 1.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down) | 96,99 | 13:35 |
| | | 1.1 | ❑ | Sprinkler Lint (none) | 7 | 25:15 |
| | | 1.2 | ❑ | Hanging Objects (nothing on sprinklers or pipes or obstruct flow) | 25 | 25:16 |
| | | 1.3 | ❑ | Smoke Detector Locations (max 15' to wall; 30' apart, 12" down) | 44 | 72:32 |
| | | 1.4 | ❑ | Holes/Gaps in Ceiling Grid & Penetrations (max 1/16" gaps) (Egg Cr | 7 | 13:30 |
| | | 1.5 | ❑ | Washable Ceiling Tiles in Patient Care Areas | 7 | 124:132 |
| | | 1.6 | ❑ | Ceiling Height (Min 7'0" new; 6'8" existing) | 38 | 101:43 |
| | | 1.7 | ❑ | Egress Obstructions (nothing within 4'/8' corridor path) | 39 | 101:150 |
| | | 1.8 | ❑ | Fireproofing on Beams & Columns | 39 | 101:148 |
| 2 | EXIT SIGNS | 2.1 | ❑ | Sign Needed if Egress Path isn't Readily Apparent | | |
| | | 2.2 | ❑ | Check Within Suites (multiple doors may need sign) | | |
| | | 2.3 | ❑ | Sign Must be Readable from Any Direction of Egress | | |
| | | 2.4 | ❑ | Signs at Cross-Corridor Doors (both sides) | | |
| | | 2.5 | ❑ | Signs at Changes of Direction (with arrow) | | |
| | | 2.6 | ❑ | Obstructions of Signs (pipes, signs, lights, etc) | | |
| | | 2.7 | ❑ | NO exit signs if Looks Like an Exit (correct wording, size) | | |
| 3 | DOORS | 3.0 | ❑ | Know Purpose(s) of Door (corridor, smoke, hazard, exit, etc) | | |
| | | 3.1 | ❑ | Astragal Needed at New Dbl Doors; Existing if Gap > 1/8" | | |
| | | 3.2 | ❑ | Force to Open (<15# latch, 30# start, 15# full open; 50 # existing) | | |
| | | 3.3 | ❑ | Rating of Door & Frame (20/45/60/90 min) (esp Aluminum) | | |
| | | 3.4 | ❑ | Closer on All Rated Doors; Test Coordinator Function | | |
| | | 3.5 | ❑ | Mag Hold-Open on Rated Doors w/Smoke Detector max 5' Away | | |
| | | 3.6 | ❑ | Positive Self-Latch (corridor & rated doors except smoke bar; push p | | |
| | | 3.7 | ❑ | Must Unlatch with Single Motion of a Hand (DEAD-BOLT) | | |
| | | 3.8 | ❑ | Cannot Lock from Egress Side (except for Clinical Pt Need) | | |
| | | 3.9 | ❑ | No Grills or Louvers | | |
| 4 | RATED WALLS | 4.1 | ❑ | Purpose of Wall (corridor, smoke, hazard, exit, separation etc) | | |
| | | 4.2 | ❑ | Top of Wall (rated has fire seal) | | 29 |
| | | 4.3 | ❑ | Seams & Screws (double coats on both) | | 101:89 |
| | | 4.4 | ❑ | Rooms used for Storage of Any Amount | | 101:66 |
| | | 4.5 | ❑ | Wall Patch Seams & Screws (Joint Compound; no Fire Sealant) | | 101:88 |
| | | 4.6 | ❑ | Meltable Penetrations Must Be Intumescent Sealed(Cable, PVC, Insul) | | |
| | | 4.7 | ❑ | Metal Penetrations & Holes Fire-Stopped (Conduits, Copper, pipes) | | |
| 5 | STAIRS & EXIT DISCHARGE | 5.1 | ❑ | Lights Constantly On (motion sensor okay; no switches) | 75 | 101:65 |
| | | 5.2 | ❑ | Redundant Lighting (Two Lamps Along Entire Path) | 76 | 101:59 |
| | | 5.3 | ❑ | Emergency Power Source (Generator or Battery) | 75 | 101:65 |
| | | 5.4 | ❑ | Interruption at Discharge (gate or door) | 102 | 101:65 |
| | | 5.5 | ❑ | Level Landing on Both Sides of Door | 102 | 101:45 |
| | | 5.6 | ❑ | Level Walk Surface (Beveled > 1/4") | 102 | 101:44 |
| | | 5.7 | ❑ | Direct Discharge or Exit Passageway (direct outside) | 103 | 101:64 |
| 6 | VENTILATION | 6.1 | ❑ | Mechanical Room Risers (Look for Shafts) | 88 | 101:71 |
| | | 6.2 | ❑ | Direct Make-Up Air for Combustion Devices | 108 | 101:154 |
| | | 6.3 | ❑ | Dampers at Floors | 48 | 90A:10 |
| | | 6.4 | ❑ | Dampers at Shaft & 2 Hr Walls | 48 | 90A:10 |
| | | 6.5 | ❑ | Corridor Neutral Air Flow - No Air Flow In/Out (Except for Infect Control) | 107 | 90A:9 |
| | | 6.6 | ❑ | Room Has Both Supply & Return/Exhaust Grills (if door is to corridor) | 108 | 90A:9 |
| | | 6.7 | ❑ | Dust on Frame Stops (esp: mech, elect, hskg, etc) | 108 | 90A:9 |

## FOCUSED' INSPECTION CHECKLIST-B (#7-12)

| SYS | AREA | | | THINGS TO CHECK | **Code Page # |
|---|---|---|---|---|---|
| 7 | CONSTR TYPE | 7.0 | ❑ | Confirm Occupancy, # Floors, Constr Date; Confirm Code Requirements | |
| | | 7.1 | ❑ | Above Ceiling Inspection (Confirm Constr Type) | |
| | | 7.2 | ❑ | Stacked Constr Types | |
| | | 7.3 | ❑ | Beam & Column Fire proofing (Structural only) | |
| | | 7.4 | ❑ | Beam & Column Encapsulation (Structural only) | |
| | | 7.5 | ❑ | Floor Penetrations | |
| | | 7.6 | ❑ | Building Separation Walls | |
| | | 7.7 | ❑ | Non-Combustible Wall Materials | |
| 8 | ABOVE CEILING | 8.0 | ❑ | Top of Wall Sealing | |
| | | 8.1 | ❑ | Fire Stopping & Joint Sealing | |
| | | 8.2 | ❑ | Rated Wall Construction | |
| | | 8.3 | ❑ | Sprinkler Support | |
| | | 8.4 | ❑ | Open Electrical Boxes; Abandoned Wiring | |
| | | 8.5 | ❑ | Damper Access | |
| | | 8.6 | ❑ | Perforated Tiles Intact | |
| | CORRIDOR | 9.0 | ❑ | Confirm Corridor Location Properly Shown on LSP | |
| | | 9.1 | ❑ | Dead End Corridors | |
| | | 9.2 | ❑ | Exit in Both Directions | |
| | | 9.3 | ❑ | Spaces Open to Corridors - Smoke Detectors | |
| | | 9.4 | ❑ | Doors (see Focused Inspection #3) & Windows | |
| | | 9.5 | ❑ | Above Ceiling Walls vs Ceiling | |
| | | 9.6 | ❑ | Walls Smoke Resistant | |
| | | 9.7 | ❑ | Width & Obstructions | |
| | | 9.8 | ❑ | Decorations & Storage | |
| | | 9.9 | ❑ | Suite Size & Travel Distance | |
| 10 | SPRINKLER | 10.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down) | |
| | | 10.1 | ❑ | Sprinkled When Required | |
| | | 10.2 | ❑ | Coverage, Shadows, Obstructions | |
| | | 10.3 | ❑ | Fire Pump | |
| | | 10.4 | ❑ | Roof Eave; Canopies | |
| | | 10.5 | ❑ | Mesh Curtains | |
| | | 10.6 | ❑ | Fire Extinguisher Obstruction | |
| 11 | FIRE ALARM | 11.0 | ❑ | Panel Security, Power Source ID, Breaker Label & Red | |
| | | 11.1 | ❑ | Panel Smoke Detector | |
| | | 11.2 | ❑ | Pull Station Obstruction | |
| | | 11.3 | ❑ | Notification Devices (audible & visual) | |
| | | 11.4 | ❑ | Tamper Switches | |
| | | 11.5 | ❑ | Smoke Detector Location | |
| 12 | ELECTRICAL | 12.0 | ❑ | Plug Strips & Extension Cords | |
| | | 12.1 | ❑ | Breaker Labeling | |
| | | 12.2 | ❑ | Panel Clearance | |
| | | 12.3 | ❑ | Hospital Grade Outlets (Green Dot) | |
| | | 12.4 | ❑ | GFI Outlets | |
| | | 12.5 | ❑ | Emergency Lighting | |
| | | 12.6 | ❑ | Generators-Remote Stop, Annunciator | |

* Page in LSC Code Tool Box, 2013 edition **Page in CMS adopted code shown © Lauxen Life Safety Consulting, LLC; Mar 2016

# 6 STEP FOCUSED INSPECTIONS



**See FULL size form on slide #41**

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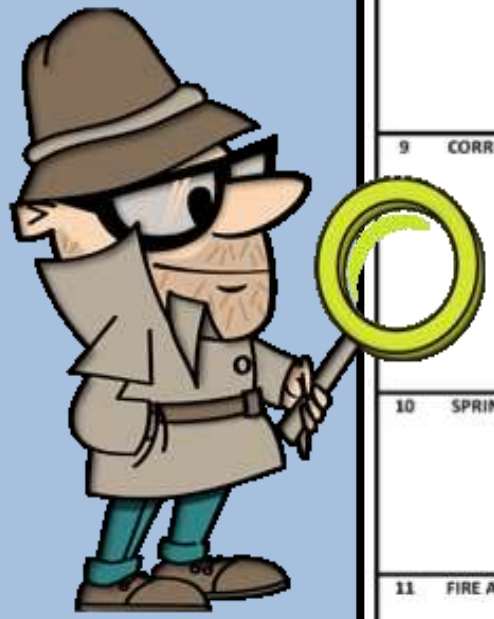
## 6 STEP 'FOCUSED' INSPECTION CHECKLIST

| STEP | AREA | | | THINGS TO CHECK | *Code Tool B Page # | **Code Page # |
|---|---|---|---|---|---|---|
| 1 | CEILINGS & FLOORS | 1.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down ) | 96,99 | 13:35 |
| | | 1.1 | ❑ | Sprinkler Lint (none) | 7 | 25:15 |
| | | 1.2 | ❑ | Hanging Objects (nothing on sprinklers or pipes or obstruct flow) | 25 | 25:16 |
| | | 1.3 | ❑ | Smoke Detector Locations (max 15' to wall; 30' apart, 12" down) | 44 | 72:32 |
| | | 1.4 | ❑ | Holes/Gaps in Ceiling Grid & Penetrations (max 1/16" gaps) (Egg Crates) | 7 | 13:30 |
| | | 1.5 | ❑ | Washable Ceiling Tiles in Patient Care Areas | 7 | 124:132 |
| | | 1.6 | ❑ | Ceiling Height (Min 7'0"new; 6'8" existing) | 88 | 101:43 |
| | | 1.7 | ❑ | Egress Obstructions (nothing within 4'/8' corridor path) | 59 | 101:150 |
| | | 1.8 | ❑ | Firepoofing on Beams & Columns | 57 | 101:148 |
| 2 | EXIT SIGNS | 2.1 | ❑ | Sign Needed If Egress Path isn't Readily Apparent | 41 | 101:66 |
| | | 2.2 | ❑ | Check Within Suites (multiple doors may need sign) | 41 | 101:66 |
| | | 2.3 | ❑ | Sign Must be Readable from Any Direction of Egress | 41 | 101:66 |
| | | 2.4 | ❑ | Signs at Cross-Corridor Doors (both sides) | 41 | 101:66 |
| | | 2.5 | ❑ | Signs at Changes of Direction (with arrow) | 41 | 101:67 |
| | | 2.6 | ❑ | Obstructions of Signs (pipes, signs, lights, etc) | 41 | 101:66 |
| | | 2.7 | ❑ | NO exit signs if Looks Like an Exit (correct wording, size) | 41 | 101:67 |
| 3 | DOORS | 3.0 | ❑ | Know Purpose(s) of Door (corridor, smoke, hazard, exit, etc) | 30 | 101:149 |
| | | 3.1 | ❑ | Astragal Needed at New Dbl Doors; Existing if Gap > 1/8" | 30 | 101:150 |
| | | 3.2 | ❑ | Force to Open (<15# latch, 30# start, 15# full open; 50 # existing) | 30 | 101:45 |
| | | 3.3 | ❑ | Rating of Door & Frame (20/45/60/90 min) (esp Aluminum) | 30 | 101:69 |
| | | 3.4 | ❑ | Closer on All Rated Doors; Test Coordinator Function | 30 | 101:69 |
| | | 3.5 | ❑ | Mag Hold-Open on Rated Doors w/Smoke Detector max 5' Away | 29 | 101:47 |
| | | 3.6 | ❑ | Positive Self-Latch (corridor & rated doors except smoke bar; push-pull) | 30 | 101:69 |
| | | 3.7 | ❑ | Must Unlatch with Single Motion of a Hand (DEAD-BOLT) | 39 | 101:46 |
| | | 3.8 | ❑ | Cannot Lock from Egress Side (except for Clinical Pt Need) | 32 | 101:46 |
| | | 3.9 | ❑ | No Grills or Louvers | 30 | 101:69 |
| 4 | RATED WALLS | 4.1 | ❑ | Purpose of Wall (corridor, smoke, hazard, exit, separation etc) | 112 | 101:149 |
| | | 4.2 | ❑ | Top of Wall (rated has fire seal) | 112 | 101:69 |
| | | 4.3 | ❑ | Seams & Screws (double coats on both) | 112 | 101:69 |
| | | 4.4 | ❑ | Rooms used for Storage of Any Amount | 62 | 101:66 |
| | | 4.5 | ❑ | Wall Patch Seams & Screws (Joint Compound; no Fire Sealant) | 112 | 101:69 |
| | | 4.6 | ❑ | Meltable Penetrations Must Be Intumescent Sealed(Cable, PVC, Insul) | 53,55 | 101:69 |
| | | 4.7 | ❑ | Metal Penetrations & Holes Fire-Stopped (Conduits, Copper, pipes) | 52,54 | 101:69 |
| 5 | STAIRS & EXIT DISCHARGE | 5.1 | ❑ | Lights Constantly On (motion sensor okay; no switches) | 75 | 101:65 |
| | | 5.2 | ❑ | Redundant Lighting (Two Lamps Along Entire Path) | 75 | 101:65 |
| | | 5.3 | ❑ | Emergency Power Source (Generator or Battery) | 75 | 101:65 |
| | | 5.4 | ❑ | Interruption at Discharge (gate or door) | 102 | 101:65 |
| | | 5.5 | ❑ | Level Landing on Both Sides of Door | 102 | 101:45 |
| | | 5.6 | ❑ | Level Walk Surface (Beveled > 1/4") | 102 | 101:44 |
| | | 5.7 | ❑ | Direct Discharge or Exit Passageway (direct outside) | 103 | 101:64 |
| 6 | VENTILATION | 6.1 | ❑ | Mechanical Room Risers (Look for Shafts) | 88 | 101:71 |
| | | 6.2 | ❑ | Direct Make-Up Air for Combustion Devices | 108 | 101:154 |
| | | 6.3 | ❑ | Dampers at Floors | 48 | 90A:10 |
| | | 6.4 | ❑ | Dampers at Shaft & 2 Hr Walls | 48 | 90A:10 |
| | | 6.5 | ❑ | Corridor Neutral Air Flow - No Air Flow In/Out (Except for Infect Control) | 107 | 90A:9 |
| | | 6.6 | ❑ | Room Has Both Supply & Return/Exhaust Grills (if door is to corridor) | 108 | 90A:9 |
| | | 6.7 | ❑ | Dust on Frame Stops (esp: mech, elect, hskg, etc) | 108 | 90A:9 |

# 2nd-6 STEP FOCUSED INSPECTIONS



**See FULL size form on slide #42**

## FOCUSED' INSPECTION CHECKLIST-B (#7-12)

| SYS | AREA | | | THINGS TO CHECK | **Code Page # |
|---|---|---|---|---|---|
| 7 | CONSTR TYPE | 7.0 | ❑ | Confirm Occupancy, # Floors, Constr Date; Confirm Code Requirements | |
| | | 7.1 | ❑ | Above Ceiling Inspection (Confirm Constr Type) | |
| | | 7.2 | ❑ | Stacked Constr Types | |
| | | 7.3 | ❑ | Beam & Column Fire proofing (Structural only) | |
| | | 7.4 | ❑ | Beam & Column Encapsulation (Structural only) | |
| | | 7.5 | ❑ | Floor Penetrations | |
| | | 7.6 | ❑ | Building Separation Walls | |
| | | 7.7 | ❑ | Non-Combustible Wall Materials | |
| 8 | ABOVE CEILING | 8.0 | ❑ | Top of Wall Sealing | |
| | | 8.1 | ❑ | Fire Stopping & Joint Sealing | |
| | | 8.2 | ❑ | Rated Wall Construction | |
| | | 8.3 | ❑ | Sprinkler Support | |
| | | 8.4 | ❑ | Open Electrical Boxes; Abandoned Wiring | |
| | | 8.5 | ❑ | Damper Access | |
| | | 8.6 | ❑ | Perforated Tiles Intact | |
| 9 | CORRIDORS | 9.0 | ❑ | Confirm Corridor Location Properly Shown on LSP | |
| | | 9.1 | ❑ | Dead End Corridors | |
| | | 9.2 | ❑ | Exit in Both Directions | |
| | | 9.3 | ❑ | Spaces Open to Corridors - Smoke Detectors | |
| | | 9.4 | ❑ | Doors (see Focused Inspection #3) & Windows | |
| | | 9.5 | ❑ | Above Ceiling Walls vs Ceiling | |
| | | 9.6 | ❑ | Walls Smoke Resistant | |
| | | 9.7 | ❑ | Width & Obstructions | |
| | | 9.8 | ❑ | Decorations & Storage | |
| | | 9.9 | ❑ | Suite Size & Travel Distance | |
| 10 | SPRINKLER | 10.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down ) | |
| | | 10.1 | ❑ | Sprinkled When Required | |
| | | 10.2 | ❑ | Coverage, Shadows, Obstructions | |
| | | 10.3 | ❑ | Fire Pump | |
| | | 10.4 | ❑ | Roof Eave; Canopies | |
| | | 10.5 | ❑ | Mesh Curtains | |
| | | 10.6 | ❑ | Fire Extinguisher Obstruction | |
| 11 | FIRE ALARM | 11.0 | ❑ | Panel Security, Power Source ID, Breaker Label & Red | |
| | | 11.1 | ❑ | Panel Smoke Detector | |
| | | 11.2 | ❑ | Pull Station Obstruction | |
| | | 11.3 | ❑ | Notification Devices (audible & visual) | |
| | | 11.4 | ❑ | Tamper Switches | |
| | | 11.5 | ❑ | Smoke Detector Location | |
| 12 | ELECTRICAL | 12.0 | ❑ | Plug Strips & Extension Cords | |
| | | 12.1 | ❑ | Breaker Labeling | |
| | | 12.2 | ❑ | Panel Clearance | |
| | | 12.3 | ❑ | Hospital Grade Outlets (Green Dot) | |
| | | 12.4 | ❑ | GFI Outlets | |
| | | 12.5 | ❑ | Emergency Lighting | |
| | | 12.6 | ❑ | Generators-Remote Stop, Annunciator | |

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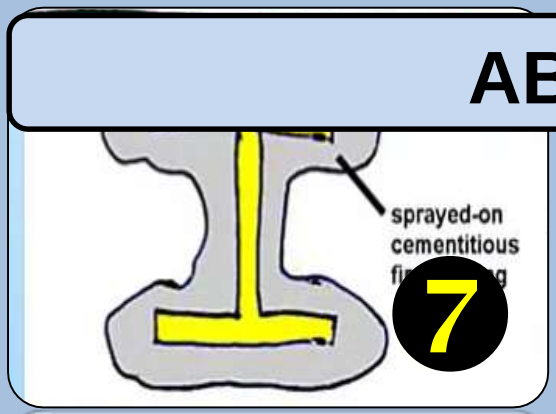
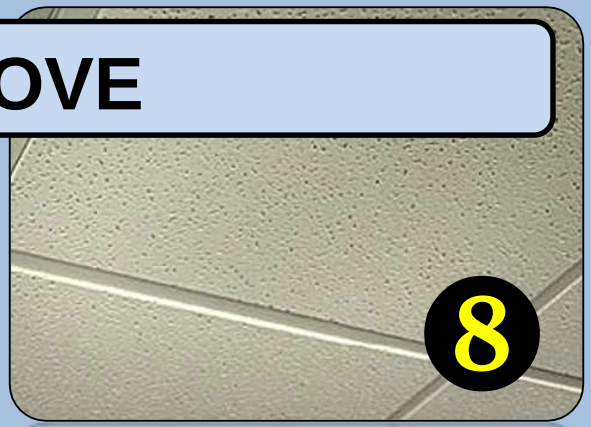
# 2nd-6 STEP FOCUSED INSPECTIONS

## ABOVE




7



8

## BELOW

9

## BELOW THE CEILING

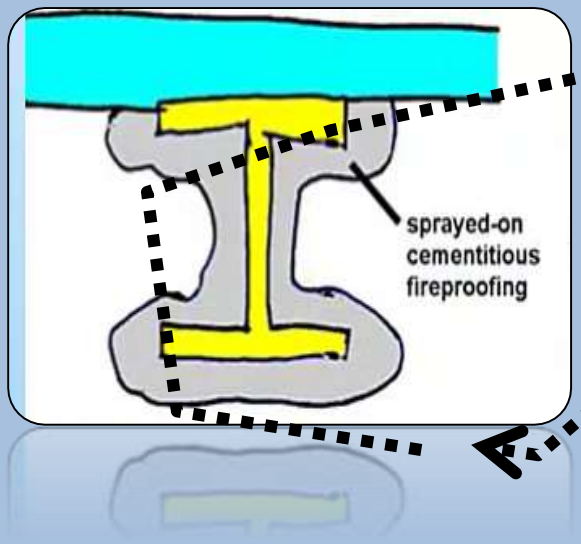
10

11

12

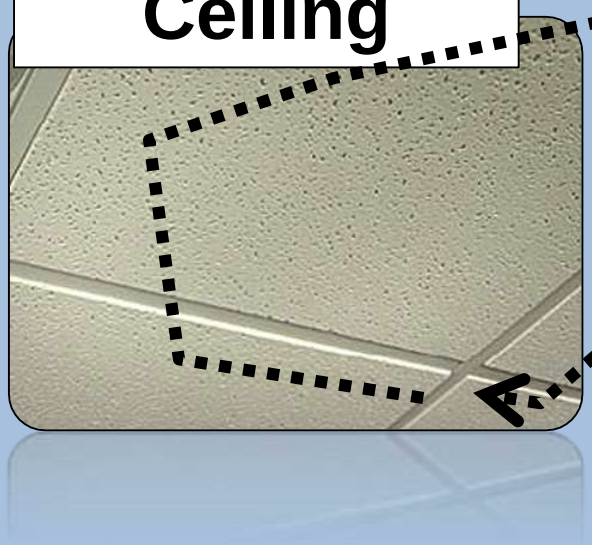
# 7

## Construction Type




# 8

**Above Ceiling**



# 9

**Corridors**

# 10

**Sprinklers**

# 11

**Fire Alarm**

# 12

**Electrical**

# 1st

## Short training on what to look for during the inspections

# 2nd

## Some actual pictures to see if you can spot the issues

# INSPECTION TIPS

**Print the next 72 slides for your own walk-around inspection tip-list**

# TIPS

# STEPS 7-12

## FOCUSED INSPECTIONS

## FOCUSED' INSPECTION CHECKLIST-B (#7-12)

**Code Page 4

| SYS | AREA | | | THINGS TO CHECK | |
|---|---|---|---|---|---|
| 7 | CONSTR TYPE | 7.0 | ❑ | Confirm Occupancy, # Floors, Constr Date; Confirm Code Requirements | |
| | | 7.1 | ❑ | Above Ceiling Inspection (Confirm Constr Type) | |
| | | 7.2 | ❑ | Stacked Constr Types | |
| | | 7.3 | ❑ | Beam & Column Fire proofing (Structural only) | |
| | | 7.4 | ❑ | Beam & Column Encapsulation (Structural only) | |
| | | 7.5 | ❑ | Floor Penetrations | |
| | | 7.6 | ❑ | Building Separation Walls | |
| | | 7.7 | ❑ | Non-Combustible Wall Materials | |
| 8 | ABOVE CEILING | 8.0 | ❑ | Top of Wall Sealing | |
| | | 8.1 | ❑ | Fire Stopping & Joint Sealing | |
| | | 8.2 | ❑ | Rated Wall Construction | |
| | | 8.3 | ❑ | Sprinkler Support | |
| | | 8.4 | ❑ | Open Electrical Boxes; Abandoned Wiring | |
| | | 8.5 | ❑ | Damper Access | |
| | | 8.6 | ❑ | Perforated Tiles Intact | |
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| | | 9.3 | ❑ | Spaces Open to Corridors - Smoke Detectors | |
| | | 9.4 | ❑ | Doors (see Focused Inspection #3) & Windows | |
| | | 9.5 | ❑ | Above Ceiling Walls vs Ceiling | |
| | | 9.6 | ❑ | Walls Smoke Resistant | |
| | | 9.7 | ❑ | Width & Obstructions | |
| | | 9.8 | ❑ | Decorations & Storage | |
| | | 9.9 | ❑ | Suite Size & Travel Distance | |
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| | | 10.2 | ❑ | Coverage, Shadows, Obstructions | |
| | | 10.3 | ❑ | Fire Pump | |
| | | 10.4 | ❑ | Roof Eave; Canopies | |
| | | 10.5 | ❑ | Mesh Curtains | |
| | | 10.6 | ❑ | Fire Extinguisher Obstruction | |
| 11 | FIRE ALARM | 11.0 | ❑ | Panel Security, Power Source ID, Breaker Label & Red | |
| | | 11.1 | ❑ | Panel Smoke Detector | |
| | | 11.2 | ❑ | Pull Station Obstruction | |
| | | 11.3 | ❑ | Notification Devices (audible & visual) | |
| | | 11.4 | ❑ | Tamper Switches | |
| | | 11.5 | ❑ | Smoke Detector Location | |
| 12 | ELECTRICAL | 12.0 | ❑ | Plug Strips & Extension Cords | |
| | | 12.1 | ❑ | Breaker Labeling | |
| | | 12.2 | ❑ | Panel Clearance | |
| | | 12.3 | ❑ | Hospital Grade Outlets (Green Dot) | |
| | | 12.4 | ❑ | GFI Outlets | |
| | | 12.5 | ❑ | Emergency Lighting | |
| | | 12.6 | ❑ | Generators-Remote Stop, Annunciator | |

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v6

# FOCUSED' INSPECTION CHECKLIST-A (#1-6)

| SYS | AREA | | | THINGS TO CHECK | **Code Page # |
|---|---|---|---|---|---|
| 1 | CEILINGS & FLOORS | 1.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down ) | 13:35 |
| | | 1.1 | ❑ | Sprinkler Lint (none) | 25:15 |
| | | 1.2 | ❑ | Hanging Objects (nothing on sprinklers or pipes or obstruct flow) | 25:16 |
| | | 1.3 | ❑ | Smoke Detector Locations (max 15' to wall; 30' apart, 12" down) | 72:32 |
| | | 1.4 | ❑ | Holes/Gaps in Ceiling Grid & Penetrations (max 1/16" gaps) (Egg Crates) | 13:30 |
| | | 1.5 | ❑ | Washable Ceiling Tiles in Patient Care Areas | 124:132 |
| | | 1.6 | ❑ | Ceiling Height (Min 7'0"new; 6'8" existing) | 101:43 |
| | | 1.7 | ❑ | Egress Obstructions (nothing within 4'/8' corridor path) | 101:150 |
| | | 1.8 | ❑ | Firepoofing on Beams & Columns | 101:148 |
| 2 | EXIT SIGNS | 2.1 | ❑ | Sign Needed If Egress Path isn't Readily Apparent | 101:66 |
| | | 2.2 | ❑ | Check Within Suites (multiple doors may need sign) | 101:66 |
| | | 2.3 | ❑ | Sign Must be Readable from Any Direction of Egress | 101:66 |
| | | 2.4 | ❑ | Signs at Cross-Corridor Doors (both sides) | 101:66 |
| | | 2.5 | ❑ | Signs at Changes of Direction (with arrow) | 101:67 |
| | | 2.6 | ❑ | Obstructions of Signs (pipes, signs, lights, etc) | 101:66 |
| | | 2.7 | ❑ | NO exit signs if Looks Like an Exit (correct wording, size) | 101:67 |
| 3 | DOORS | 3.0 | ❑ | Know Purpose(s) of Door (corridor, smoke, hazard, exit, etc) | 101:149 |
| | | 3.1 | ❑ | Astragal Needed at New Dbl Doors; Existing if Gap > 1/8" | 101:150 |
| | | 3.2 | ❑ | Force to Open (<15# latch, 30# start, 15# full open; 50 # existing) | 101:45 |
| | | 3.3 | ❑ | Rating of Door & Frame (20/45/60/90 min) (esp Aluminum) | 101:69 |
| | | 3.4 | ❑ | Closer on All Rated Doors; Test Coordinator Function | 101:69 |
| | | 3.5 | ❑ | Mag Hold-Open on Rated Doors w/Smoke Detector max 5' Away | 101:47 |
| | | 3.6 | ❑ | Positive Self-Latch (corridor & rated doors except smoke bar; push-pull) | 101:69 |
| | | 3.7 | ❑ | Must Unlatch with Single Motion of a Hand (DEAD-BOLT) | 101:46 |
| | | 3.8 | ❑ | Cannot Lock from Egress Side (except for Clinical Pt Need) | 101:46 |
| | | 3.9 | ❑ | No Grills or Louvers | 101:69 |
| 4 | RATED WALLS | 4.1 | ❑ | Purpose of Wall (corridor, smoke, hazard, exit, separation etc) | 101:149 |
| | | 4.2 | ❑ | Top of Wall (rated has fire seal) | 101:69 |
| | | 4.3 | ❑ | Seams & Screws (double coats on both) | 101:69 |
| | | 4.4 | ❑ | Rooms used for Storage of Any Amount | 101:66 |
| | | 4.5 | ❑ | Wall Patch Seams & Screws (Joint Compound; no Fire Sealant) | 101:69 |
| | | 4.6 | ❑ | Meltable Penetrations Must Be Intumescent Sealed(Cable, PVC, Insul) | 101:69 |
| | | 4.7 | ❑ | Metal Penetrations & Holes Fire-Stopped (Conduits, Copper, pipes) | 101:69 |
| 5 | STAIRS & EXIT DISCHARGE | 5.1 | ❑ | Lights Constantly On (motion sensor okay; no switches) | 101:65 |
| | | 5.2 | ❑ | Redundant Lighting (Two Lamps Along Entire Path) | 101:65 |
| | | 5.3 | ❑ | Emergency Power Source (Generator or Battery) | 101:65 |
| | | 5.4 | ❑ | Interruption at Discharge (gate or door) | 101:65 |
| | | 5.5 | ❑ | Level Landing on Both Sides of Door | 101:45 |
| | | 5.6 | ❑ | Level Walk Surface (Beveled > 1/4") | 101:44 |
| | | 5.7 | ❑ | Direct Discharge or Exit Passageway (direct outside) | 101:64 |
| 6 | VENTILATION | 6.1 | ❑ | Mechanical Room Risers (Look for Shafts) | 101:71 |
| | | 6.2 | ❑ | Direct Make-Up Air for Combustion Devices | 101:154 |
| | | 6.3 | ❑ | Dampers at Floors | 90A:10 |
| | | 6.4 | ❑ | Dampers at Shaft & 2 Hr Walls | 90A:10 |
| | | 6.5 | ❑ | Corridor Neutral Air Flow - No Air Flow In/Out (Except for Infect Control) | 90A:9 |
| | | 6.6 | ❑ | Room Has Both Supply & Return/Exhaust Grills (if door is to corridor) | 90A:9 |
| | | 6.7 | ❑ | Dust on Frame Stops (esp: mech, elect, hskg, etc) | 90A:9 |

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# FOCUSED' INSPECTION CHECKLIST-B (#7-12)

| SYS | AREA | | | THINGS TO CHECK | **Code Page # |
|---|---|---|---|---|---|
| 7 | CONSTR TYPE | 7.0 | ❑ | Confirm Occupancy, # Floors, Constr Date; Confirm Code Requirements | |
| | | 7.1 | ❑ | Above Ceiling Inspection (Confirm Constr Type) | |
| | | 7.2 | ❑ | Stacked Constr Types | |
| | | 7.3 | ❑ | Beam & Column Fire proofing (Structural only) | |
| | | 7.4 | ❑ | Beam & Column Encapsulation (Structural only) | |
| | | 7.5 | ❑ | Floor Penetrations | |
| | | 7.6 | ❑ | Building Separation Walls | |
| | | 7.7 | ❑ | Non-Combustible Wall Materials | |
| 8 | ABOVE CEILING | 8.0 | ❑ | Top of Wall Sealing | |
| | | 8.1 | ❑ | Fire Stopping & Joint Sealing | |
| | | 8.2 | ❑ | Rated Wall Construction | |
| | | 8.3 | ❑ | Sprinkler Support | |
| | | 8.4 | ❑ | Open Electrical Boxes; Abandoned Wiring | |
| | | 8.5 | ❑ | Damper Access | |
| | | 8.6 | ❑ | Perforated Tiles Intact | |
| 9 | CORRIDORS | 9.0 | ❑ | Confirm Corridor Location Properly Shown on LSP | |
| | | 9.1 | ❑ | Dead End Corridors | |
| | | 9.2 | ❑ | Exit in Both Directions | |
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| | | 9.7 | ❑ | Width & Obstructions | |
| | | 9.8 | ❑ | Decorations & Storage | |
| | | 9.9 | ❑ | Suite Size & Travel Distance | |
| 10 | SPRINKLER | 10.0 | ❑ | Sprinkler Locations (max 7.5' to wall, 6'-15' apart, 12"/22" down ) | |
| | | 10.1 | ❑ | Sprinkled When Required | |
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| | | 11.5 | ❑ | Smoke Detector Location | |
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| | | 12.1 | ❑ | Breaker Labeling | |
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| | | 12.3 | ❑ | Hospital Grade Outlets (Green Dot) | |
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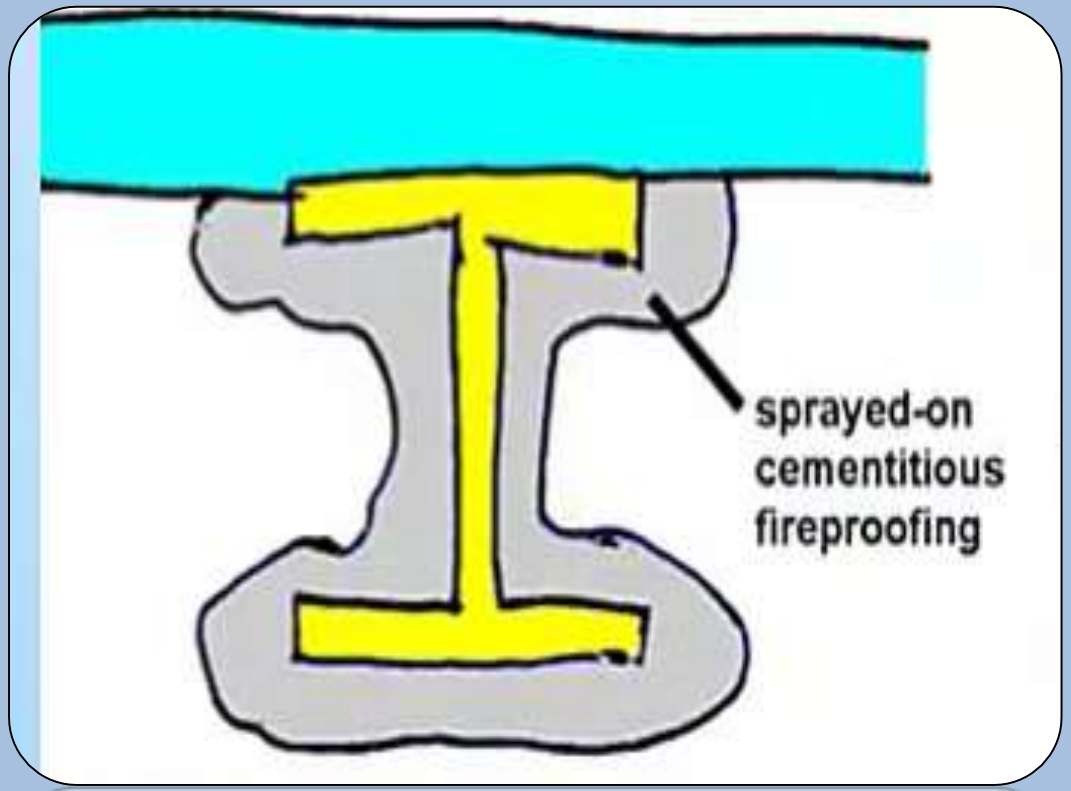
# 7

# Construction Type




# 7

# Construction Type

**Need to Know:**

1. **Occupancy**
2. **Date of Construction**
3. **Number of Floors**

# 7

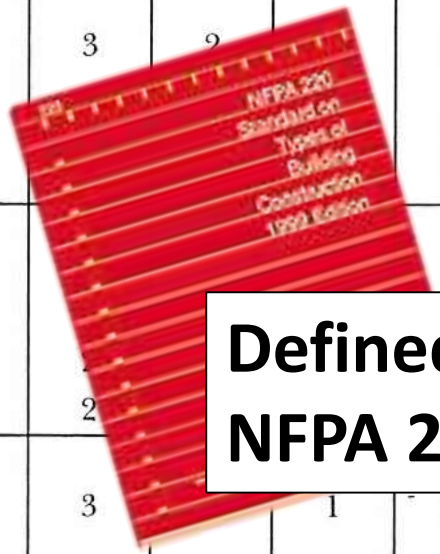
# Construction Type

**Is the building structurally able to withstand a fire for the time needed to occupy during a fire?**

# NFPA 220 Construction Types - LSC - Annex (p.300)

| | Type I | | Type II | | | Type III | | Type IV | Type V | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 443 | 332 | 222 | 111 | 000 | 211 | 200 | 2HH | 111 | 000 |
| **Exterior Bearing Walls** | | | | | | | | | | |
| Supporting more than one floor, columns, or other bearing walls | 4 | 3 | 2 | 1 | 0[1] | 2 | 2 | 2 | 1 | 0[1] |
| Supporting one floor only | 4 | 3 | 2 | 1 | 0[1] | 2 | 2 | 2 | 1 | 0[1] |
| Supporting a roof only | 4 | 3 | 1 | 1 | 0[1] | 2 | 2 | 2 | 1 | 0[1] |
| **Interior Bearing Walls** | | | | | | | | | | |
| Supporting more than one floor, columns, or other bearing walls | 4 | 3 | 2 | | 0 | 1 | 0 | 2 | 1 | 0 |
| Supporting one floor only | 3 | | | | 0 | 1 | 0 | 1 | 1 | 0 |
| Supporting roofs only | 3 | | | | 0 | 1 | 0 | 1 | 1 | 0 |
| **Columns** | | | | | | | | | | |
| Supporting more than one floor, columns, or other bearing walls | 4 | | | | 0 | 1 | 0 | H[2] | 1 | 0 |
| Supporting one floor only | 3 | | | | | | 0 | H[2] | 1 | 0 |
| Supporting roofs only | 3 | 2 | | | | | 0 | H[2] | 1 | 0 |
| **Beams, Girders, Trusses, and Arches** | | | | | | | | | | |
| Supporting more than one floor, columns, or other bearing walls | 4 | 3 | | 1 | 0 | 1 | 0 | H[2] | 1 | 0 |
| Supporting one floor only | 3 | 2 | 2 | 1 | 0 | 1 | 0 | H[2] | 1 | 0 |
| Supporting roofs only | 3 | 2 | 1 | 1 | 0 | 1 | 0 | H[2] | 1 | 0 |
| **Floor Construction** | 3 | 2 | 2 | 1 | 0 | 1 | 0 | H[2] | 1 | 0 |
| **Roof Construction** | 2 | 1 1/2 | 1 | 1 | 0 | 1 | 0 | H[2] | 1 | 0 |
| **Exterior Nonbearing Walls**[3] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] | 0[1] |

Those members that shall be permitted to be of approved combustible material.




**Defined in NFPA 220**

# HEALTH CARE CONSTRUCTION TYPE

NEW

**Table 18.1.6.2 Construction Type Limitations**

| Construction Type | Stories 1 | 2 | 3 | 4 or More |
|---|---|---|---|---|
| I(443) | X | X | X | X |
| I(332) | X | X | X | X |
| II(222) | X | X | X | X |
| II(111) | X | X | X | NP |
| II(000) | X | NP | NP | NP |
| III(211) | X | NP | NP | NP |
| III(200) | NP | NP | NP | NP |
| IV(2HH) | X | NP | NP | NP |
| V(111) | X | NP | NP | NP |
| V(000) | NP | NP | NP | NP |

X: Permitted type of construction.
NP: Not permitted.

EXISTING

**Table 19.1.6.2 Construction Type Limitations**

| Construction Type | Stories 1 | 2 | 3 | 4 or More |
|---|---|---|---|---|
| I(443) | X | X | X | X |
| I(332) | X | X | X | X |
| II(222) | X | X | X | X |
| II(111) | X | X* | X* | NP |
| II(000) | X* | X* | NP | NP |
| III(211) | X* | X* | NP | NP |
| III(200) | X* | NP | NP | NP |
| IV(2HH) | X* | X* | NP | NP |
| V(111) | X* | X* | NP | NP |
| V(000) | X* | NP | NP | NP |

X: Permitted type of construction.
NP: Not permitted.
*Building requires automatic sprinkler protection. *(See 19.3.5.1.)*

# 7

# Construction Type

**STACKED**

**CONSTRUCTION TYPES**

**Lowest construction type governs**

# 7

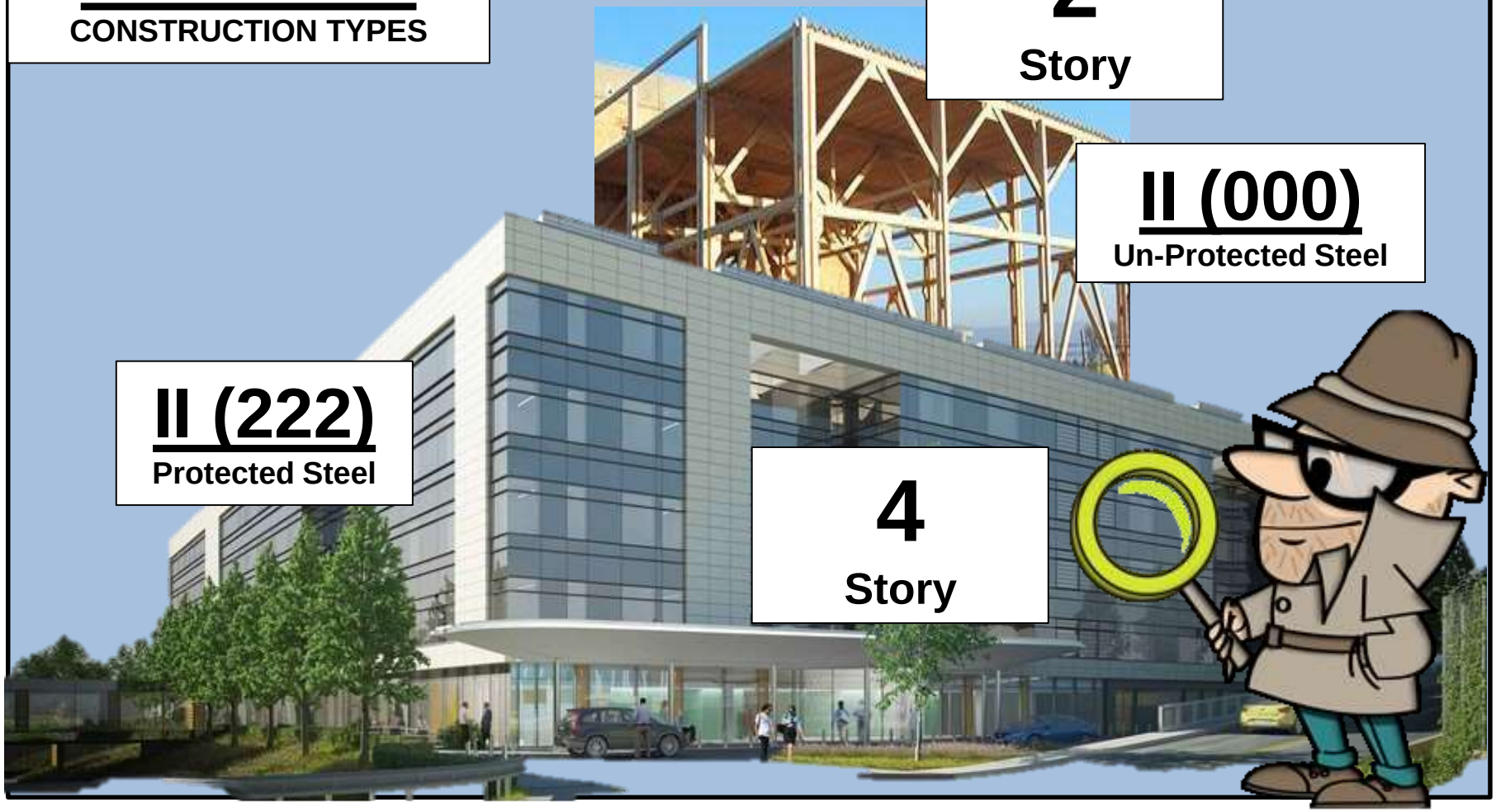
## STACKED
**CONSTRUCTION TYPES**

**2**
**Story**

**II (000)**
**Un-Protected Steel**

**II (222)**
**Protected Steel**

**4**
**Story**



# HEALTH CARE CONSTRUCTION TYPE

NEW

**Table 18.1.6.2 Construction Type Limitations**

| Construction Type | Stories 1 | 2 | 3 | 4 or More |
|---|---|---|---|---|
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| I(332) | X | X | X | X |
| II(222) | X | X | X | X |
| II(111) | X | X | X | NP |
| II(000) | X | NP | NP | NP |
| III(211) | X | NP | NP | NP |
| III(200) | NP | NP | NP | NP |
| IV(2HH) | X | | | |
| V(111) | X | | | |
| V(000) | N | | | |

X: Permitted type of constructi
NP: Not permitted.

**Lowest type governs**

**WHOLE Bldg is II(000)**

# 7 Construction Type

## FIRE PROOFING

**STRUCTURAL MEMBERS**

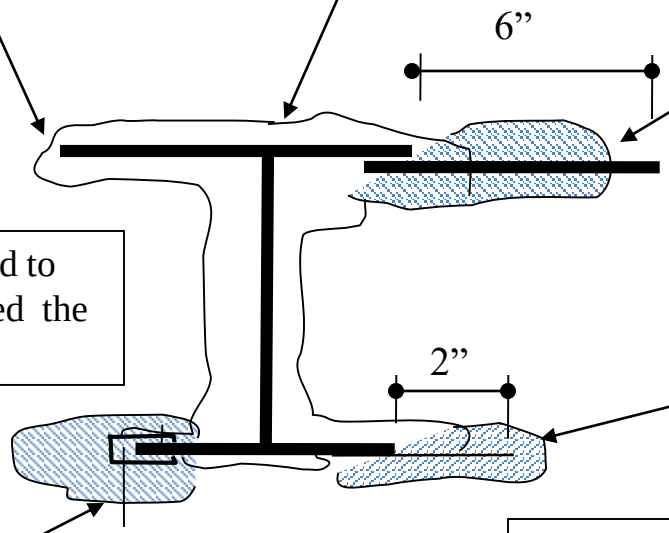
# FIREPROOFING

[LSC 18.1.6.2]

**All beams & columns must be covered by fire proofing thick enough for the specified rating, typically >= 1-1/2"**

**Fire proofing @ end of flange can be ¼" thick**

Thick/heavy attachments must be insulated for 6" away from the framing




All items that are directly attached to the steel framing must be insulated the same thickness as the steel

Light attachments, such as top track or hat channel, must be fully covered for 2" away from the framing

All parts of beam clamps must be covered on all sides with 1-1/2" fire proofing

**Never remove fire insulation to make room for any plastic pipe or insulation…NO amount of fire proofing will make up for it !**

# 7 Construction Type

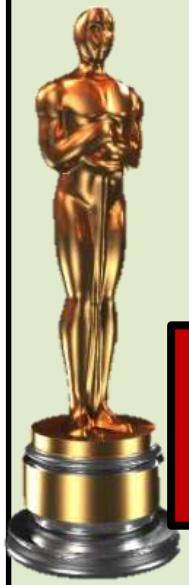
## FLOOR PENETRATIONS

**If not properly fire stopped, they void FLOOR RATING**

# 8 Above Ceiling

# 8 Above Ceiling

**This is a “catch-all” inspection to watch for a wide variety of issues that are typically found above the ceiling**



# 8 Above Ceiling

**Top 10 CMS/TJC Cite**

**At Rated Walls, look for:**

- **Proper <u>Fire Stopping</u>**
- **Top of Wall Joints**
- **Taped Seams & Screws**
- **Fire Dampers at Shafts & 2-hr walls**

# 8 Above Ceiling

**Look for:**

- **Sprinkler Pipes**
- **Electrical Boxes**
- **Unused Utilities**

# 8

**NFPA 13-1999, 6-1.1.5**

**“ Sprinkler piping or hangers shall not be used to support nonsystem components”**

## SPRINKLER PIPES

# 8

## SPRINKLER PIPES

**DQA Inspectors will cite if <u>ANYTHING</u> is even touching a pipe or hanger.**

# 8

# ELECTRICAL BOXES

**NFPA 70 (1999 ed.)**
**370-28**
**“ Each box shall have a cover”**

# 8

## KNOCK-OUTS

**NFPA 70 (1999 ed.)**
**370-18**
**“ unused openings shall be effectively closed”**

# 8

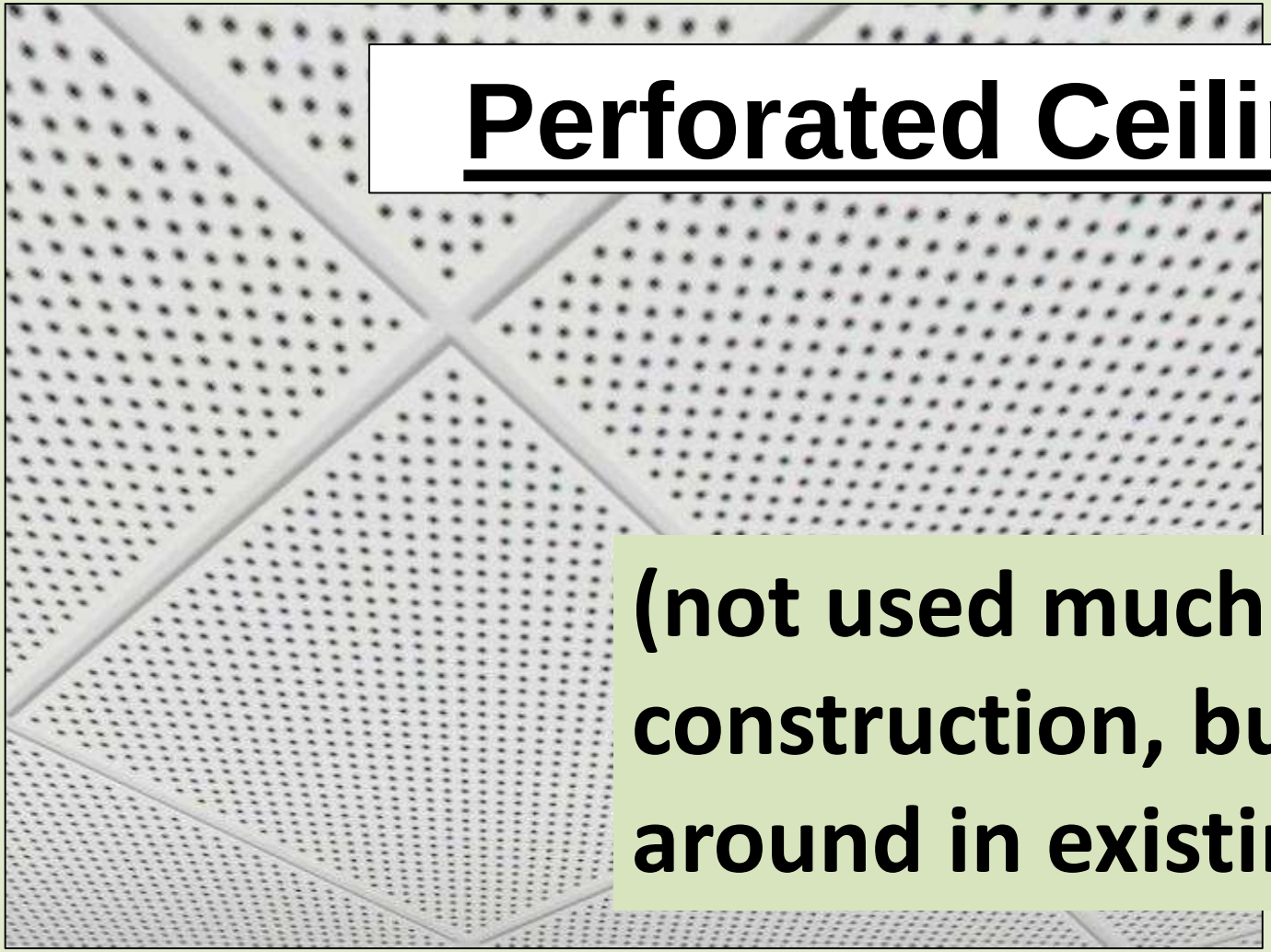
## UNUSED UTILITIES

# 8 Above Ceiling

**Look for:**

- **Perforated Ceilings**
- **Damper Door Access**

# 8



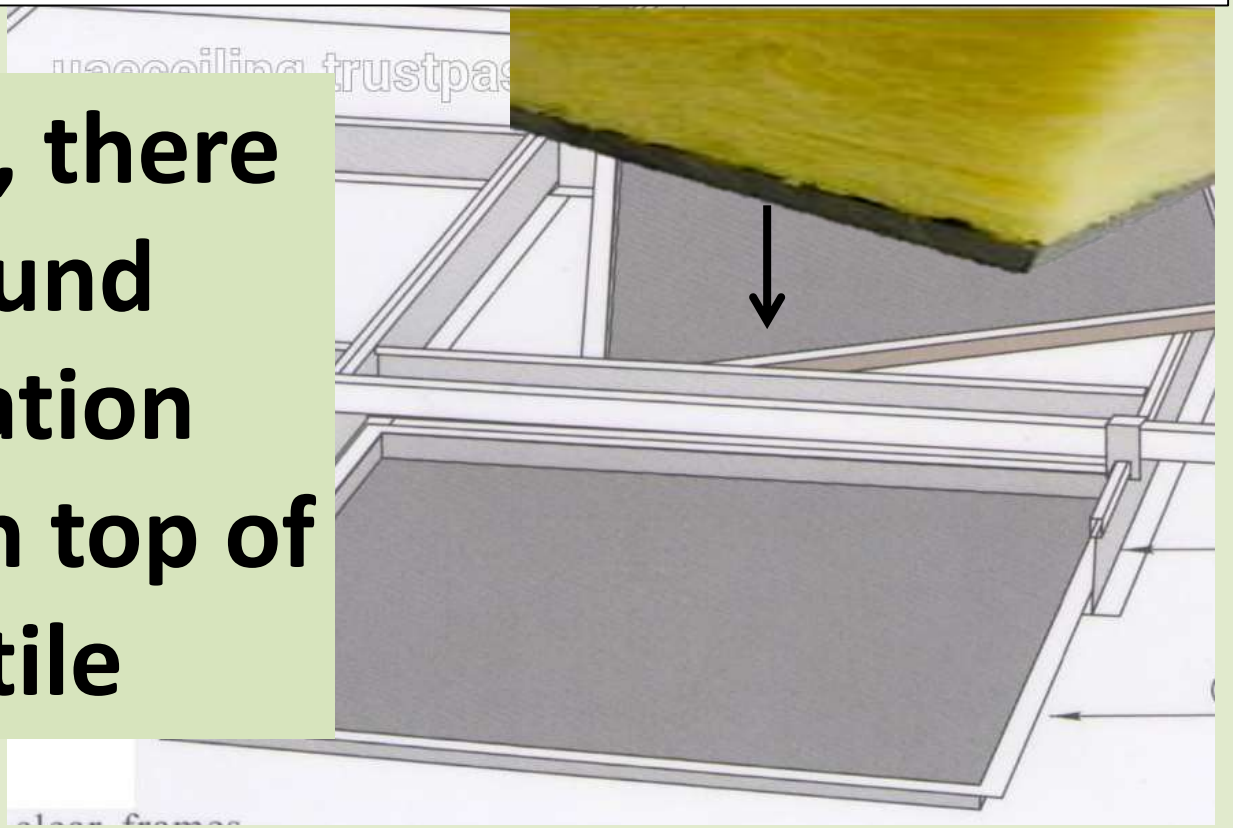
## Perforated Ceilings

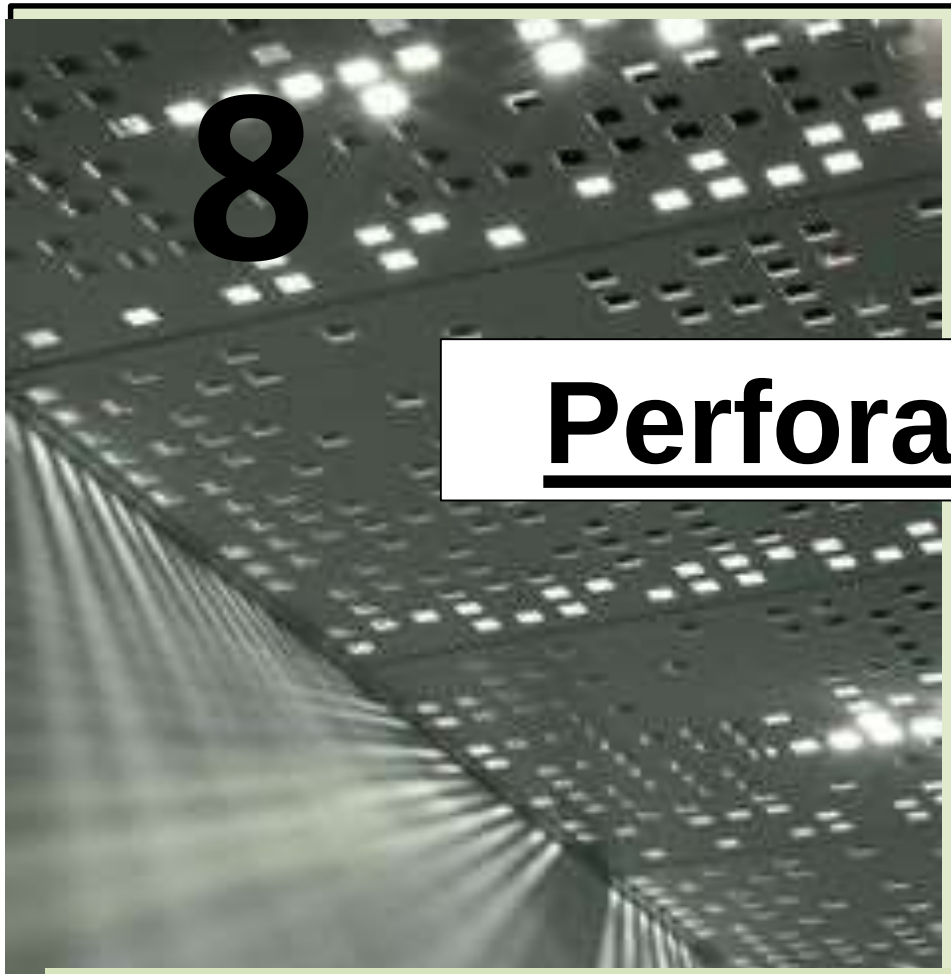
**(not used much in new construction, but still around in existing)**

# 8

## Perforated Ceilings

**Normally, there is a sound attenuation blanket on top of each tile**





8

# Perforated Ceilings

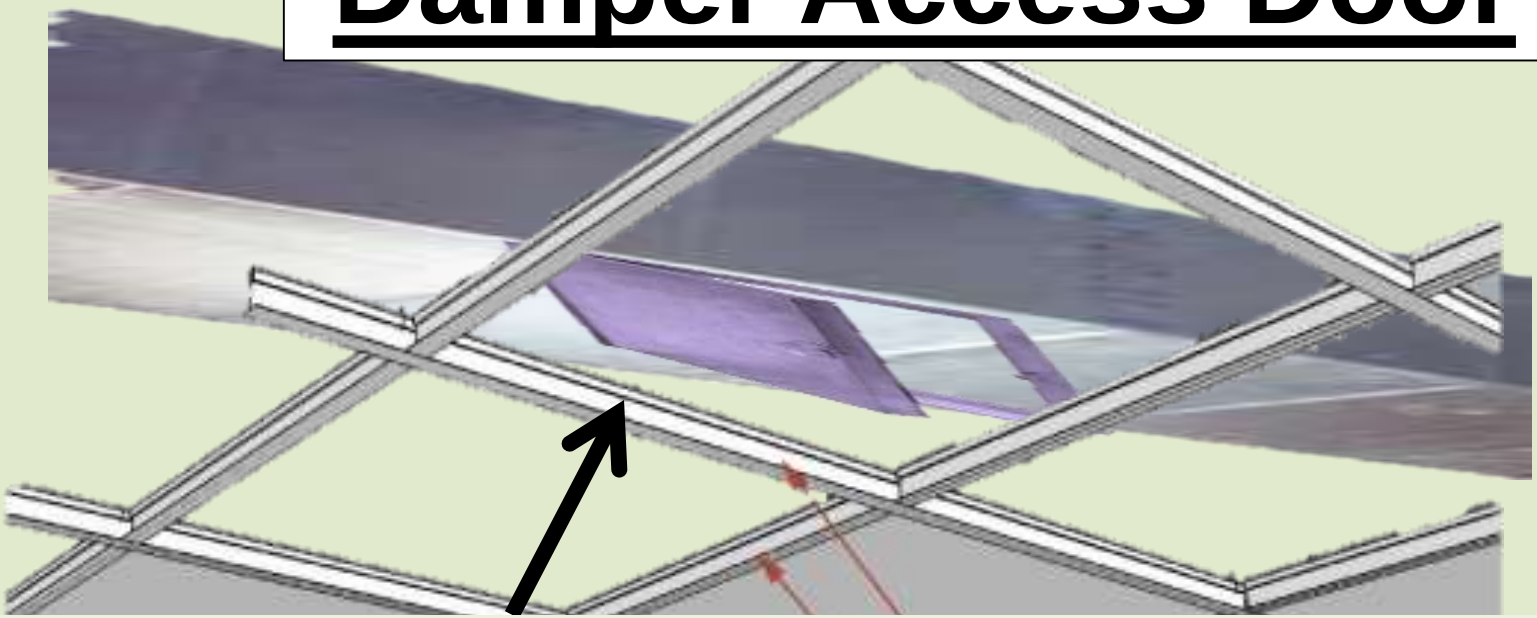
**Often the insulation pad is out of place.**

**Issue: The holes allow smoke & heat to pass through**

**(Cite: Sprinkled above ceiling or incorrect sprinkler design)**

# 8

## Damper Access Door



**Make sure the MAIN RUNNER of grid doesn't prevent**

1. **the access door from opening**
2. **reaching the damper link**

# 9 Corridors

# 9 Corridors

**Corridors are an important, but misunderstood, part of the Life Safety Code**

# 9 Corridors

**REFER TO YOUR LIFE SAFETY PLANS**

# RULES FOR CORRIDORS:

1. CORRIDORS CONNECT EXITS & STAIRS

2. EVERY ROOM MUST OPEN INTO A CORIDOR

3. OPEN SPACES WITH A DOOR ARE A CORIDOR

# 9 Corridors

1. Must Exit in 2 Directions

2. Dead Ends are Limited

3. Spaces open to corridor must have a smoke detector

# 9 Corridors

**4. Doors must Resist Smoke, Self Latch & Close with a Nudge**

**Top 10 CMS/TJC Cite**

**5. Walls must Resist Smoke**

**6. Smoke-tight ceiling can substitute for walls above it**

# 9

# Corridor

## WIDTH

**New: 8’**

**Existing: 4’***

# 9

# Corridor

## WIDTH

**Existing: 4’ ?**

***Anything Built since 10/1971:**

# = 8’

# 9

# Corridor

## WIDTH

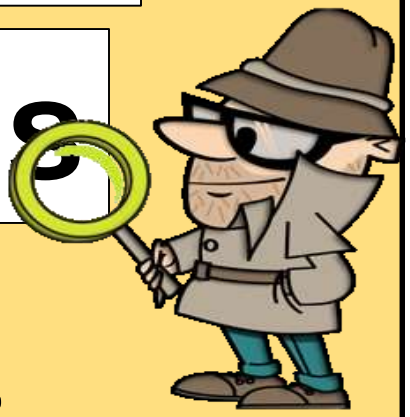
## “ADJUNCT” CORRIDOR 44”

**LCS 18/19.2.3.3, Exception 1**

**“Not used for housing, treatment or inpatients”**

# 9

# Corridor Obstructions



**Top 10 CMS/TJC Cite**

## Temporary Parking

1. 30 Minute without being moved
2. Person must be in attendance at all times
3. On fire alarm, they remove it

# 9

# Corridor

# Obstructions

## Temporary Parking

**Exceptions:**

**- Crash Carts** **- Isolation Carts**

**On fire alarm, must be removed**

# 9

# Corridor

# STORAGE

## ONE SIMPLE RULE !

## NONE* !

**LSC 18/19.3.6.1, Exception 1(a)**

*** or in limited quantities that AHJ deems non-hazardous**

# 9 Corridor DECORATIONS

## TWO SIMPLE RULES !

**1. Must be Non-Combustible* !**

**LSC 18/19.7.5.4**

**2. Don't Block Exits or Signs**

*** or flame-retardant; or in limited quantities so no fire hazard**

# 9

# Corridor

# SUITES

**The cool exception to the corridor door rule!**

# RULES FOR CORRIDORS:

1. CORRIDORS CONNECT EXITS & STAIRS

2. EVERY ROOM MUST OPEN INTO A CORIDOR

3. OPEN SPACES WITH A DOOR ARE A CORIDOR

**ANY ROOM DOOR THAT DOESN'T OPEN INTO A CORIDOR <u>is automatically in a suite</u> !**

**SUITE: "Room within a Room"**

# 9

# Corridor

# SUITES

1. **Max Size** (5,000/10,000)
2. **Max Travel Distance** (50/100)
3. **Number of Corridor Exits** (1,000/2,500)
4. **Don’t create a Dead-End** (<20’)

# 10

# Sprinklers

**Top 10**
**CMS/TJC Cite**

# 10 Sprinkler Locations

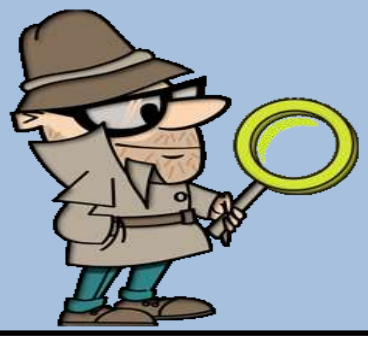

Too Far From Ceiling >12”/22”

Too Near to Wall <4”


Too Far Apart >15’

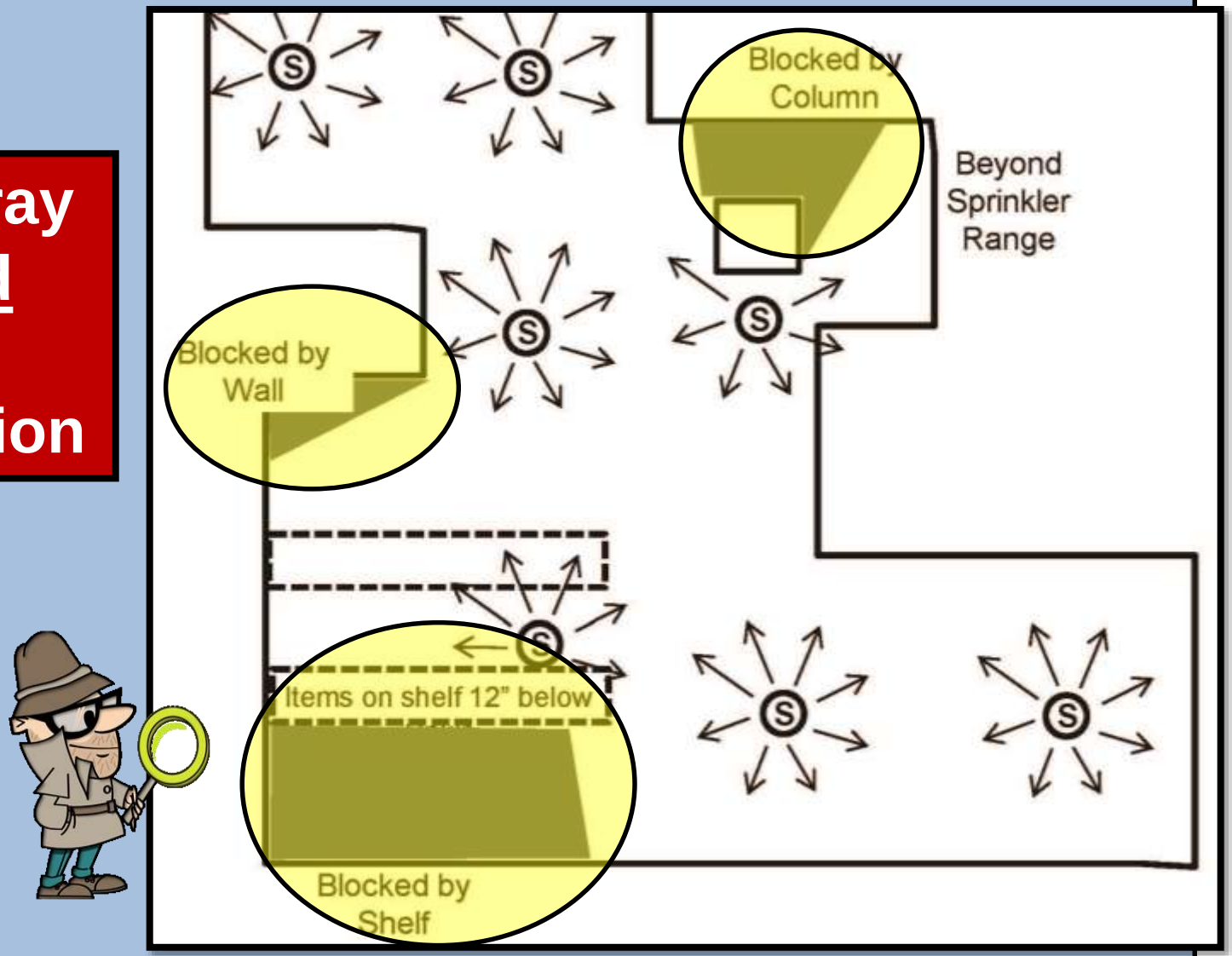
Too Near Together <6’


Too Far From Wall >7.5’



# 10 Sprinkler Shadows

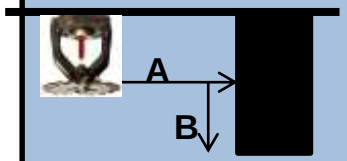
**Water spray <u>blocked</u> by construction**



# 10 Sprinkler Obstructions

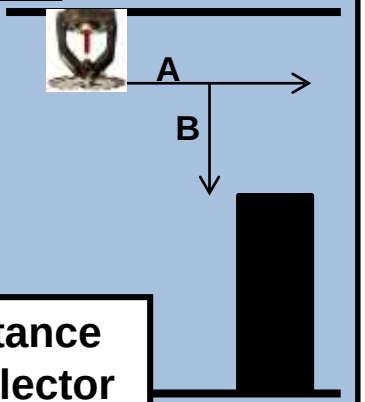
**Follow the Charts**

HANGING DOWN FROM CEILING

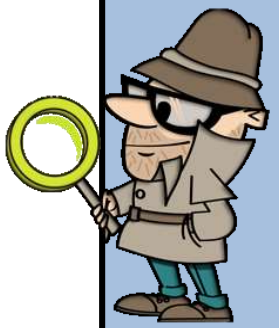



| A<br>Distance to Obstruction | B<br>Max Distance Below Deflector |
|---|---|
| <12” | 0” |
| 12-18” | 2.5” |
| 18-24” | 3.5” |
| 24-30” | 5.5” |
| 30-36” | 7.5” |
| 36-42” | 9.5” |
| 42-48” | 12” |
| 48-54” | 14” |
| 54-60” | 16.5” |
| >60” | 18” |

FLOOR MOUNTED ITEMS




| A<br>Horiz Dist to Obstruction | B<br>Min Distance Below Deflector |
|---|---|
| <6” | 3” |
| 6-9” | 4” |
| 9-12” | 6” |
| 12-15” | 8” |
| 15-18” | 9.5” |
| 18-24” | 12.5” |
| 24-30” | 15.5” |
| >30” | 18” |



# 10 Mesh Curtains

(NFPA 13, 5-6.5.2.3) – See Appendix

**Applies only if sprinkler is one side**

**Broad Mesh (½” Diagonal)**

# 10 FIRE PUMPS

- In 1-hr/2-hr Room
- Floor Drain
- Floor Pitched
- Protected from Interruptions

# 10 Eaves & Canopies

## Same Rules Apply to Both

(NFPA 13, 5-13.8)

1. Sprinkle if combustibles stored or handled

2. Sprinkle if over 4’ wide*



* Unless made of noncombustible or limited combustible construction

# 10 Fire Extinguisher

## Obstruction

**(NFPA 10, 1-6.3)**

**Anything that obstructs view or access will be cited**


**Use ZERO Tolerance**

**<u>Relocating</u> the Extinguisher is better than relocating the obstruction**

# 11

# Fire Alarm

**Top 10**
**CMS/TJC Cite**

# 11 Fire Alarm Panels

**MUST Be Located in a continuously occupied area <u>OR</u> have a smoke detector (NFPA 72, 1-5.6)**

**<u>OR</u>**

# 11

# FA Power

**Must have 2 independent power supplies**

- **Primary (ac power)**
- **Secondary (normally battery)**


- **Must automatically supply within 30 sec of power loss &**
- **Must last for 24 hrs & then sound all alarms for 5 min**
- **(§1-5.2.6)**

# 11

# FA Power

**<u>Power Source</u>**
**(1-5.2.5.2)**

**Must be:**

- **Dedicated circuit**
- **Mechanically protected**
- **Marked in red**
- **Accessible only to authorized personnel**
- **Marked as “Fire Alarm Circuit Control”**

# 11

# Pull Station

## Obstruction

**Anything that obstructs view or access will be cited**


## Use ZERO Tolerance

# 11 Notification

**Per NFPA 72, 4-4**

- 1- 2 flashes per second
- Entire lens 80-96” above floor
- Room spacing per Tables in code
- Corridor spacing:
  - Min 15’ from end
  - Max 100’ on center
  - Min 55’ apart

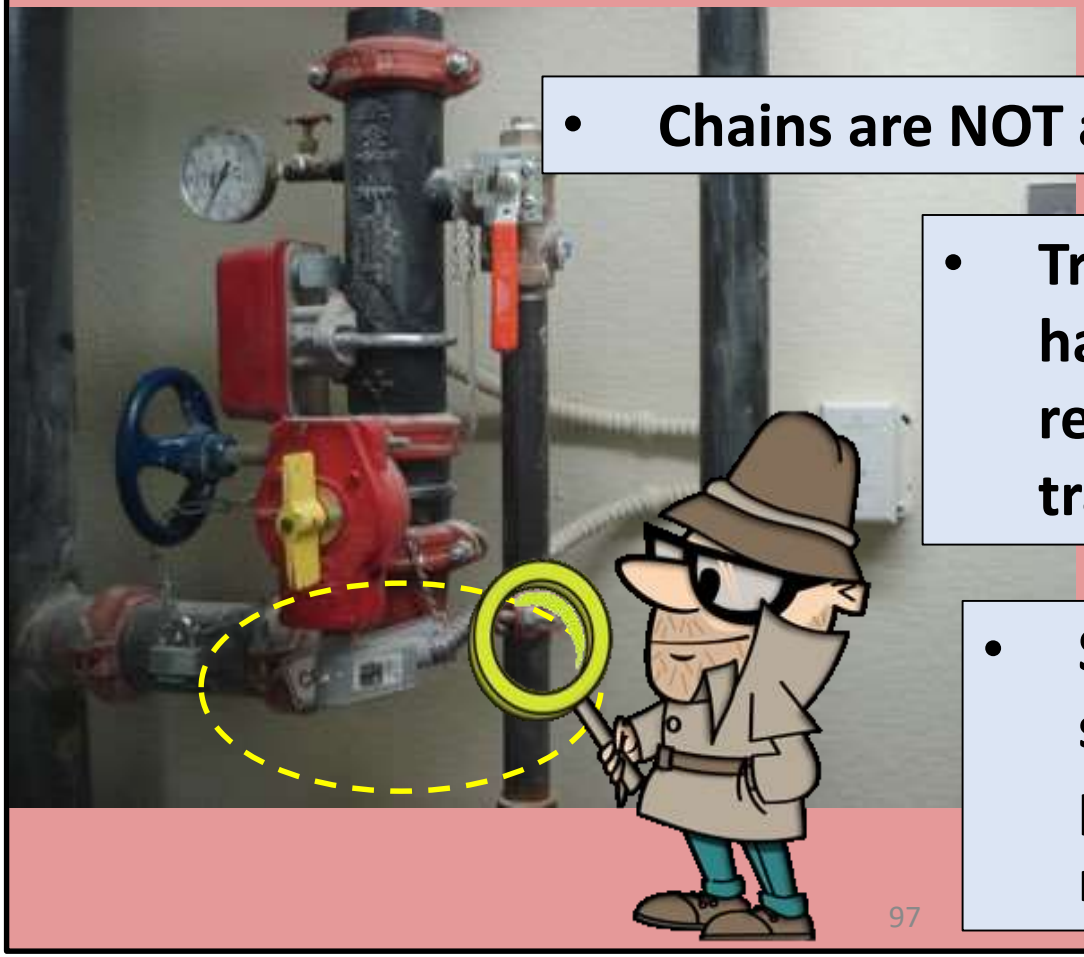


**Per IBC 907.5.2.3**

- Install in public and common areas (any room with 2 or more persons)

# 11 Tamper Switches

## Supervisory - Control Valve (2-9.1)



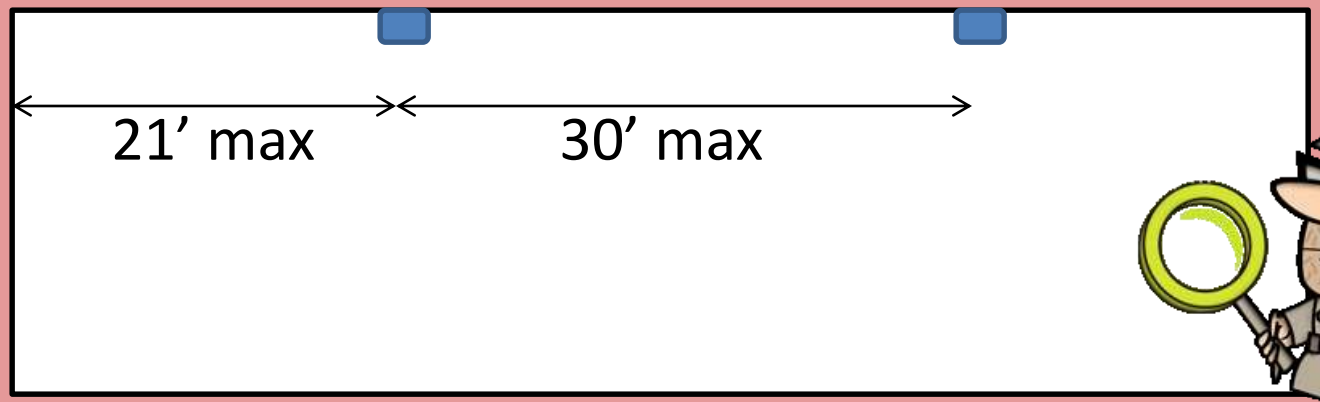
- Chains are NOT an acceptable substitute
- Trouble signal when handle is moved max 2 revolutions or 1/5 of total travel distance
- Separate & distinct signal when valve position fully restored to normal

# 11 Smoke Detectors

## Spacing

**Smooth Ceilings: (2-3.4.5)**

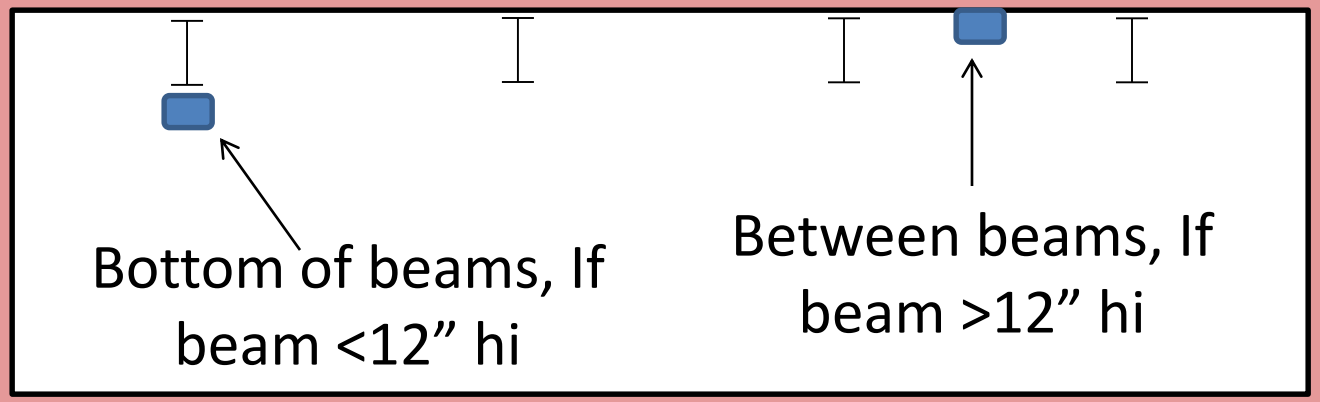
- **Spaced per Mfgr or 30’ on center**
- **Max .7 x spacing from any wall**




# 11 Smoke Detectors

## Spacing

**Beam Ceilings: (2-3.4.6)**



# 12

# Electrical

**Top 10 CMS/TJC Cite**

# 12

# Power Strips

(Relocatable Power Taps)

## MANY TYPES & STYLES ON THE MARKET


# 12

# Power Strips

**(Relocatable Power Taps)**

**At the current time, the only RPT requirement that is seriously being enforced is that only computers may be plugged into power strips.**

# 12

# Power Strips

## (Relocatable Power Taps)

**Categorical Waiver requirements will be mandatory if/when LSC 2012 is adopted**

## Recommendations:

- **MINIMIZE the use of power strips … you will be required to monitor their use (including those for computers)**
- **BUY ONLY UL Listed Power Strips 1363, 1363A or 60601-1 (or other equiv listed)**
- **Standardize on a single brand & model for each type power strip (so they are readily identifiable)**

# 12 Breaker Labels

**Accurate – Complete - Clear**




**LOOK FOR:**

1. Spares that are on
2. Blank Lines with Breaker in space
3. Handwritten notes; Multiple Directories

# 12 Panel Clearance

NFPA 70,Art 110-26

Min 36 inches

No exceptions for easy moveability

# 12 Hospital Grade

**Look for the “Green” Dots on plugs**

**(especially on patient-use devices**


**Must ONLY BE PLUGGED into H-G Outlets**

# 12 Ground Fault

**Within 4’ of any Water Device**

**Also:**

- **Garages**
- **Outdoors**
- **Construction**

# 12 Generator

## REMOTE STOP BUTTON

- Located outside generator space
- "Tamper-resistant"



## BATTERY

- Maintenance Free
  Prohibited if Level 1 generator

# 12 Generator

## ANNUNCIATOR PANEL [110:3-4.1]

- Battery powered
- At 24-hour manned location
- Signals if it's operating, low fuel, pressure or temp abnormal & other conditions

# 2nd PART

## Some actual pictures to see if you can spot the issues

# Multiple choice

- There may be more than one correct answer
- You only have 10 seconds per photo

# Use Team Work

**If there are multiple people in the room:**

- **Have one person look at #1**
- **Another look at #2**
- **Third look at #3**

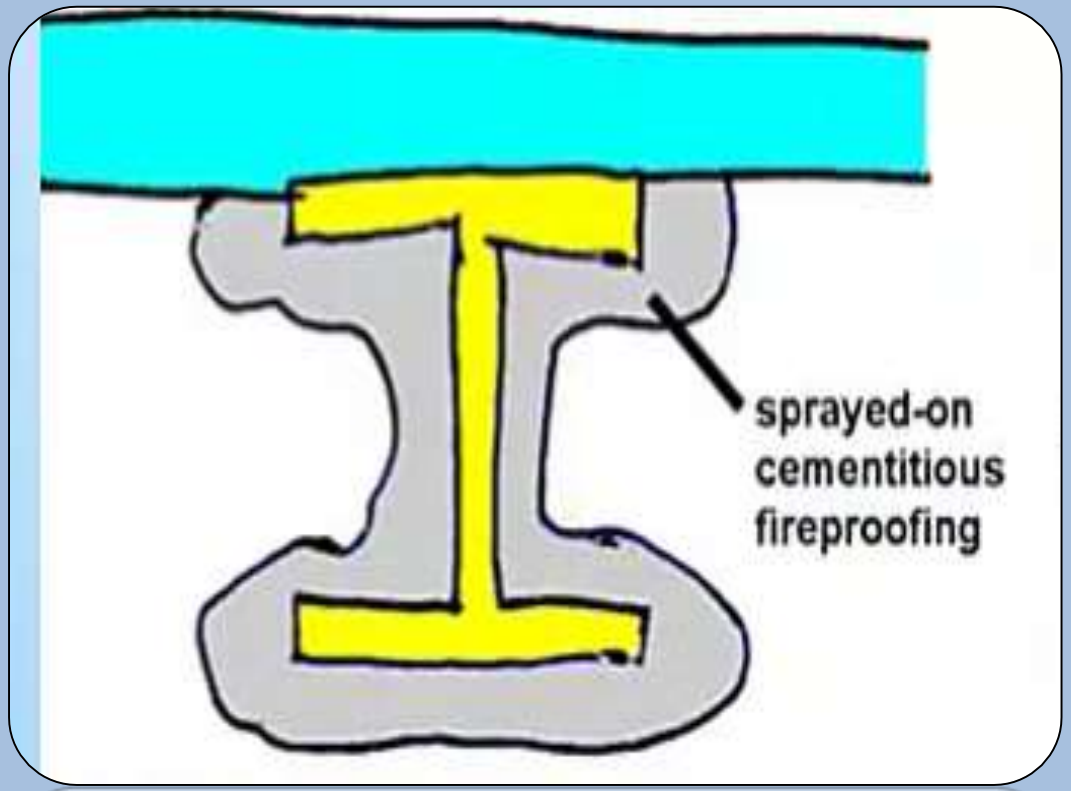
**Each give**  **or** 

# Be Observant


**Can you spot the man in this picture?**

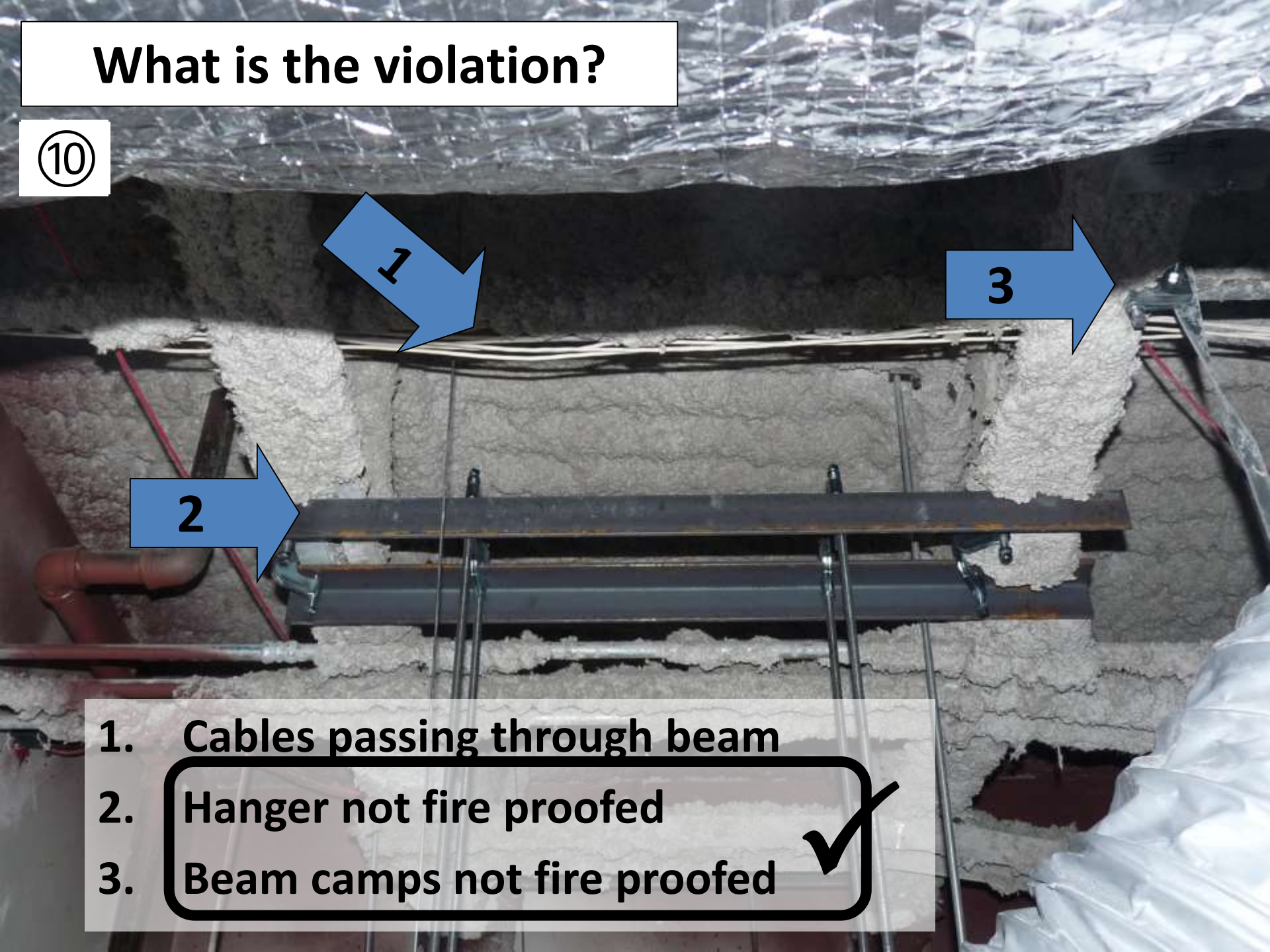
# 7

# Construction Type




# What is the violation?

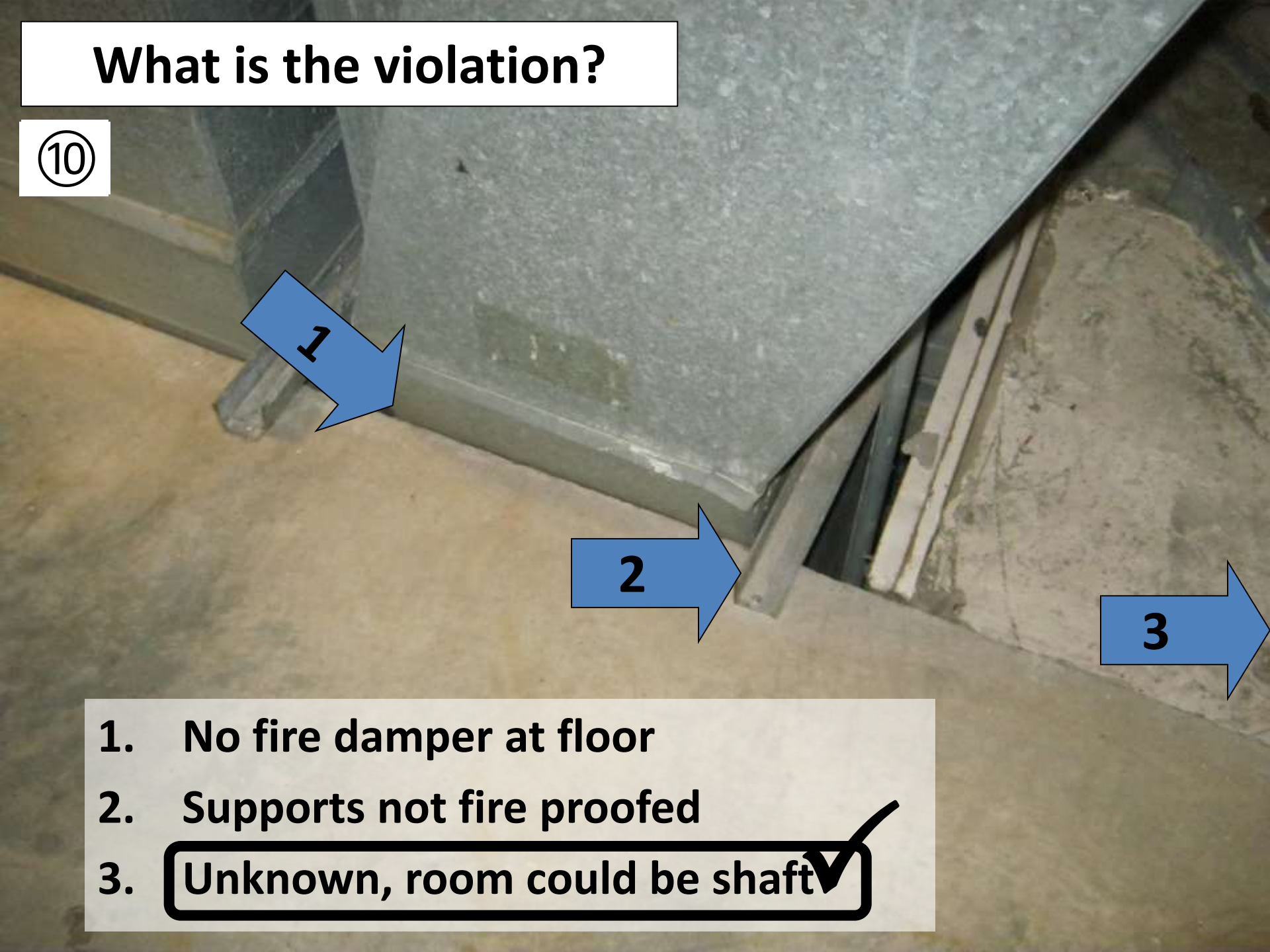
⑩




1. Cables passing through beam
2. Hanger not fire proofed
3. Beam camps not fire proofed ✓

# What is the violation?

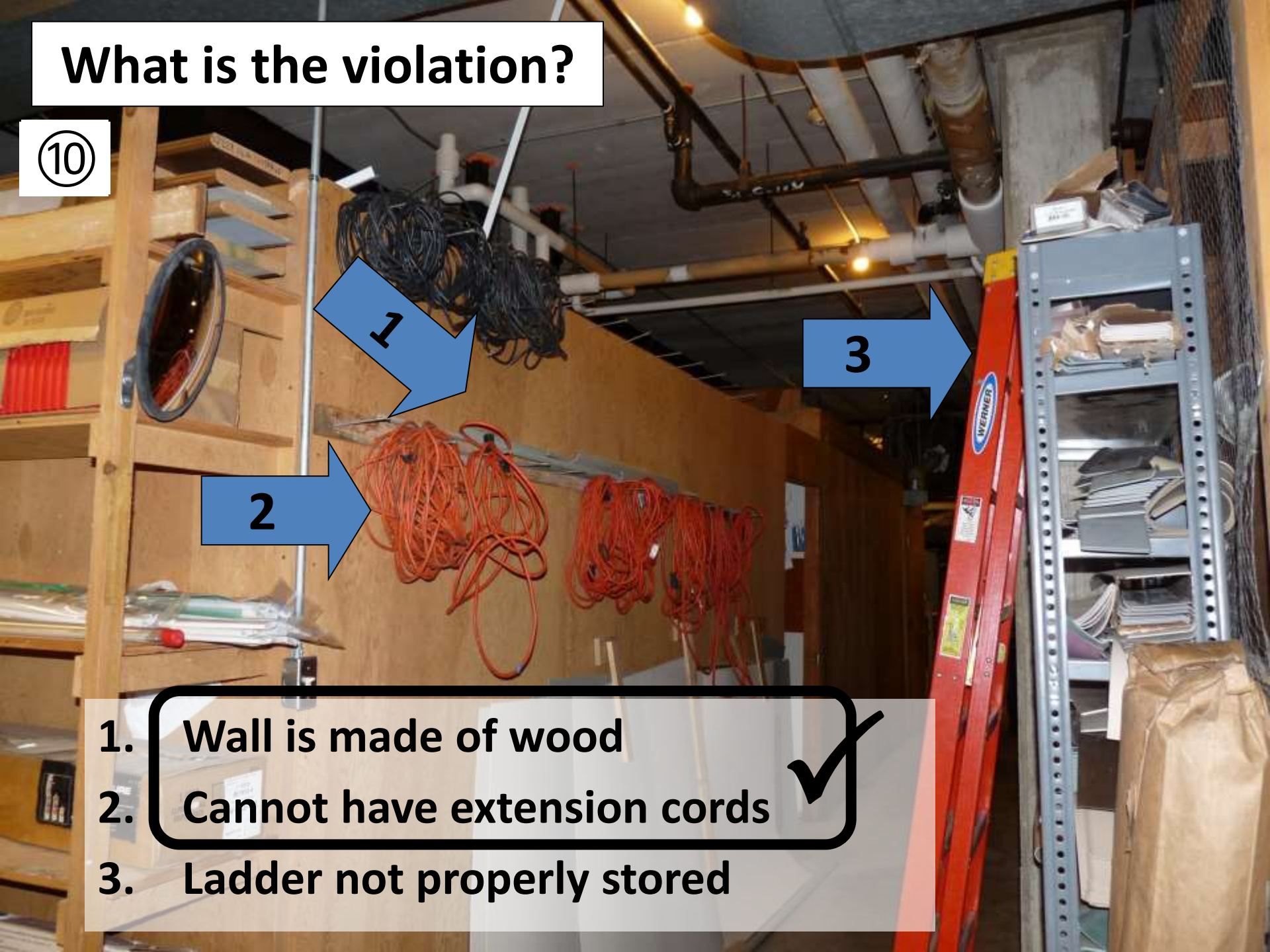
⑩




1. No fire damper at floor
2. Supports not fire proofed
3. Unknown, room could be shaft ✓

# What is the violation?

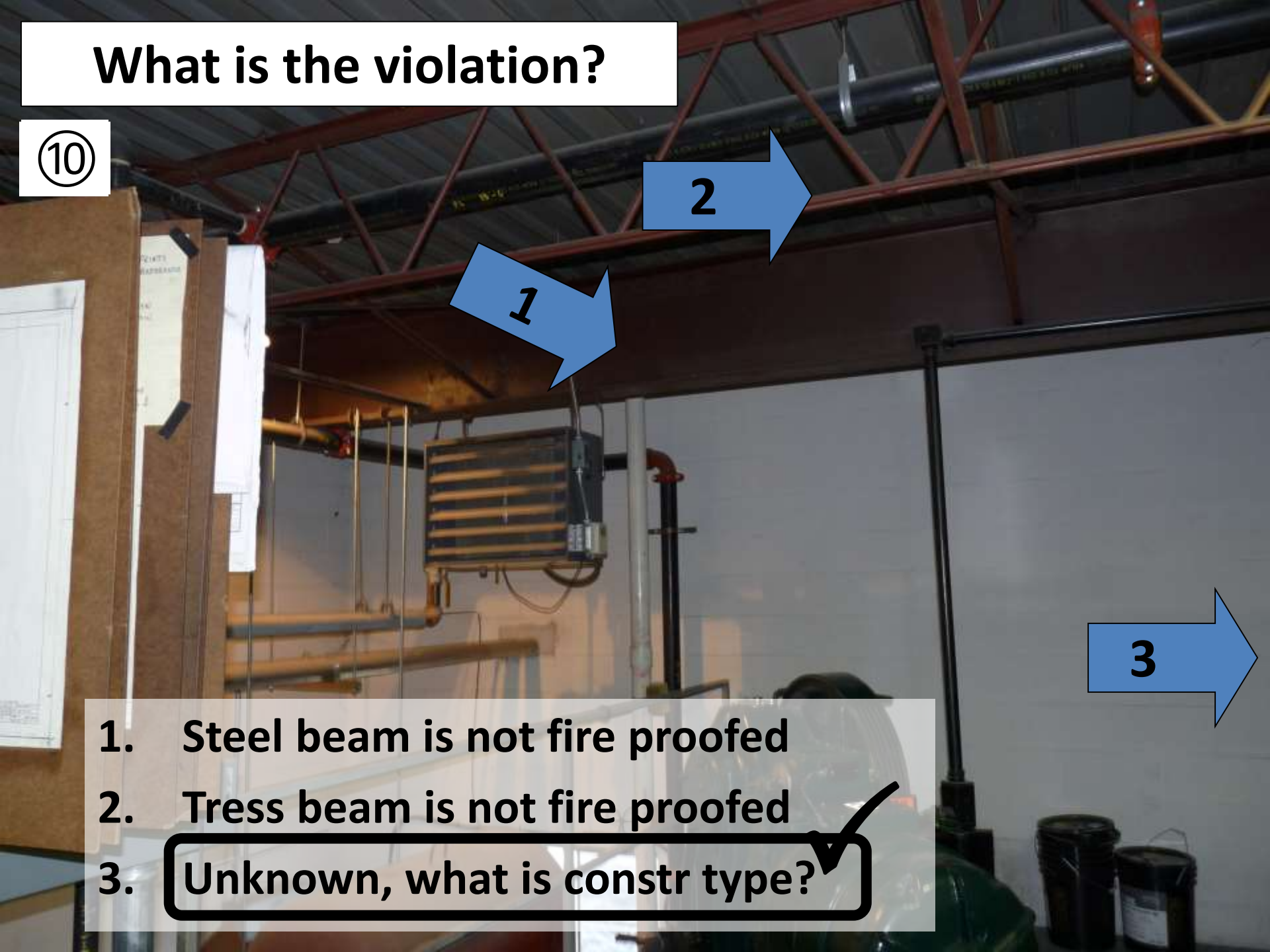
⑩




1. Wall is made of wood
2. Cannot have extension cords ✓
3. Ladder not properly stored

# What is the violation?

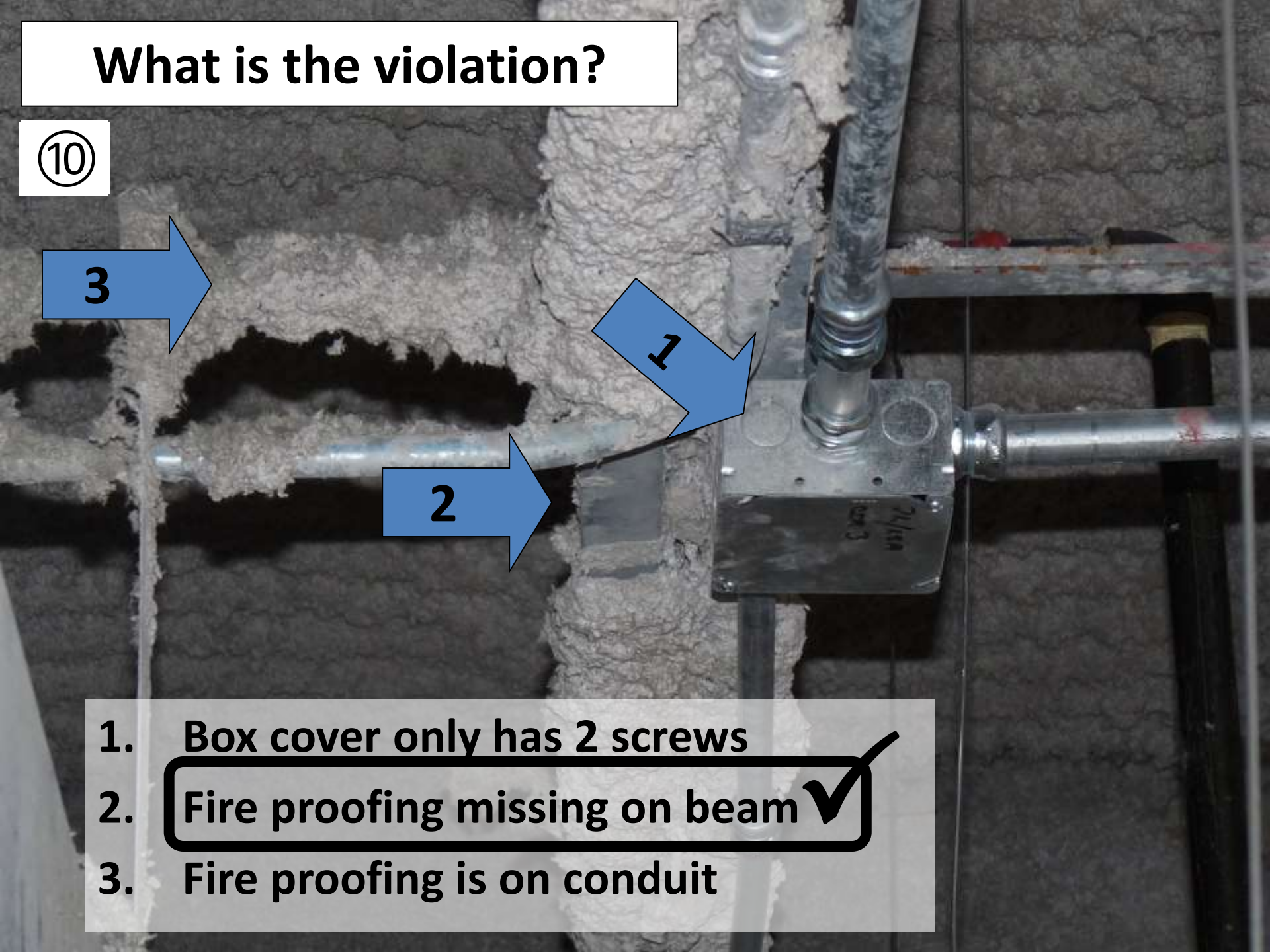
⑩




1. Steel beam is not fire proofed
2. Tress beam is not fire proofed
3. Unknown, what is constr type?

# What is the violation?

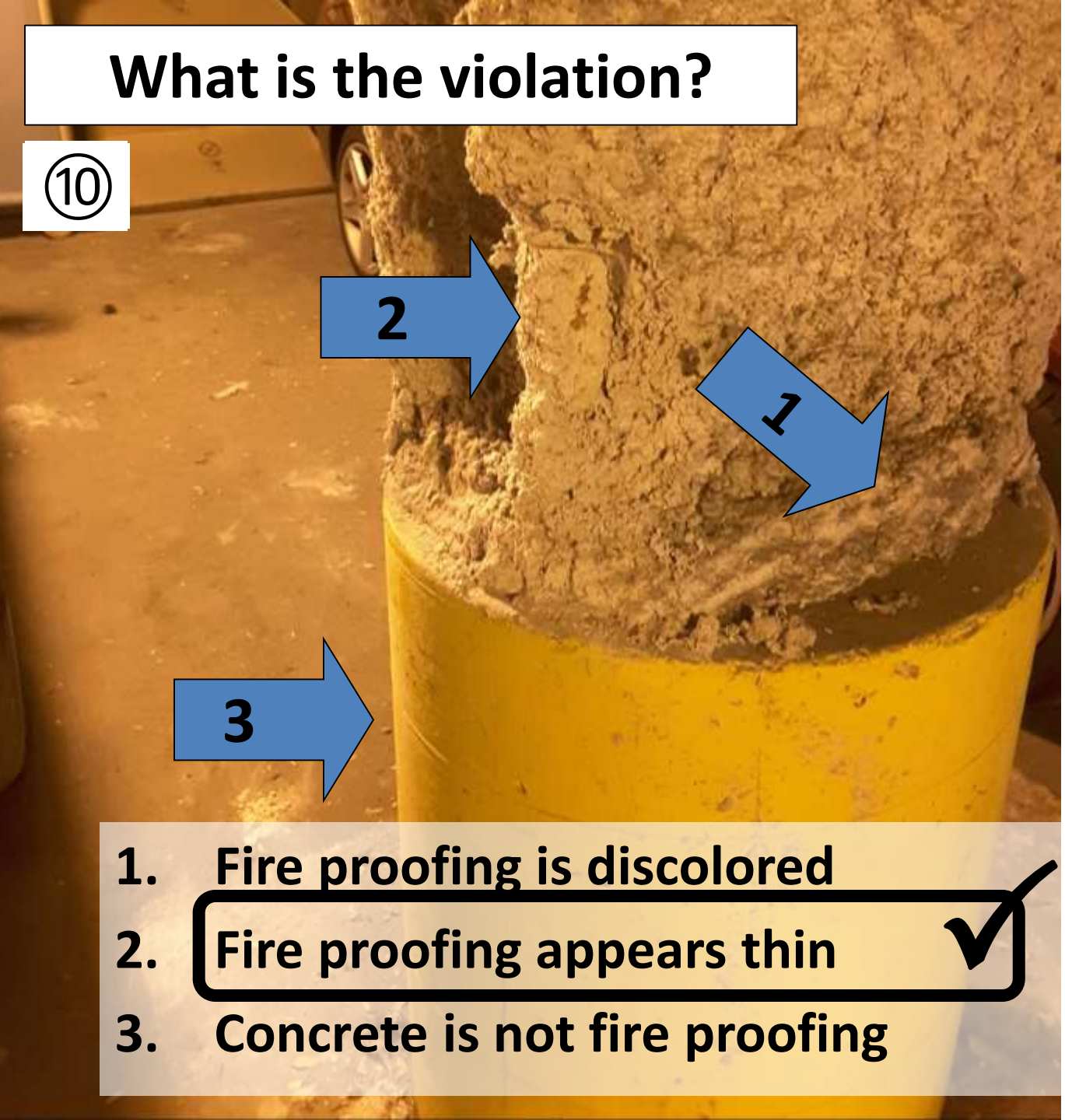
⑩




1. Box cover only has 2 screws
2. Fire proofing missing on beam ✓
3. Fire proofing is on conduit

# What is the violation?

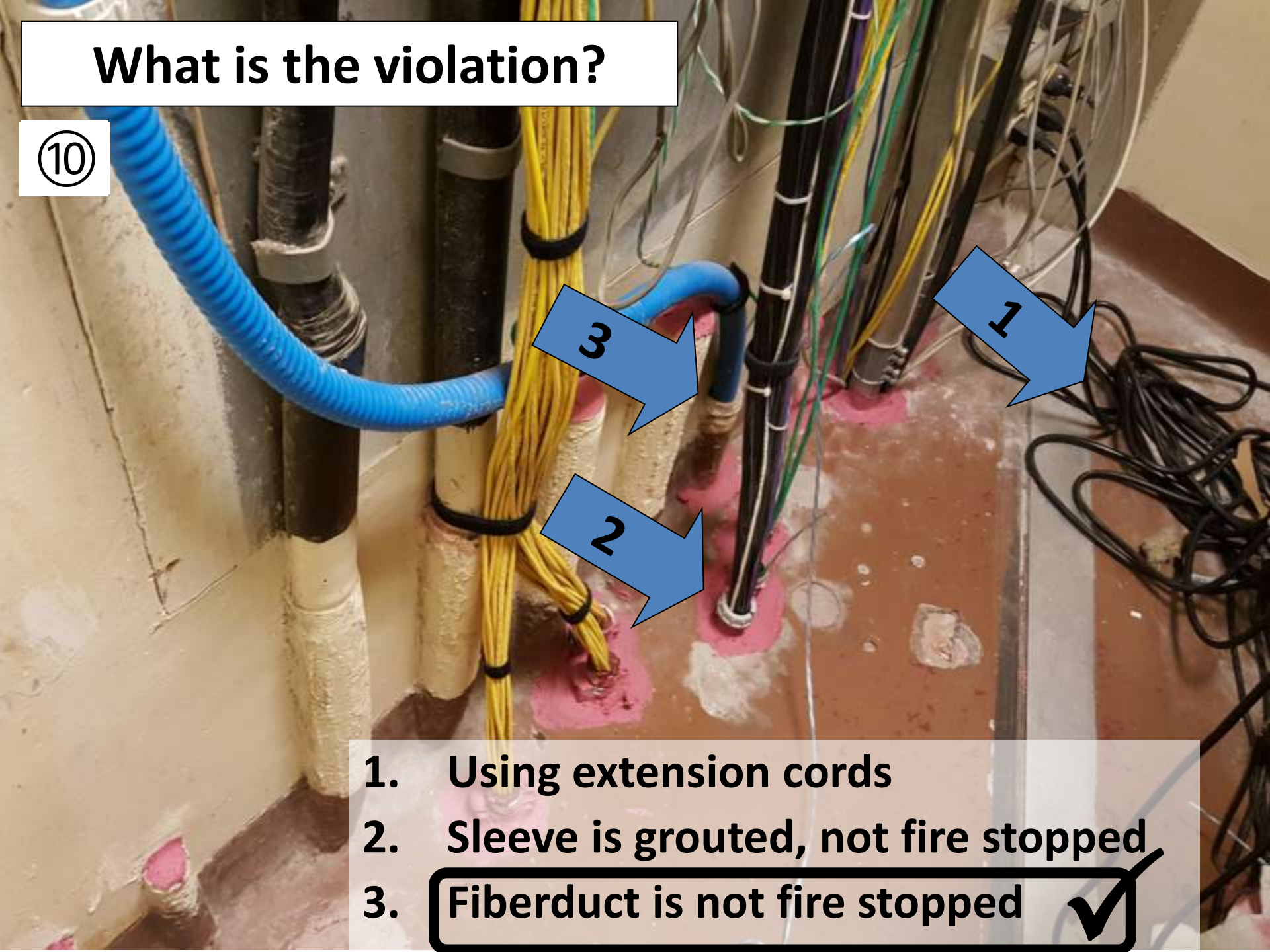
⑩




1. Fire proofing is discolored
2. Fire proofing appears thin ✓
3. Concrete is not fire proofing

# What is the violation?

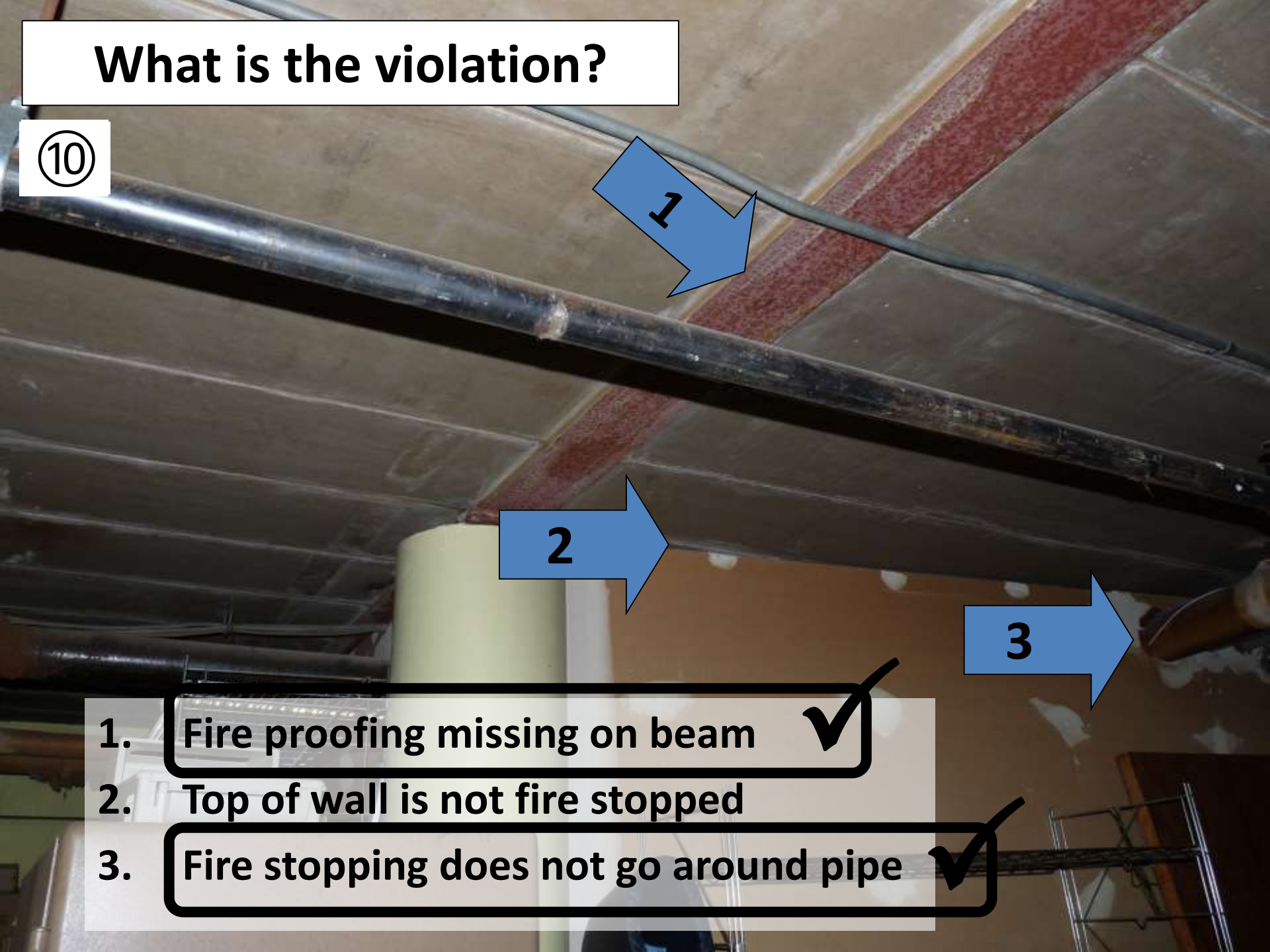
⑩




1. Using extension cords
2. Sleeve is grouted, not fire stopped
3. Fiberduct is not fire stopped ✓

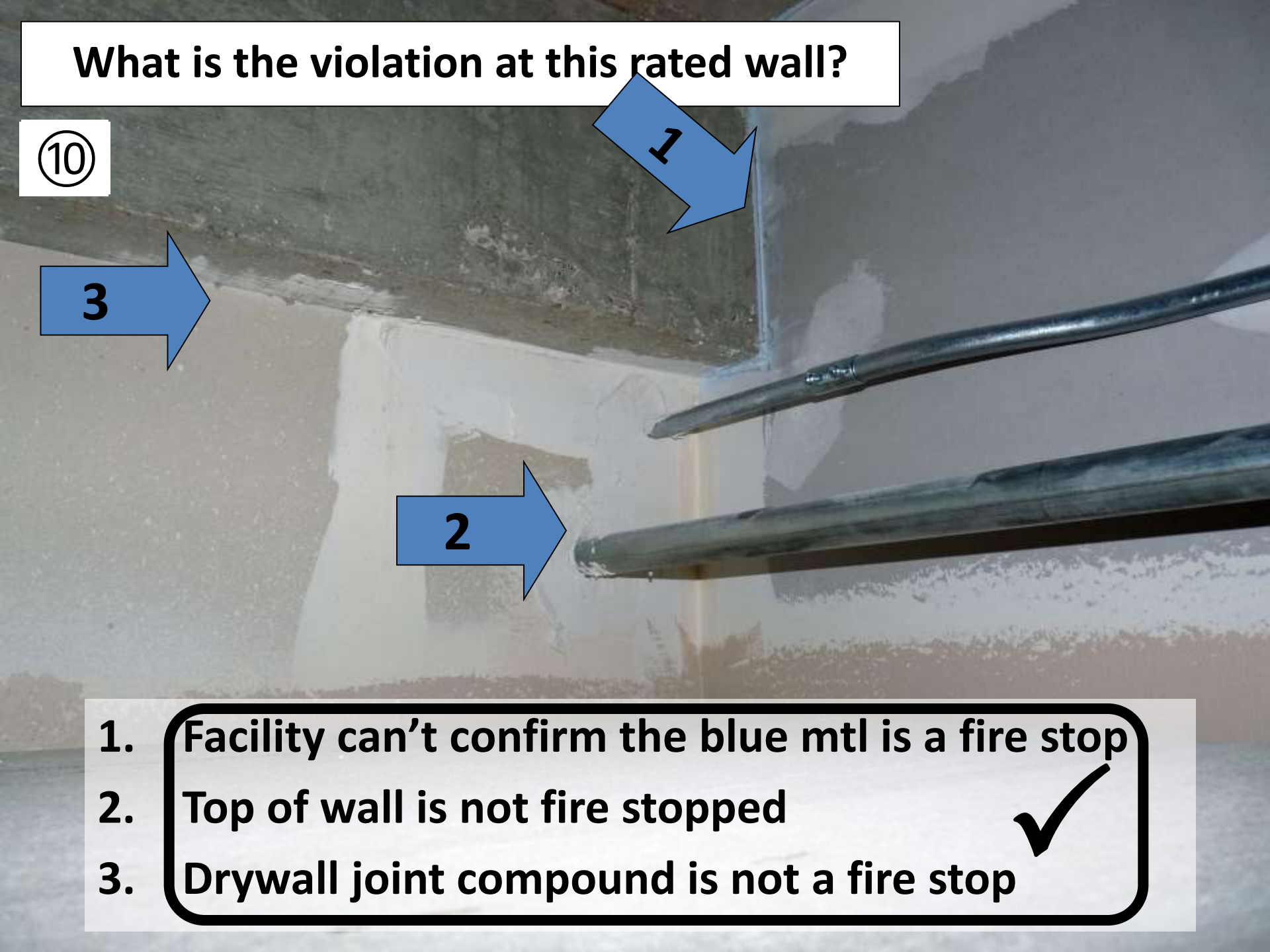
# What is the violation?

⑩



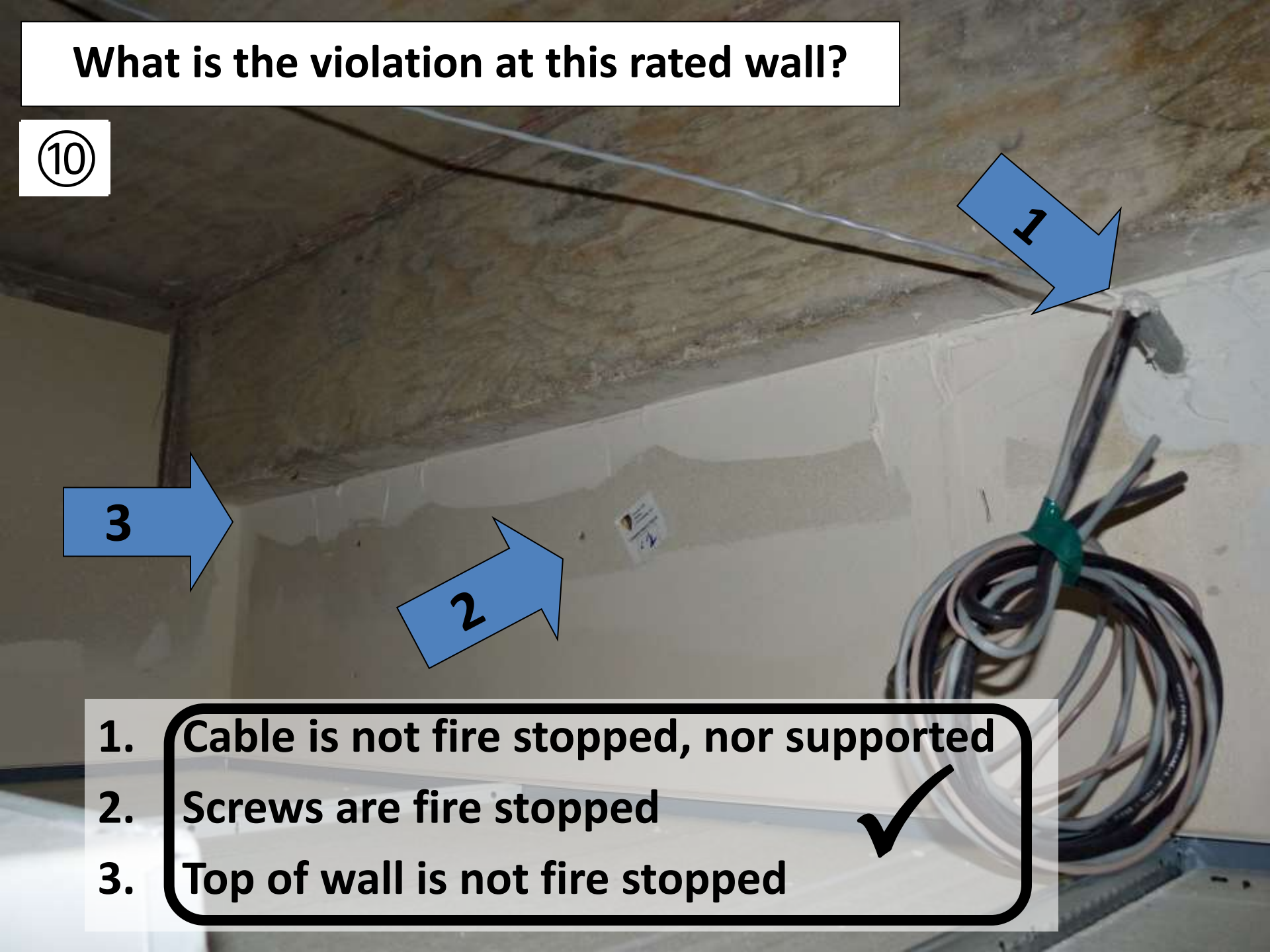

1. Fire proofing missing on beam ✓
2. Top of wall is not fire stopped
3. Fire stopping does not go around pipe ✓

# 8 Above Ceiling


What is the violation at this rated wall?
⑩
1
3
2
1. Facility can't confirm the blue mtl is a fire stop
2. Top of wall is not fire stopped
3. Drywall joint compound is not a fire stop

# What is the violation at this rated wall?

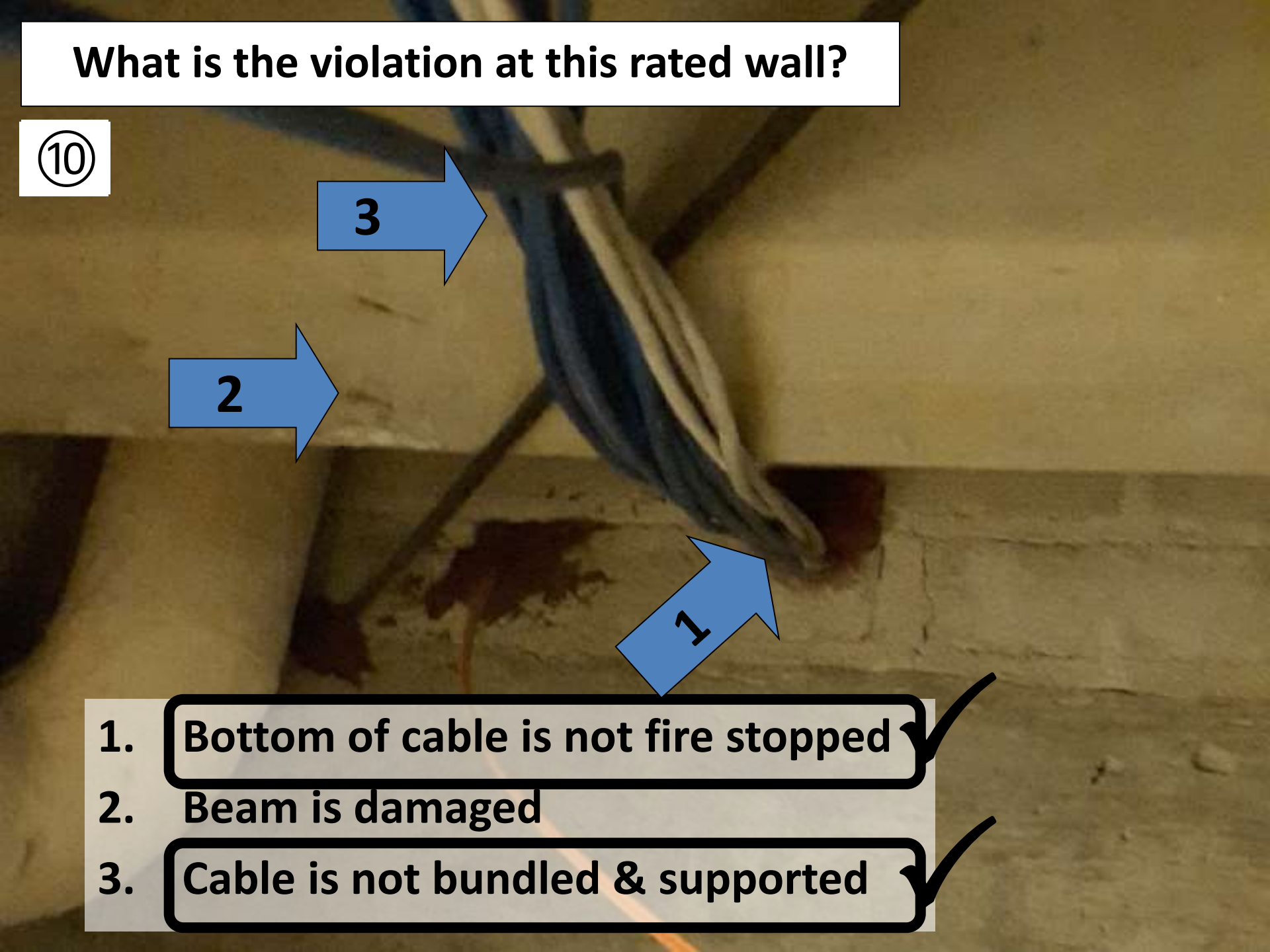
⑩




1. Cable is not fire stopped, nor supported
2. Screws are fire stopped ✓
3. Top of wall is not fire stopped

# What is the violation at this rated wall?

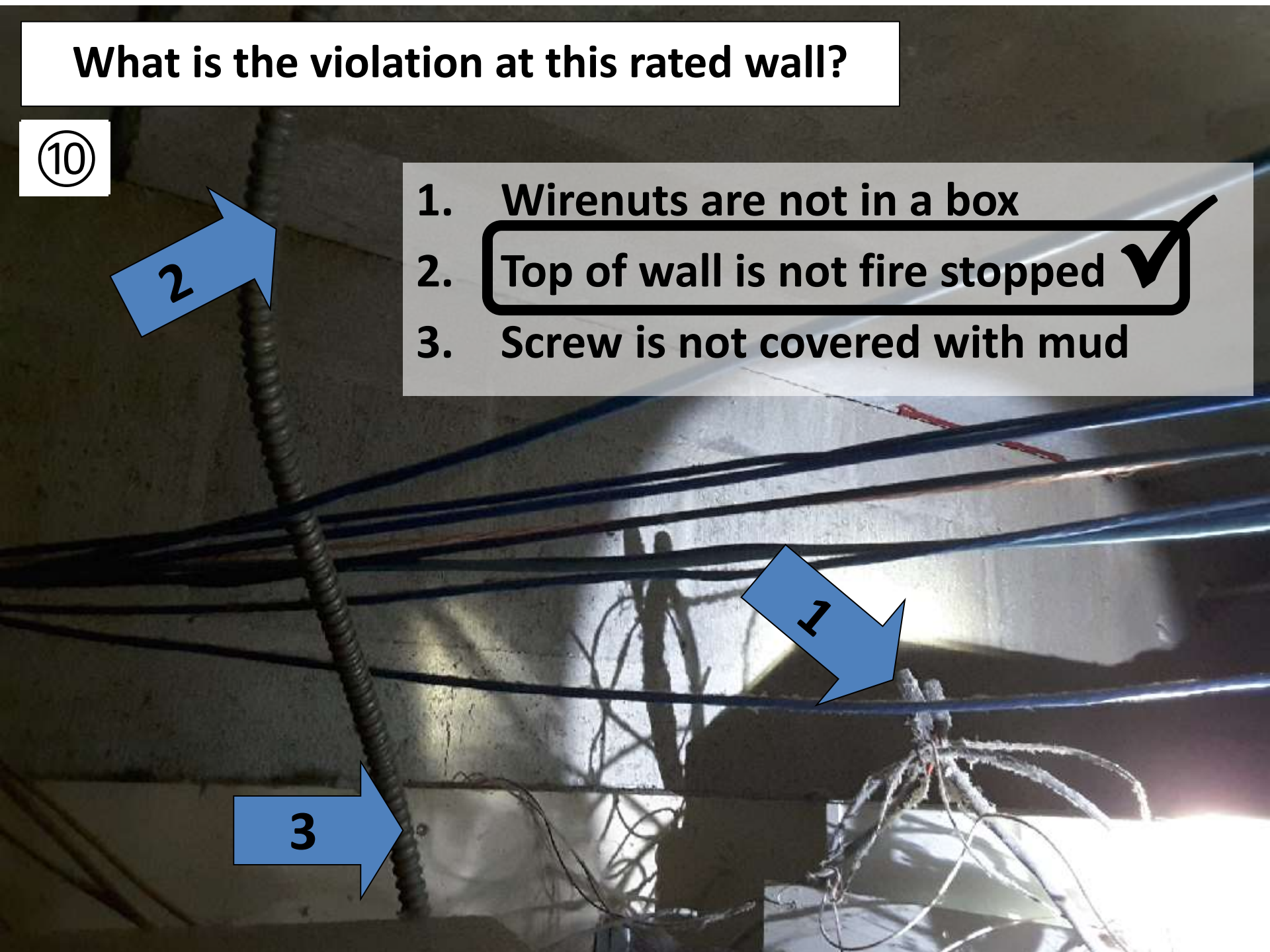
⑩




1. Bottom of cable is not fire stopped ✓
2. Beam is damaged
3. Cable is not bundled & supported ✓

# What is the violation at this rated wall?

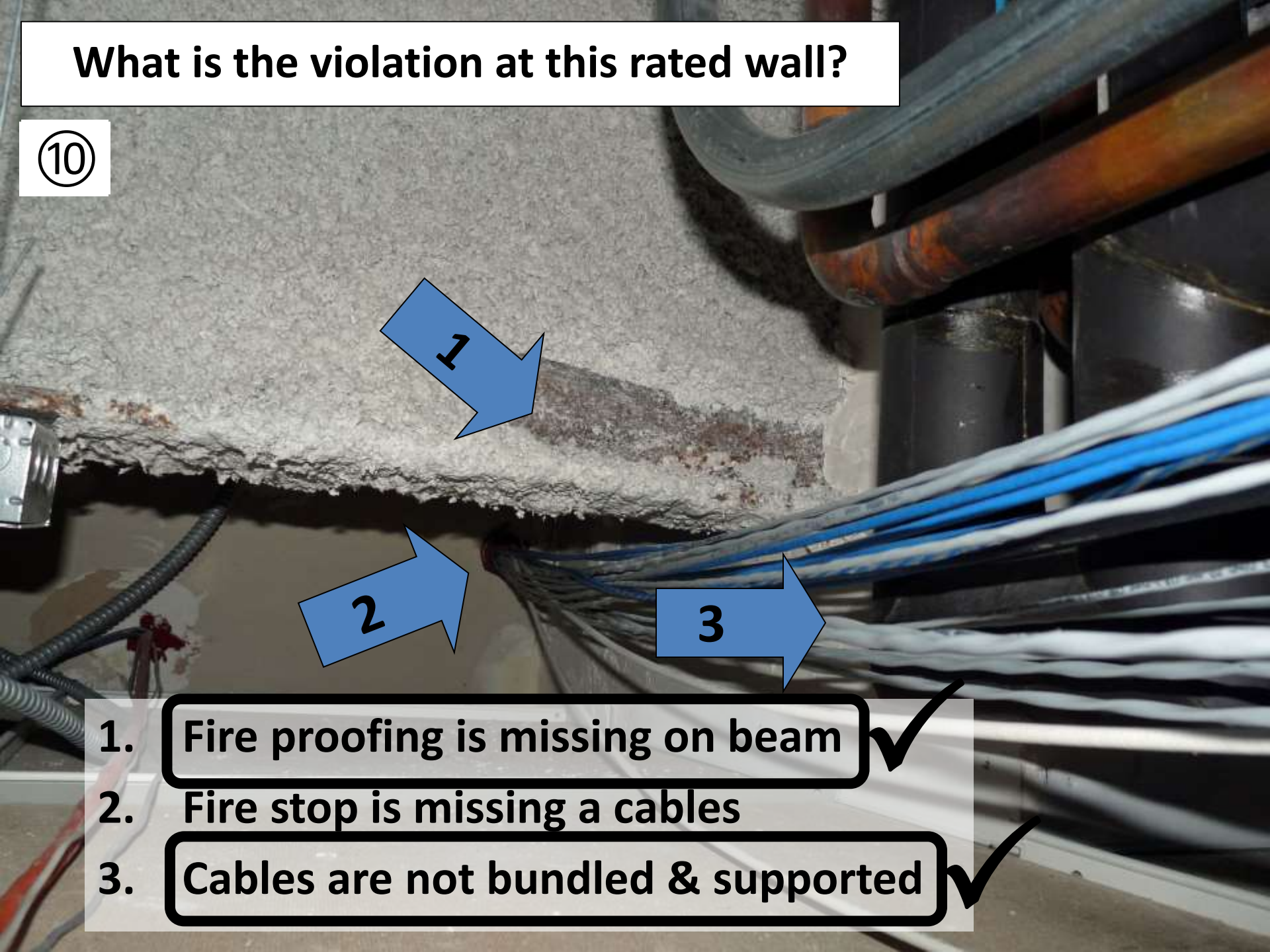
⑩




1. Wirenuts are not in a box
2. Top of wall is not fire stopped ✓
3. Screw is not covered with mud

# What is the violation at this rated wall?

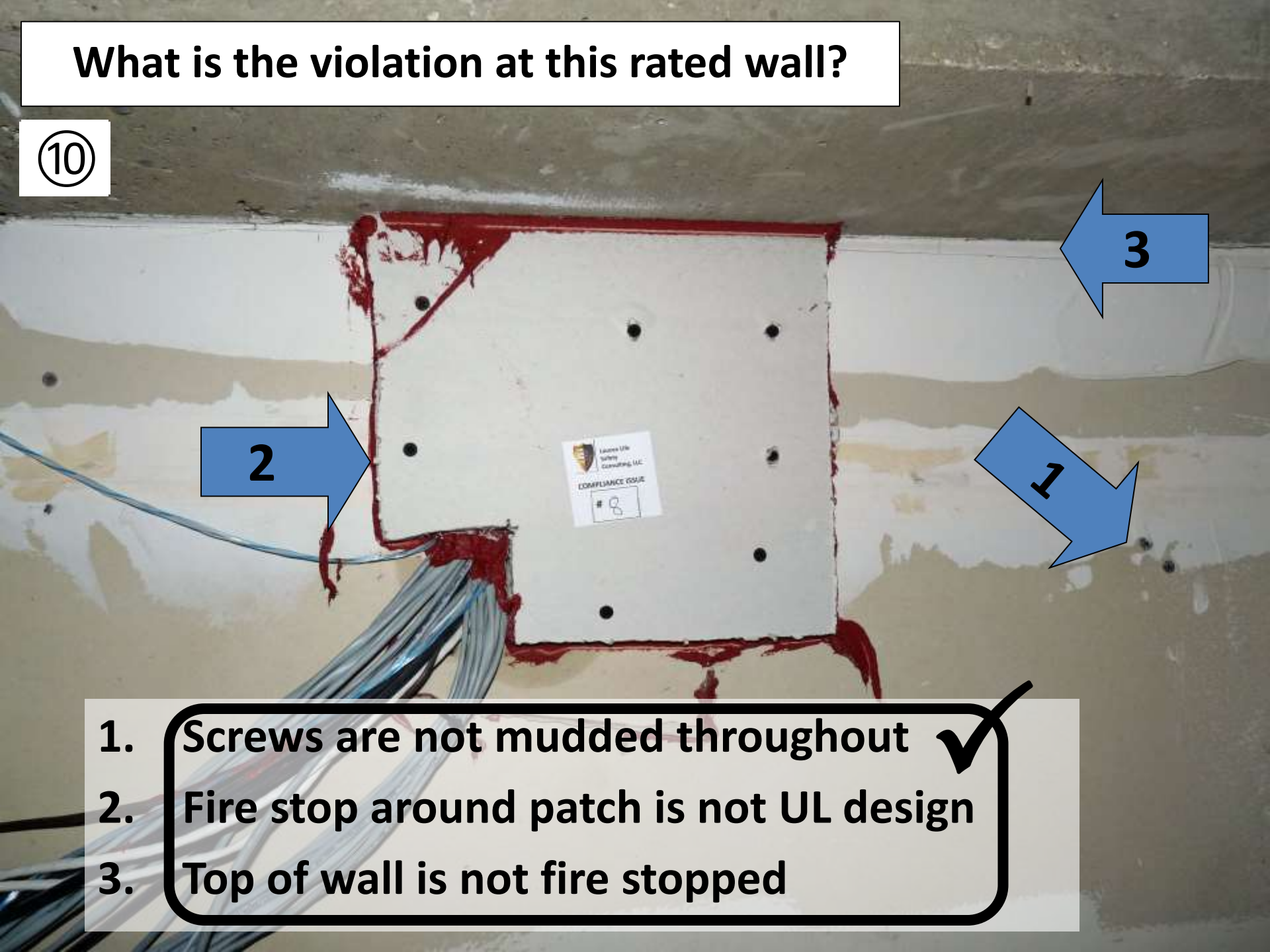
⑩




1. Fire proofing is missing on beam ✓
2. Fire stop is missing a cables
3. Cables are not bundled & supported ✓

# What is the violation at this rated wall?

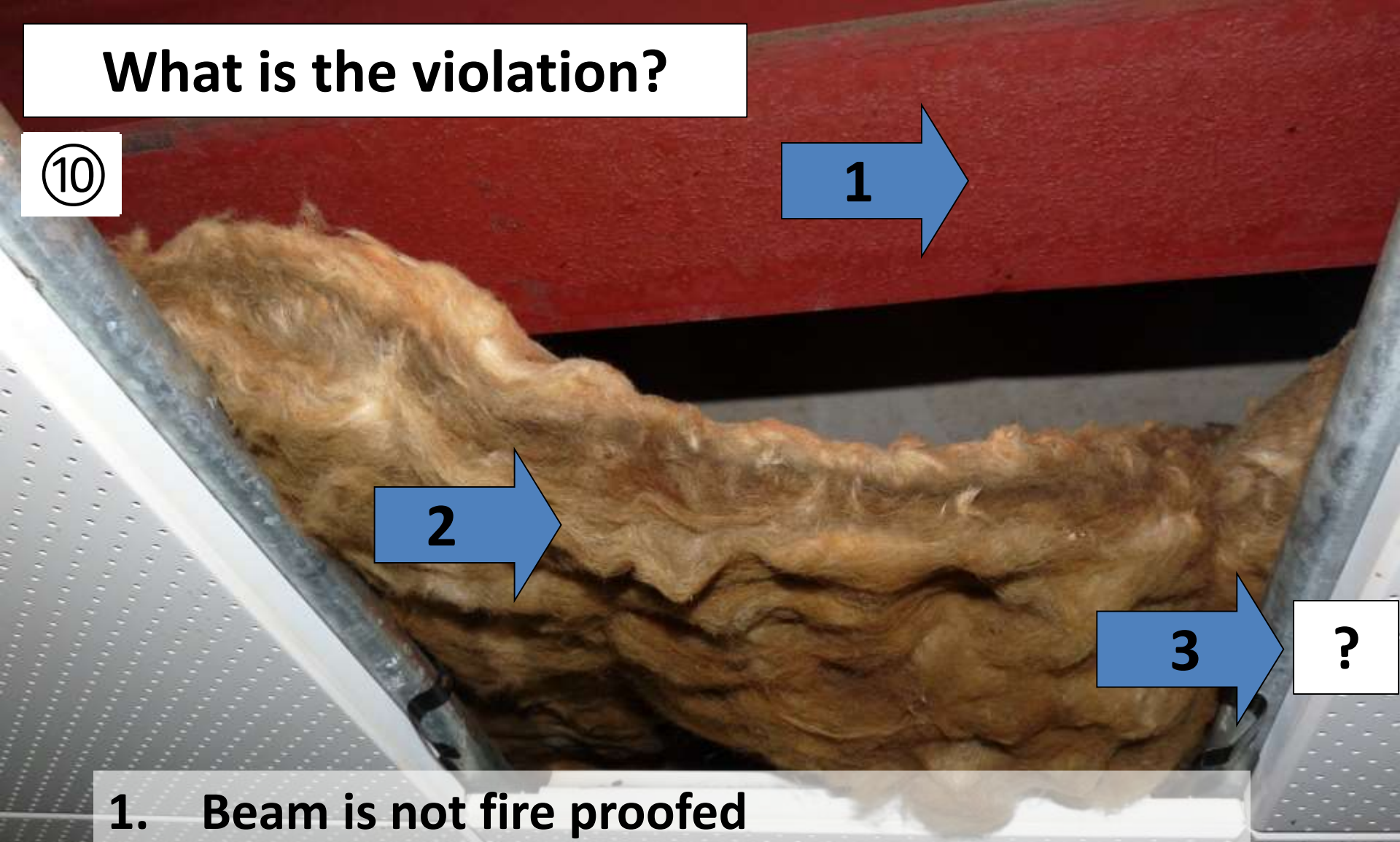
⑩




1. Screws are not mudded throughout ✓
2. Fire stop around patch is not UL design
3. Top of wall is not fire stopped

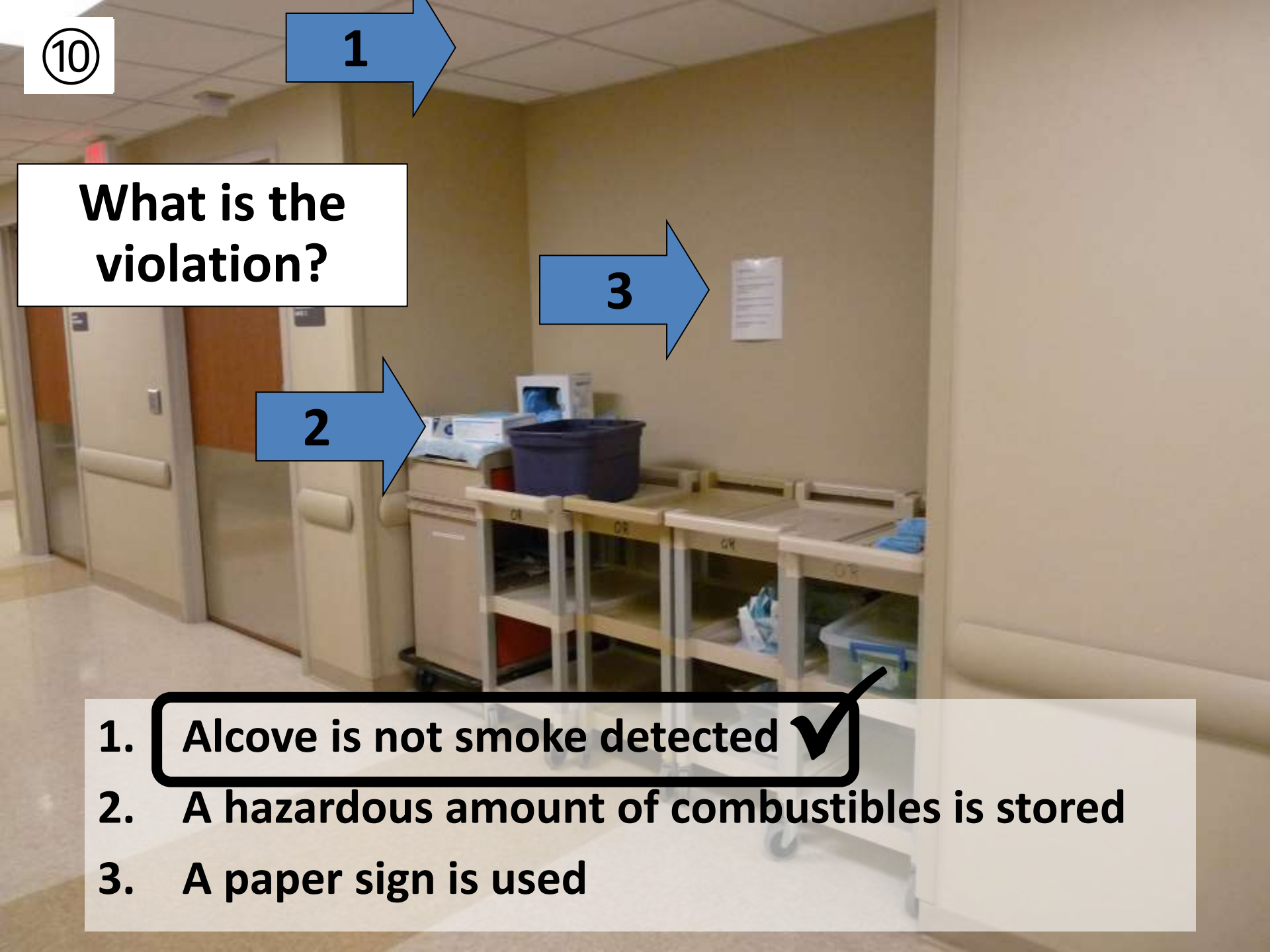
# What is the violation?

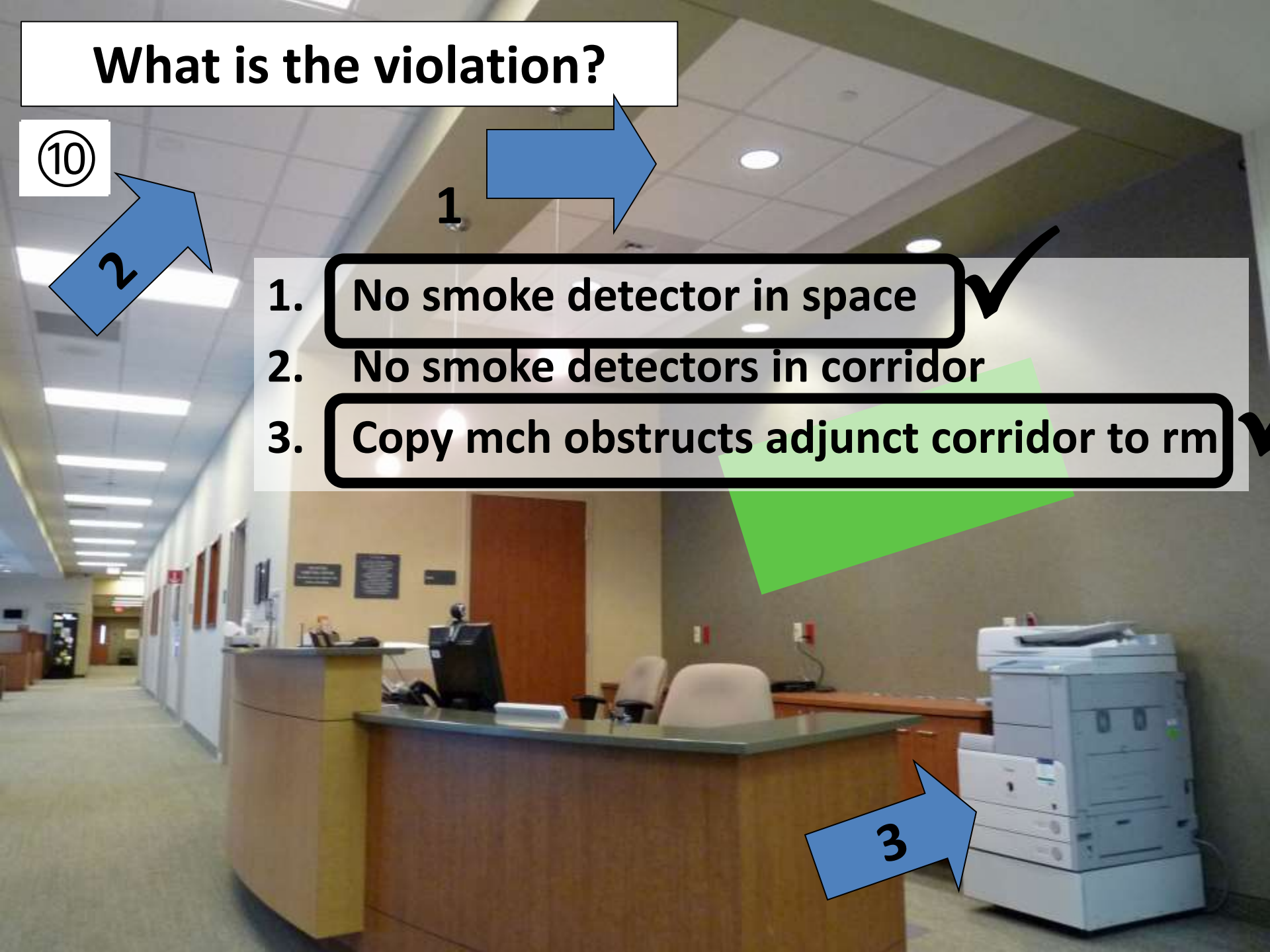
⑩




1. Beam is not fire proofed
2. Insulation is not tight to perforated tile
3. Unknown, not enough info ✓

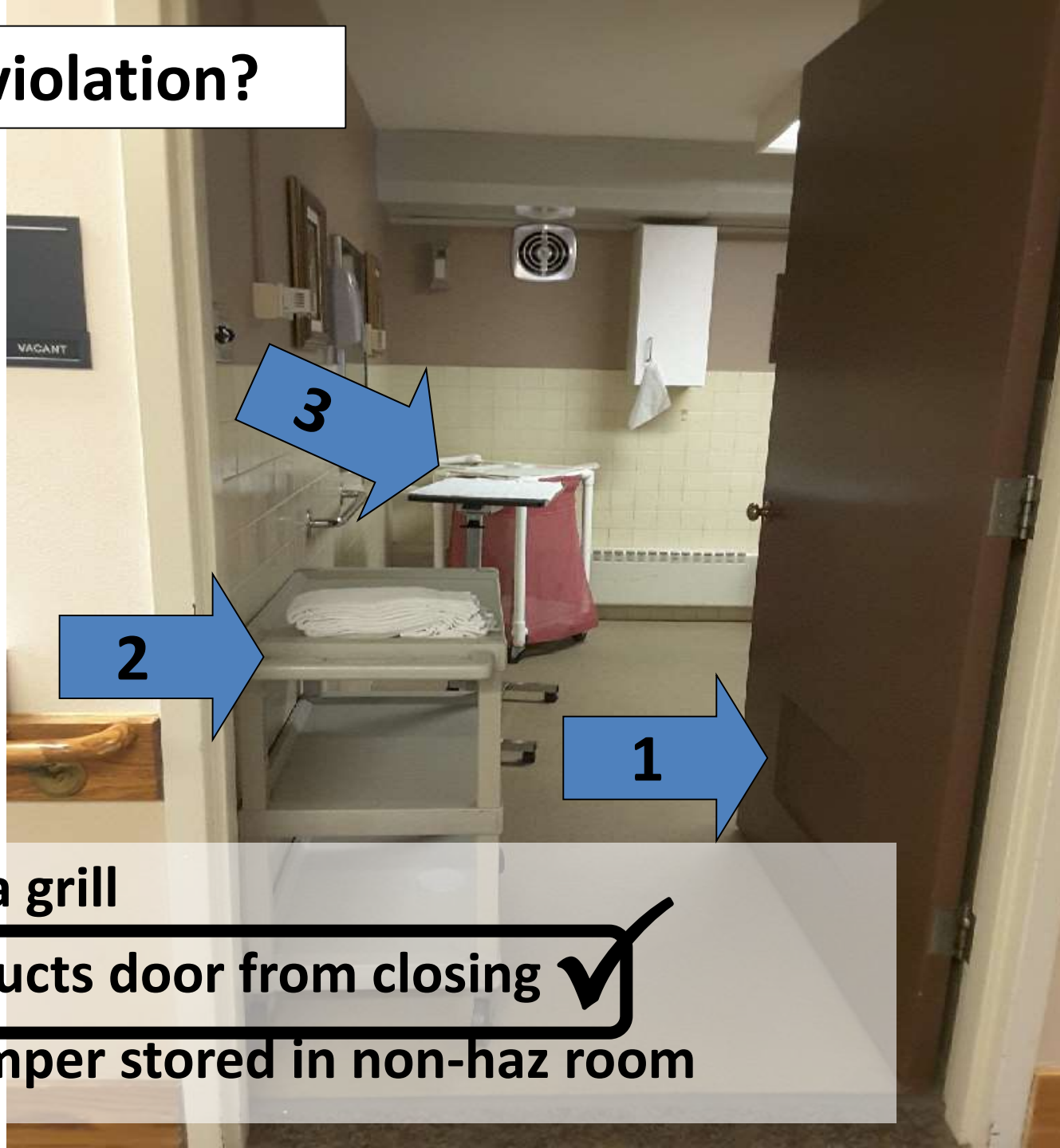
# 9 Corridors


⑩
1
What is the violation?
3
2
1. Alcove is not smoke detected ✓
2. A hazardous amount of combustibles is stored
3. A paper sign is used

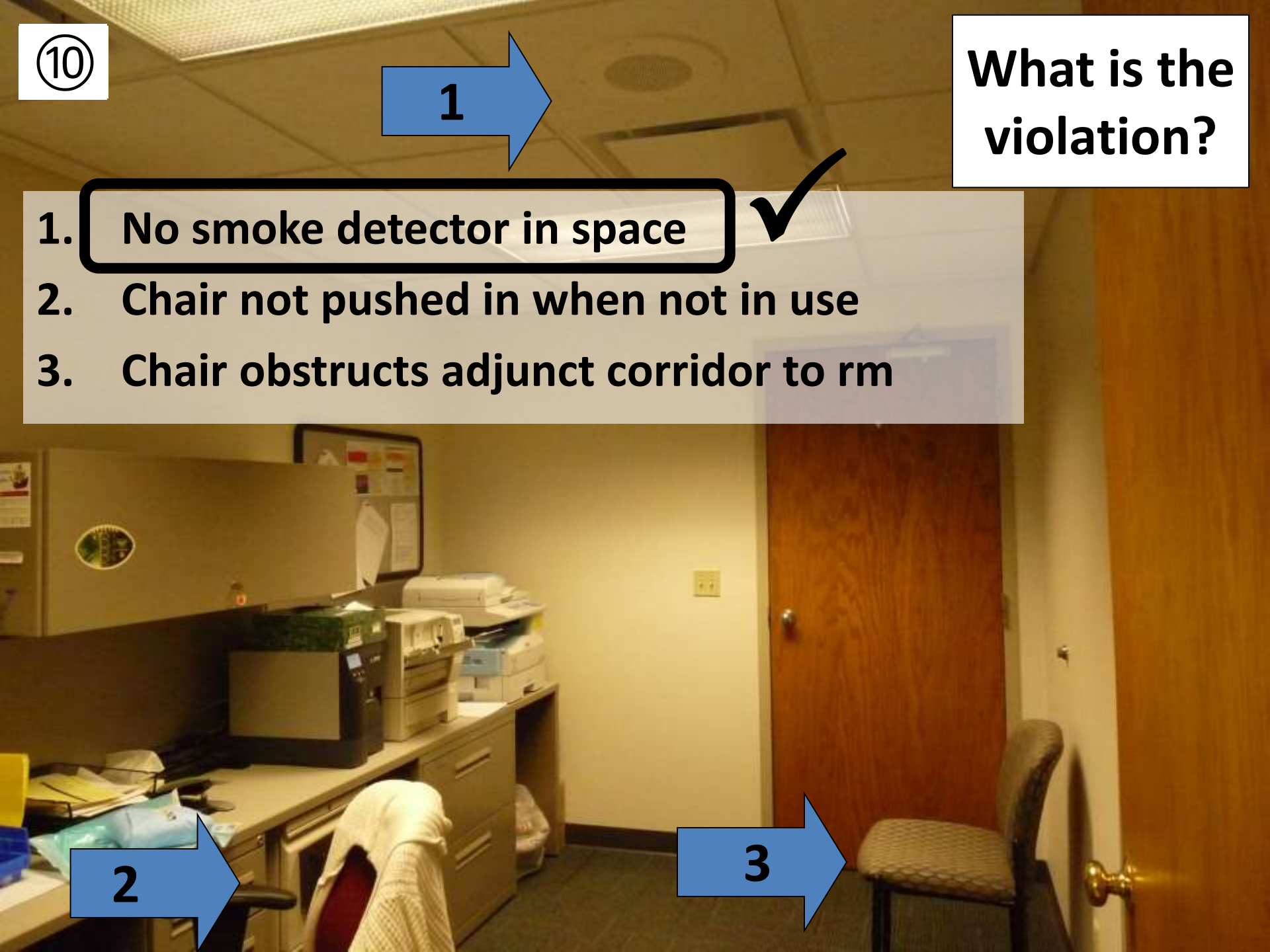

What is the violation?
⑩
1
2
3
1. No smoke detector in space
2. No smoke detectors in corridor
3. Copy mch obstructs adjunct corridor to rm

# What is the violation?

⑩

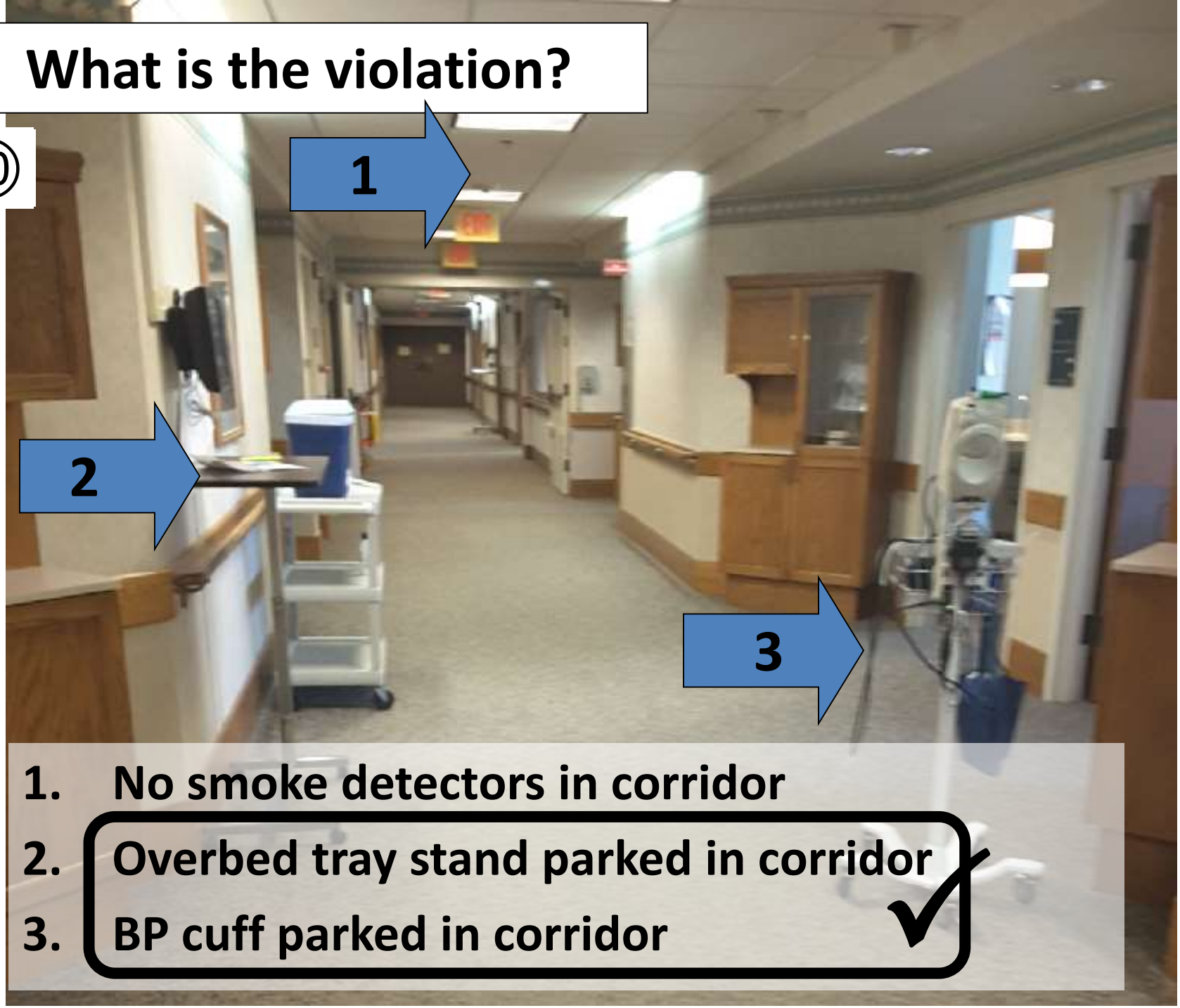



1. Door has a grill
2. Cart obstructs door from closing ✓
3. Soiled hamper stored in non-haz room


⑩
1
What is the violation?
1. No smoke detector in space
2. Chair not pushed in when not in use
3. Chair obstructs adjunct corridor to rm
2
3

# What is the violation?

⑩

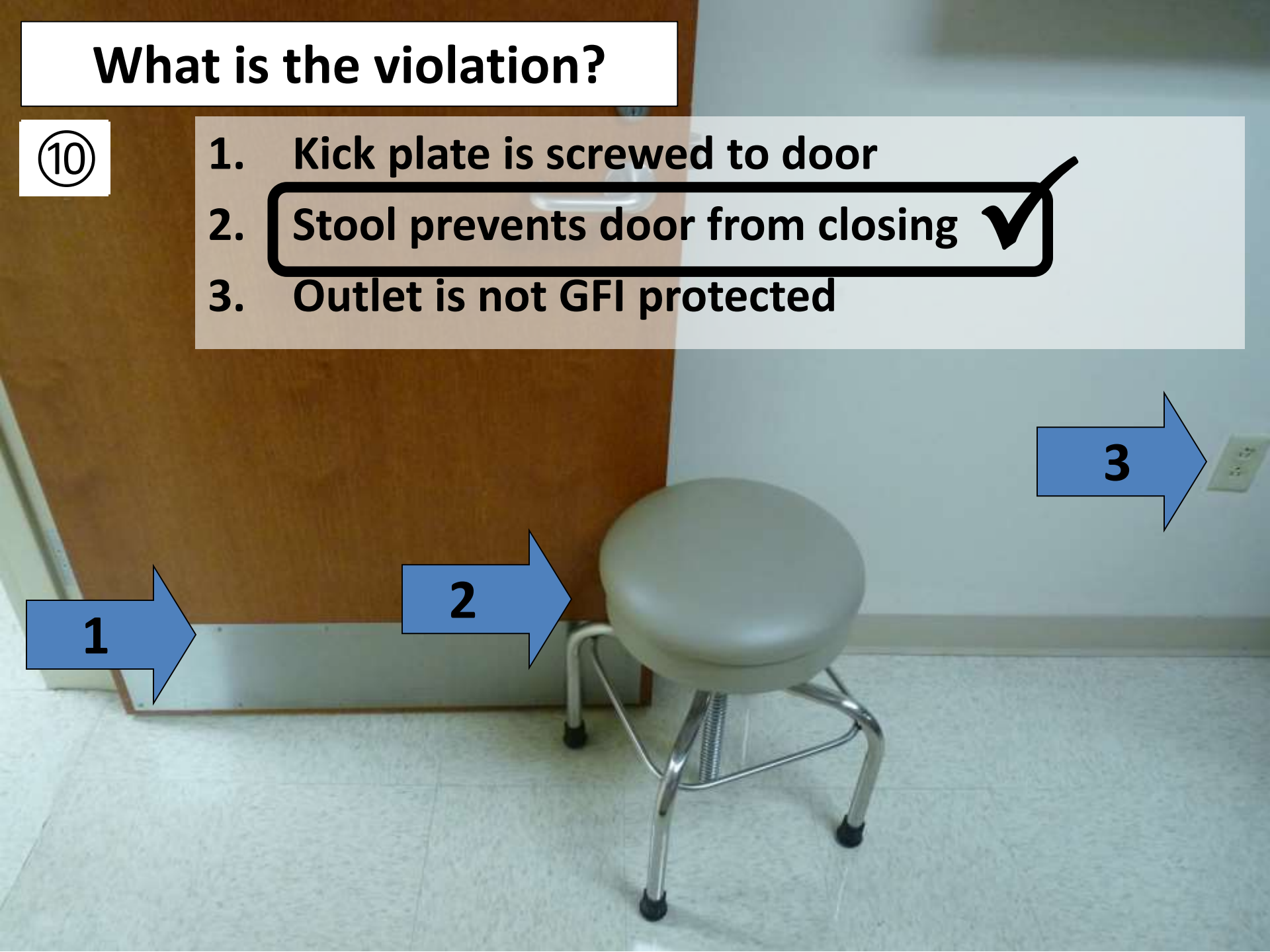



1. No smoke detectors in corridor
2. Overbed tray stand parked in corridor
3. BP cuff parked in corridor ✓

# What is the violation?

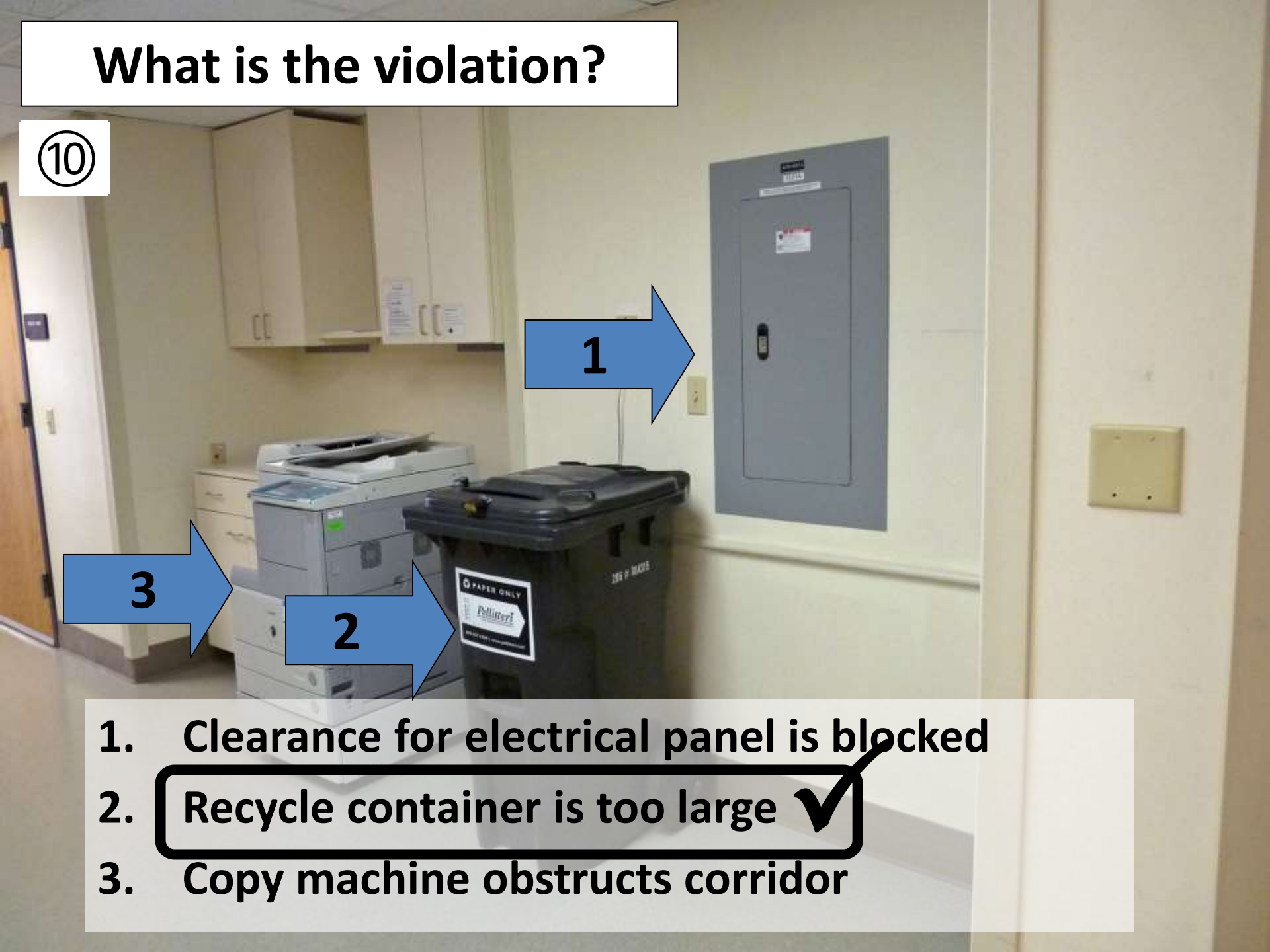
⑩

1. Kick plate is screwed to door
2. Stool prevents door from closing ✓
3. Outlet is not GFI protected



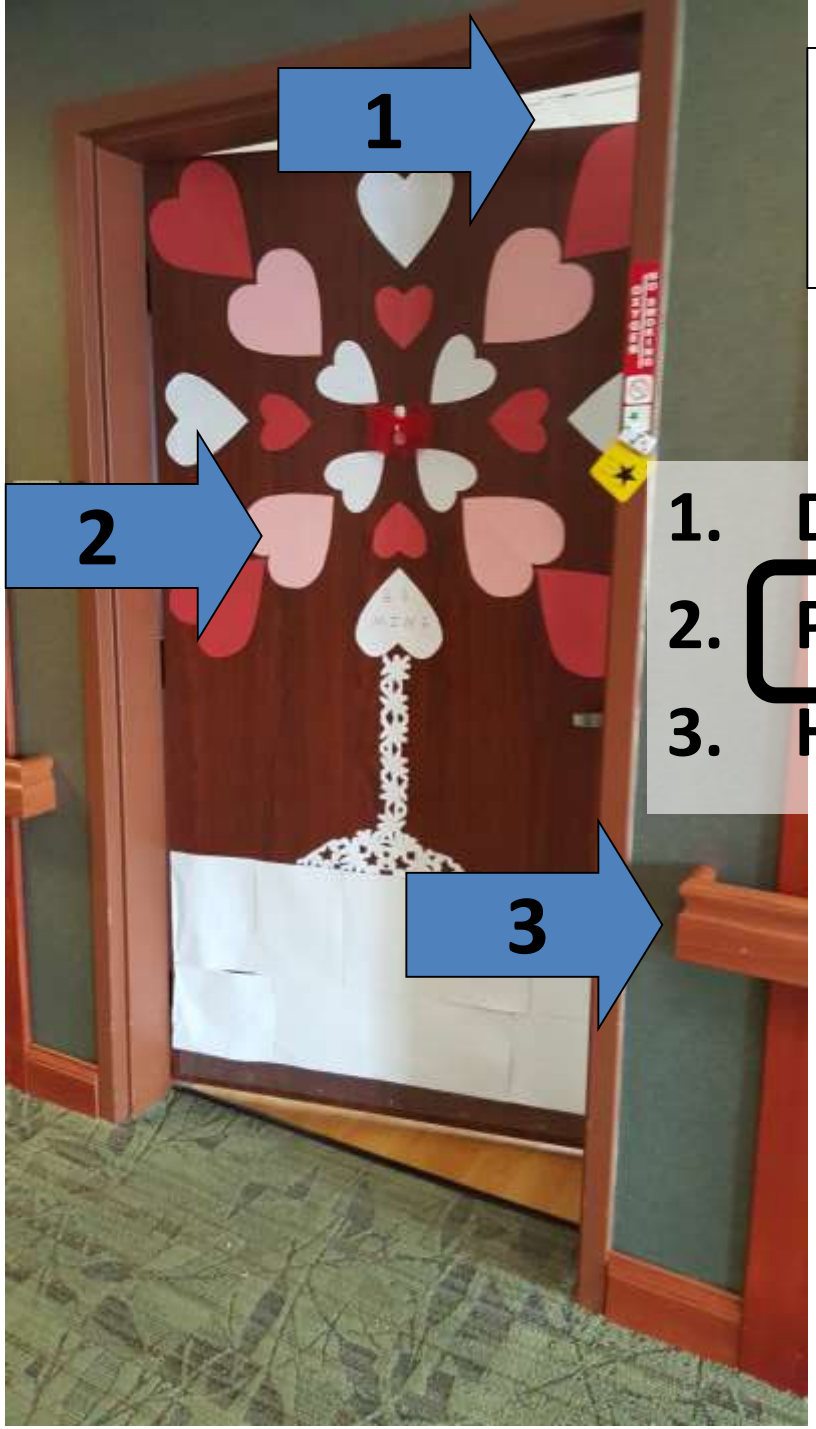
# What is the violation?

⑩




1. Clearance for electrical panel is blocked
2. Recycle container is too large ✓
3. Copy machine obstructs corridor

⑩

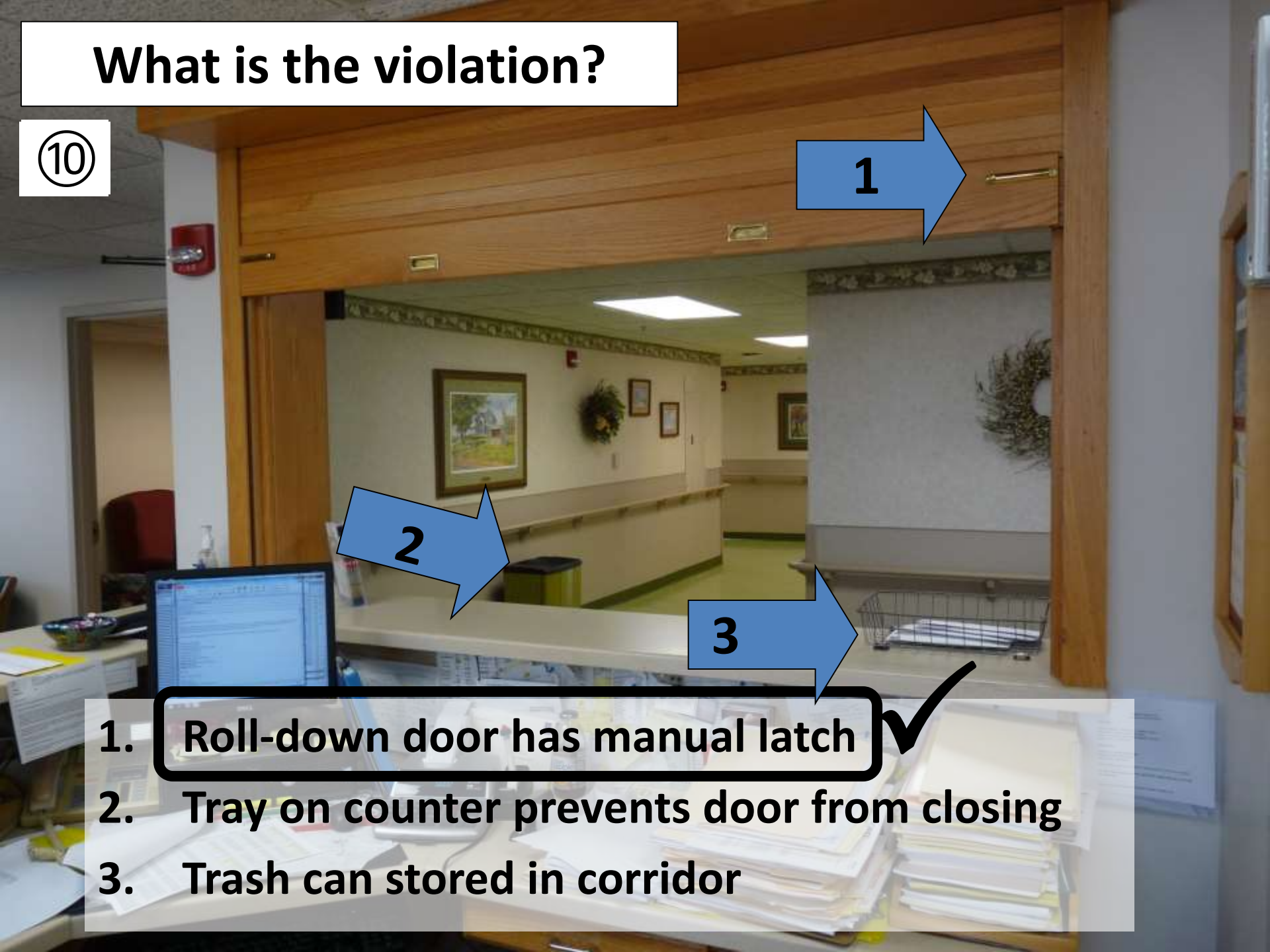



**What is the violation?**

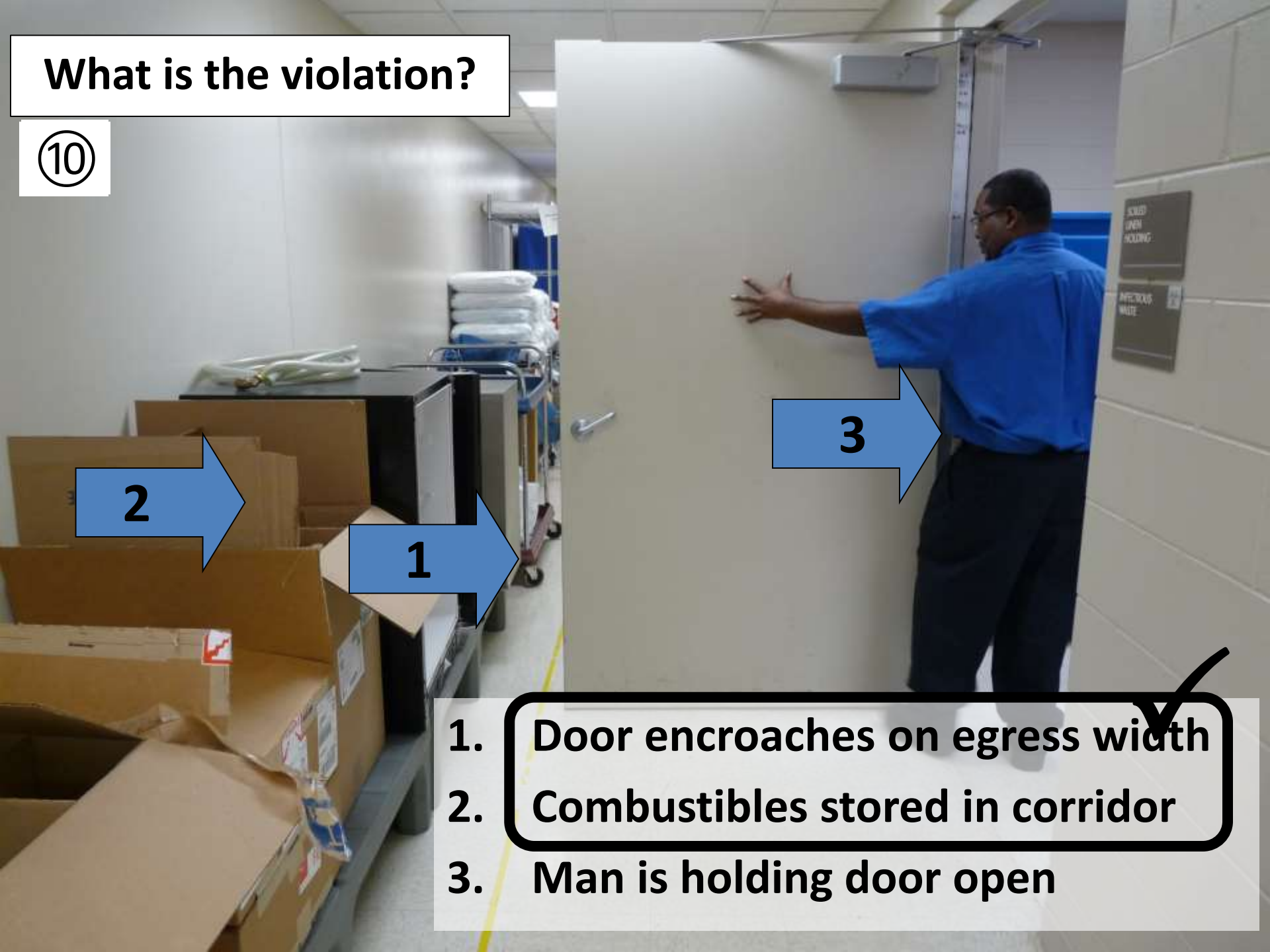
1. Door is not kept closed
2. Paper decorations on door ✓
3. Handrails not graspable

# What is the violation?

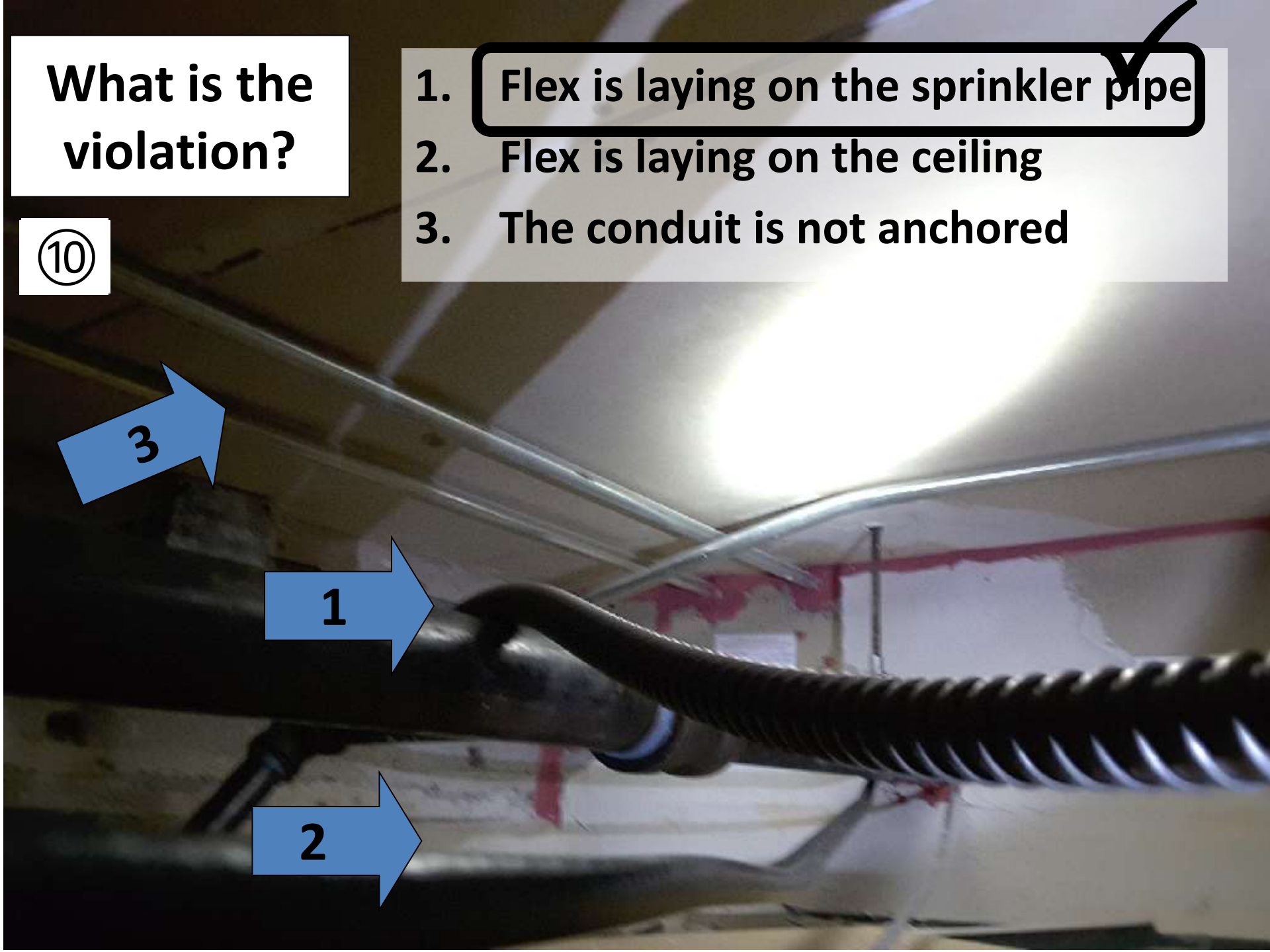
⑩



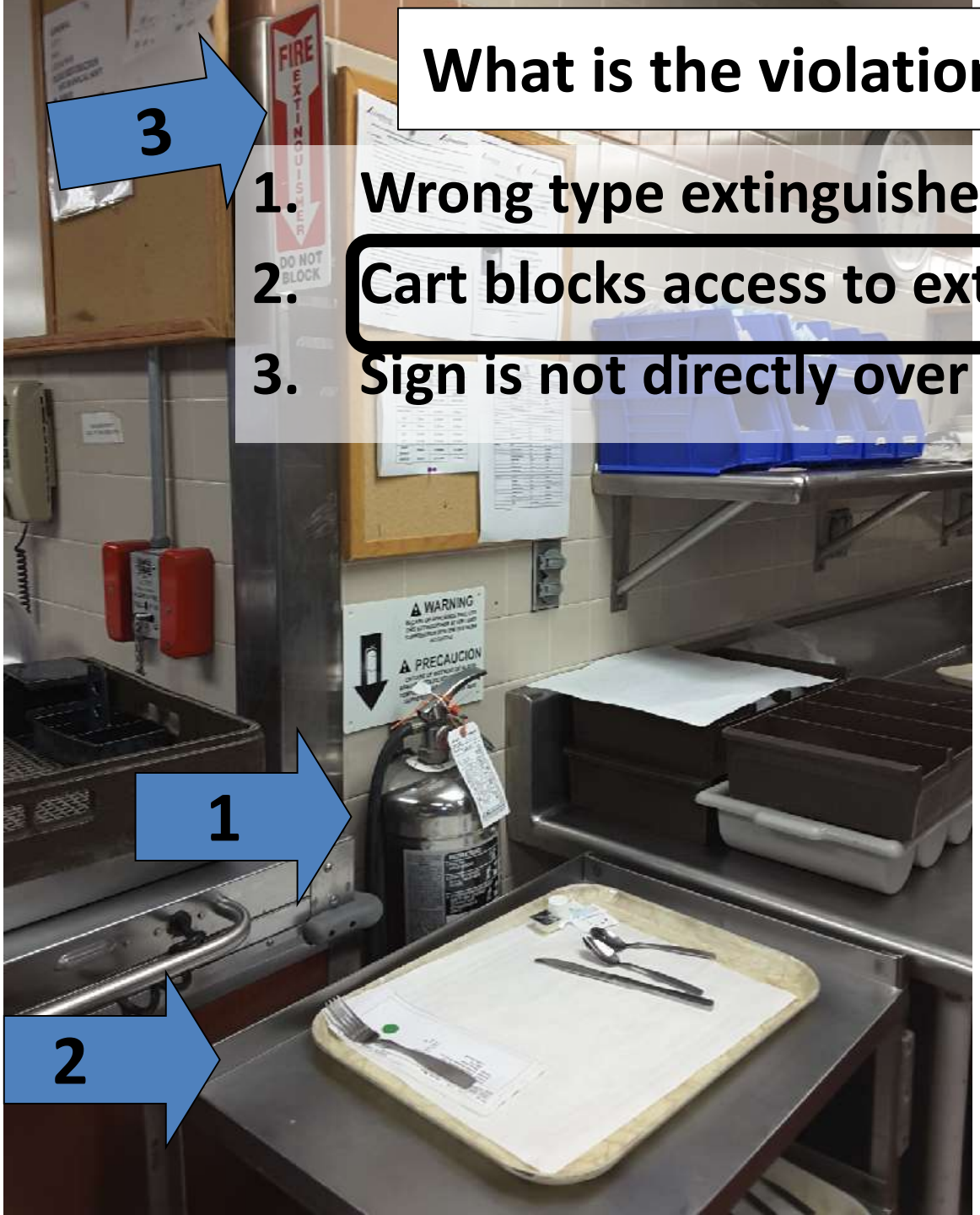

1. Roll-down door has manual latch ✓
2. Tray on counter prevents door from closing
3. Trash can stored in corridor


What is the violation?
⑩
2
1
3
1. Door encroaches on egress width
2. Combustibles stored in corridor
3. Man is holding door open

# 10 Sprinklers


What is the violation?
⑩
1. Flex is laying on the sprinkler pipe
2. Flex is laying on the ceiling
3. The conduit is not anchored
3
1
2

⑩



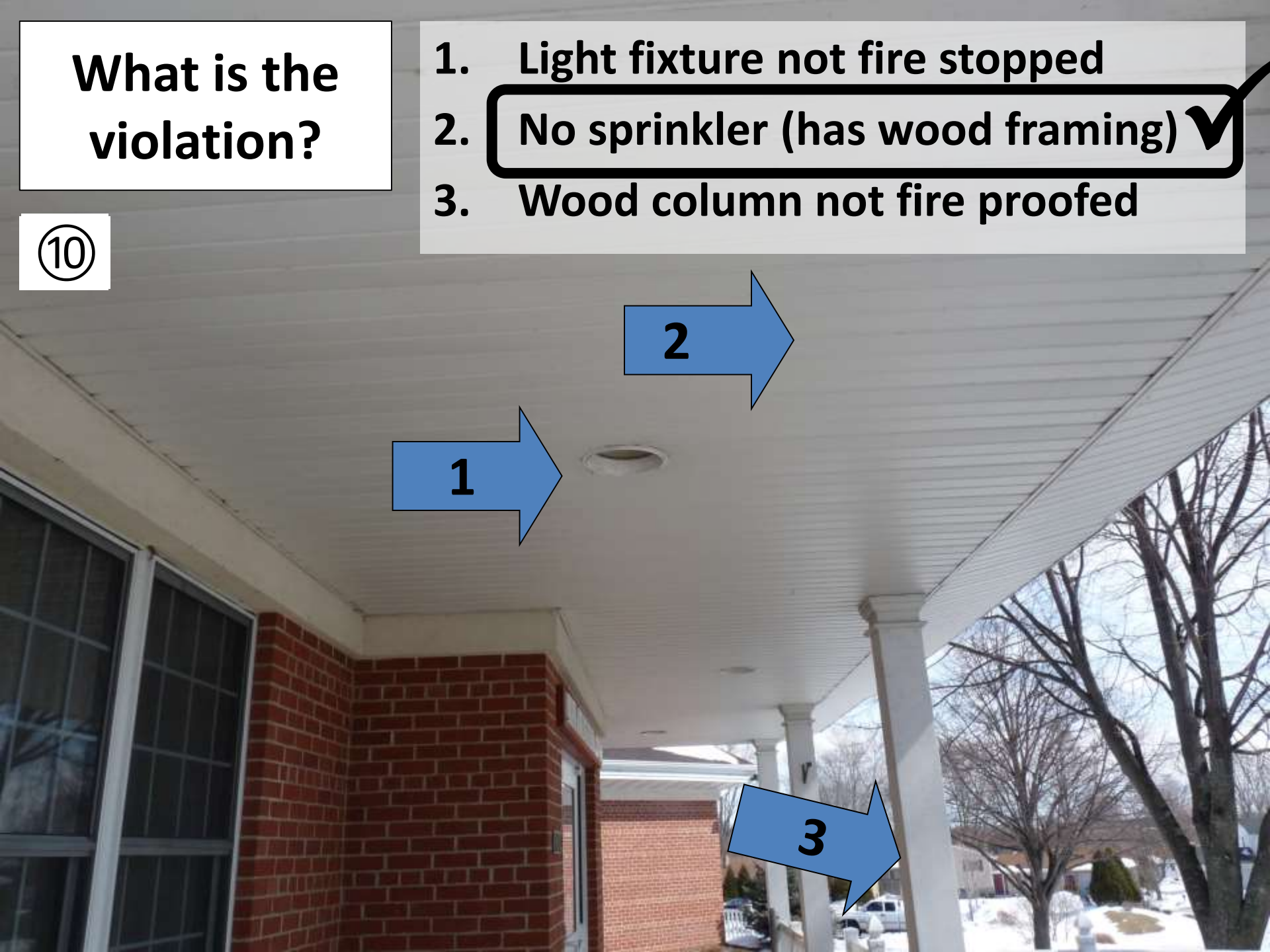

## What is the violation?

1. Wrong type extinguisher
2. Cart blocks access to extinguisher ✓
3. Sign is not directly over the unit

# What is the violation?

⑩

1. Light fixture not fire stopped
2. No sprinkler (has wood framing) ✓
3. Wood column not fire proofed



# What is the violation?

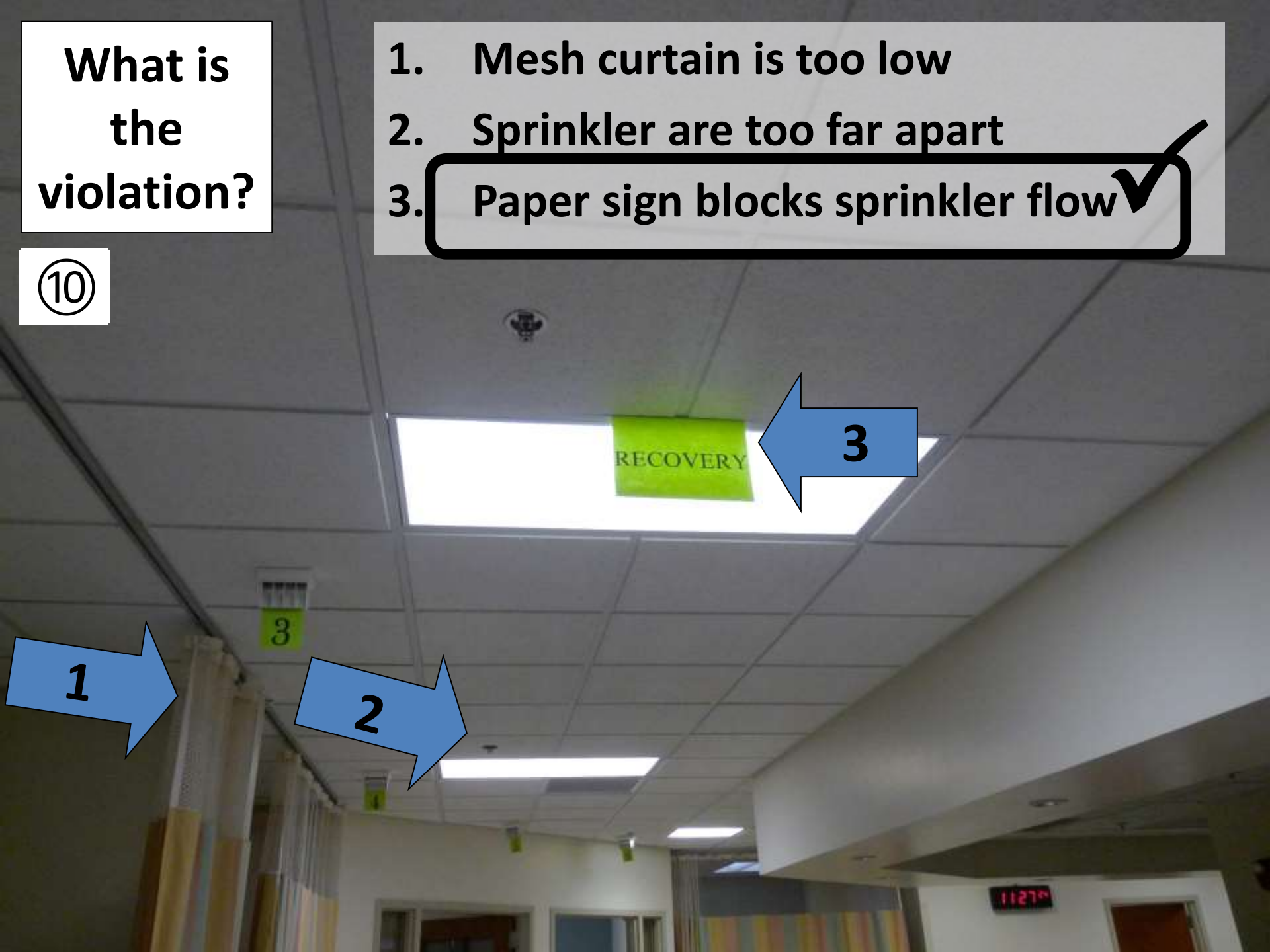
⑩

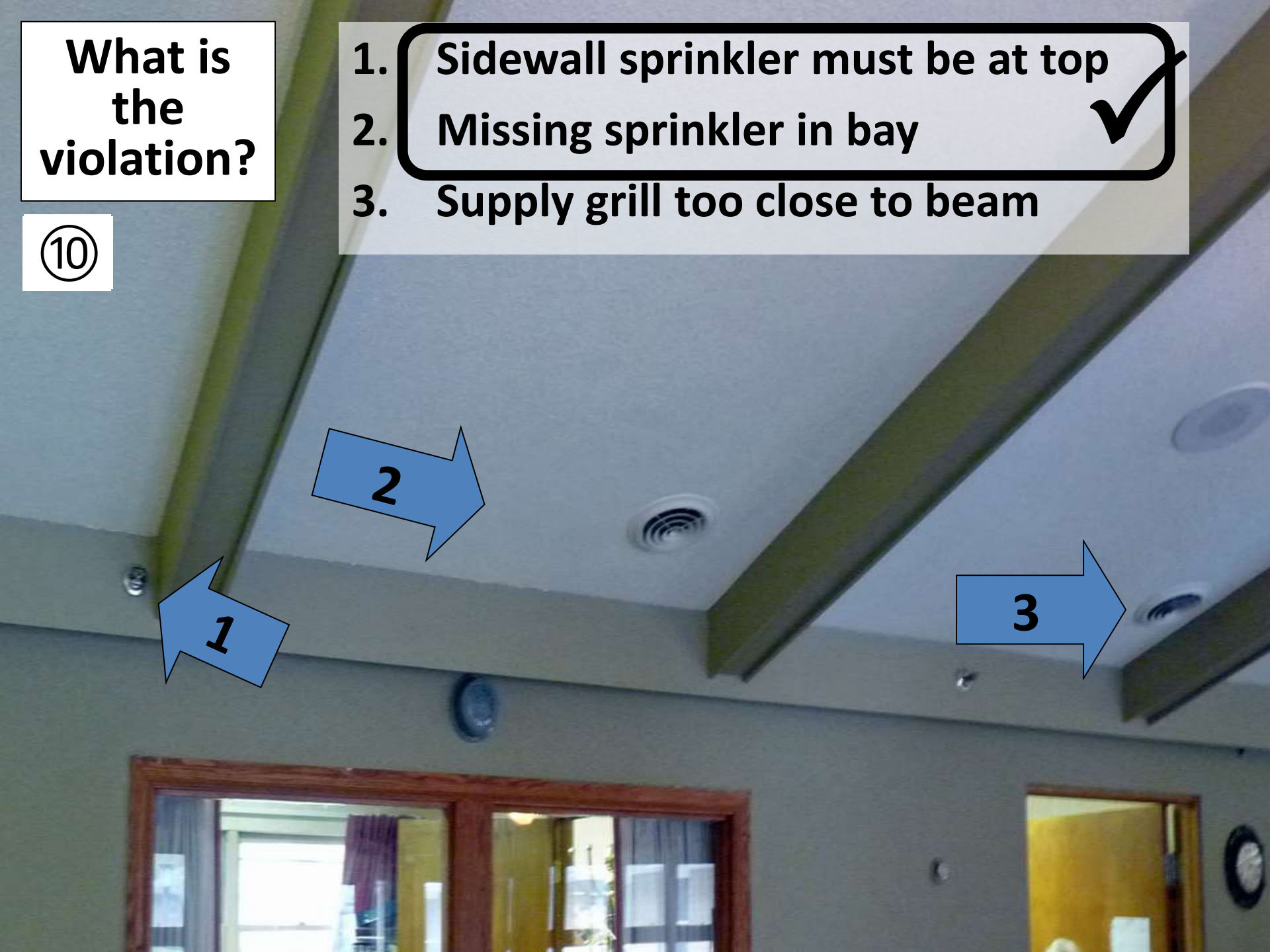

1. Cap is not tight to ceiling ✓
2. Sprinkler not cover shower area
3. Sliding door

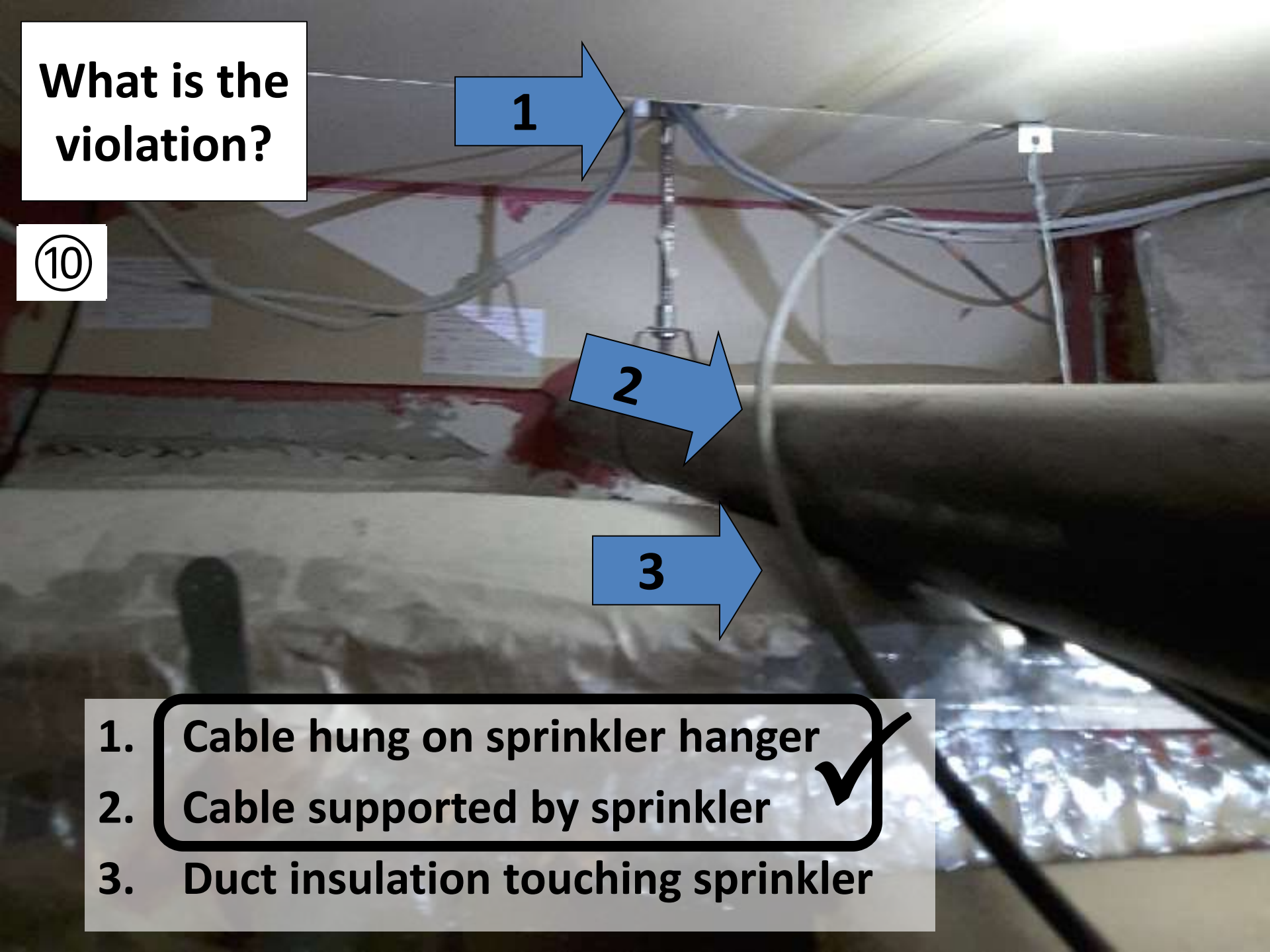
# What is the violation?

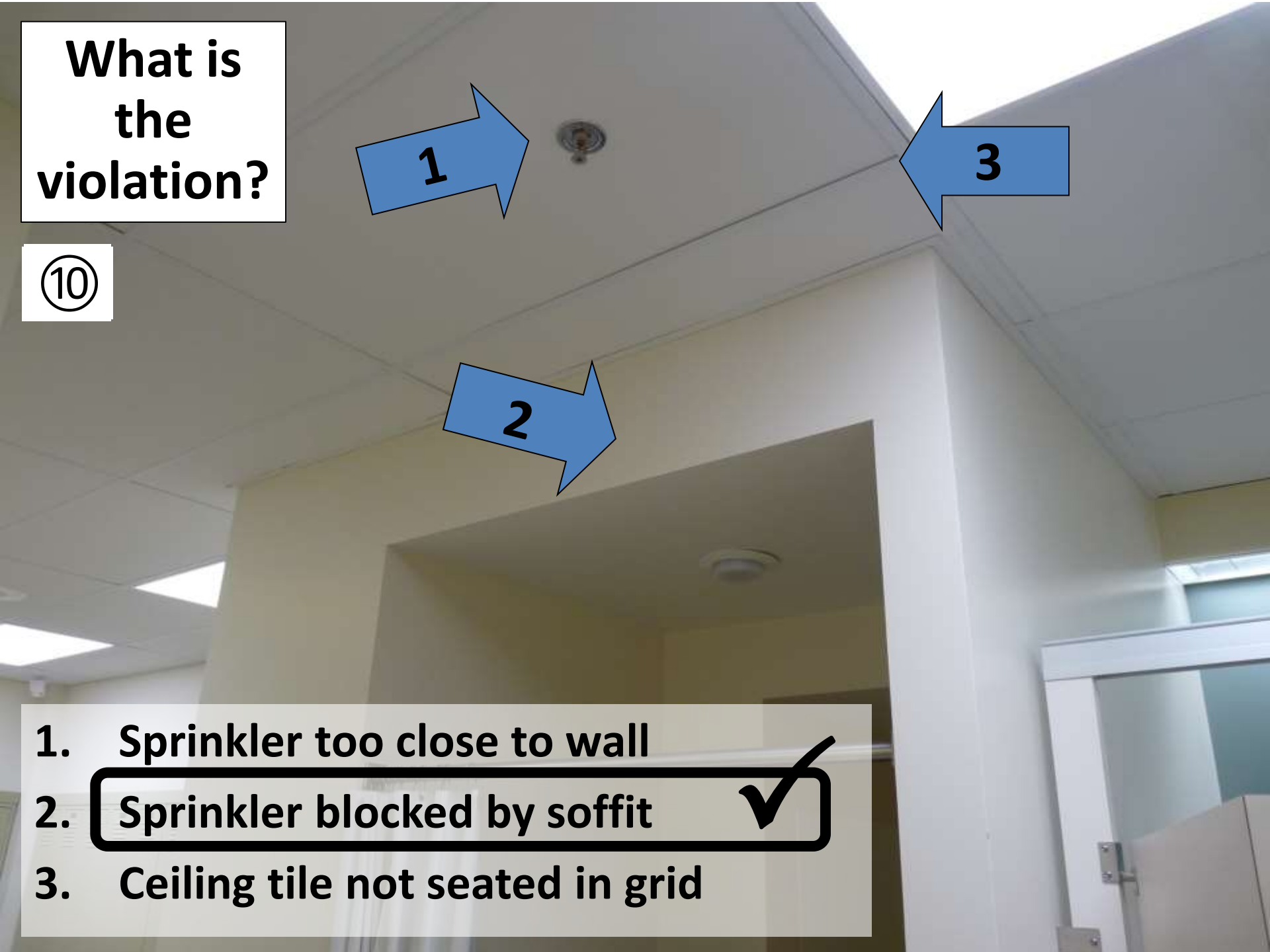
⑩


1. Head recessed too far into escutcheon
2. Sprinkler has debris on deflector ✓
3. Sprinkler has dust on deflector


What is the violation?
⑩
1. Mesh curtain is too low
2. Sprinkler are too far apart
3. Paper sign blocks sprinkler flow
RECOVERY
3
1
2


What is the violation?
⑩
1. Sidewall sprinkler must be at top
2. Missing sprinkler in bay
3. Supply grill too close to beam
2
1
3

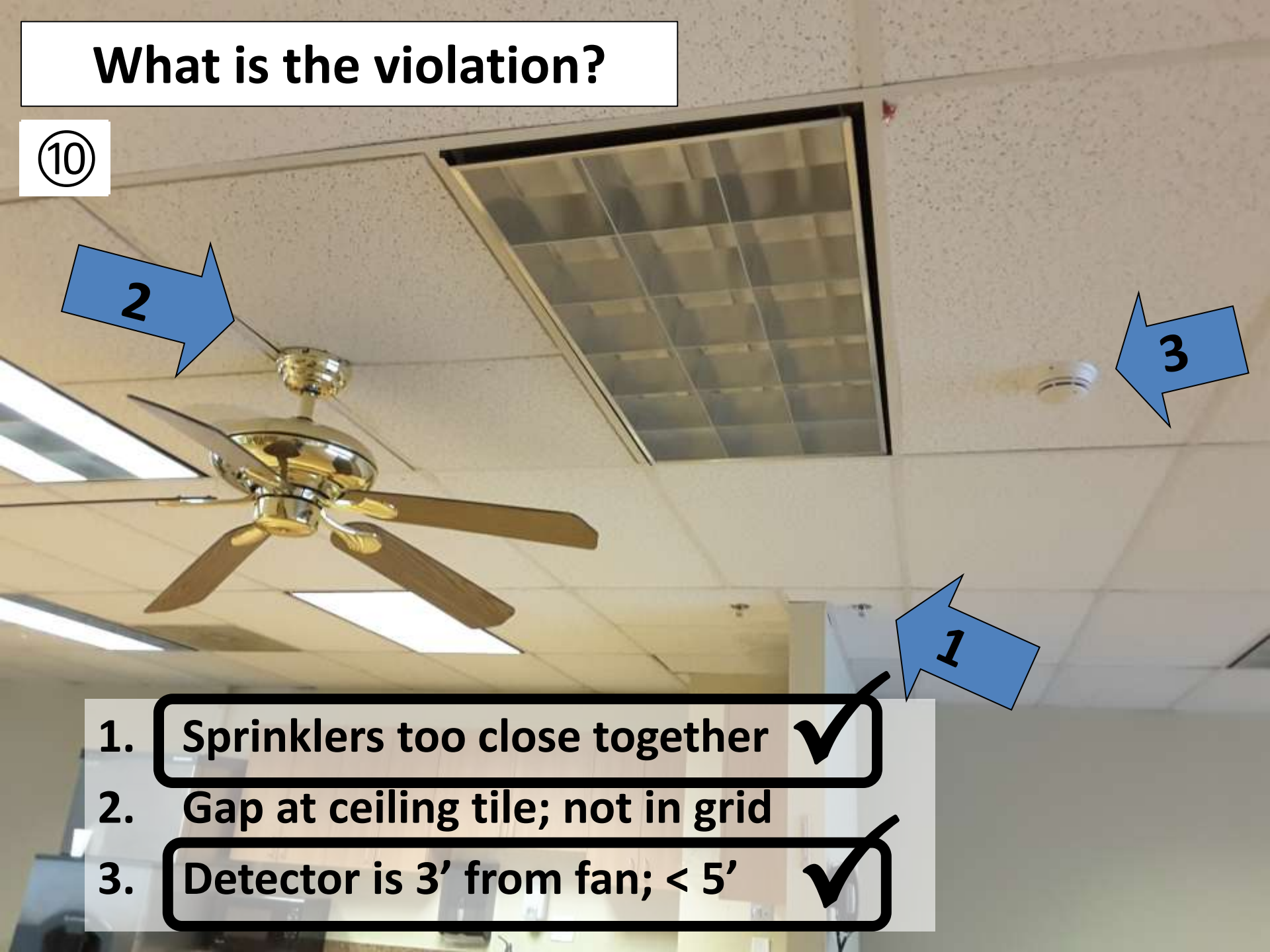

What is the violation?
⑩
1
2
3
1. Cable hung on sprinkler hanger
2. Cable supported by sprinkler
3. Duct insulation touching sprinkler


What is the violation?
⑩
1
2
3
1. Sprinkler too close to wall
2. Sprinkler blocked by soffit
3. Ceiling tile not seated in grid

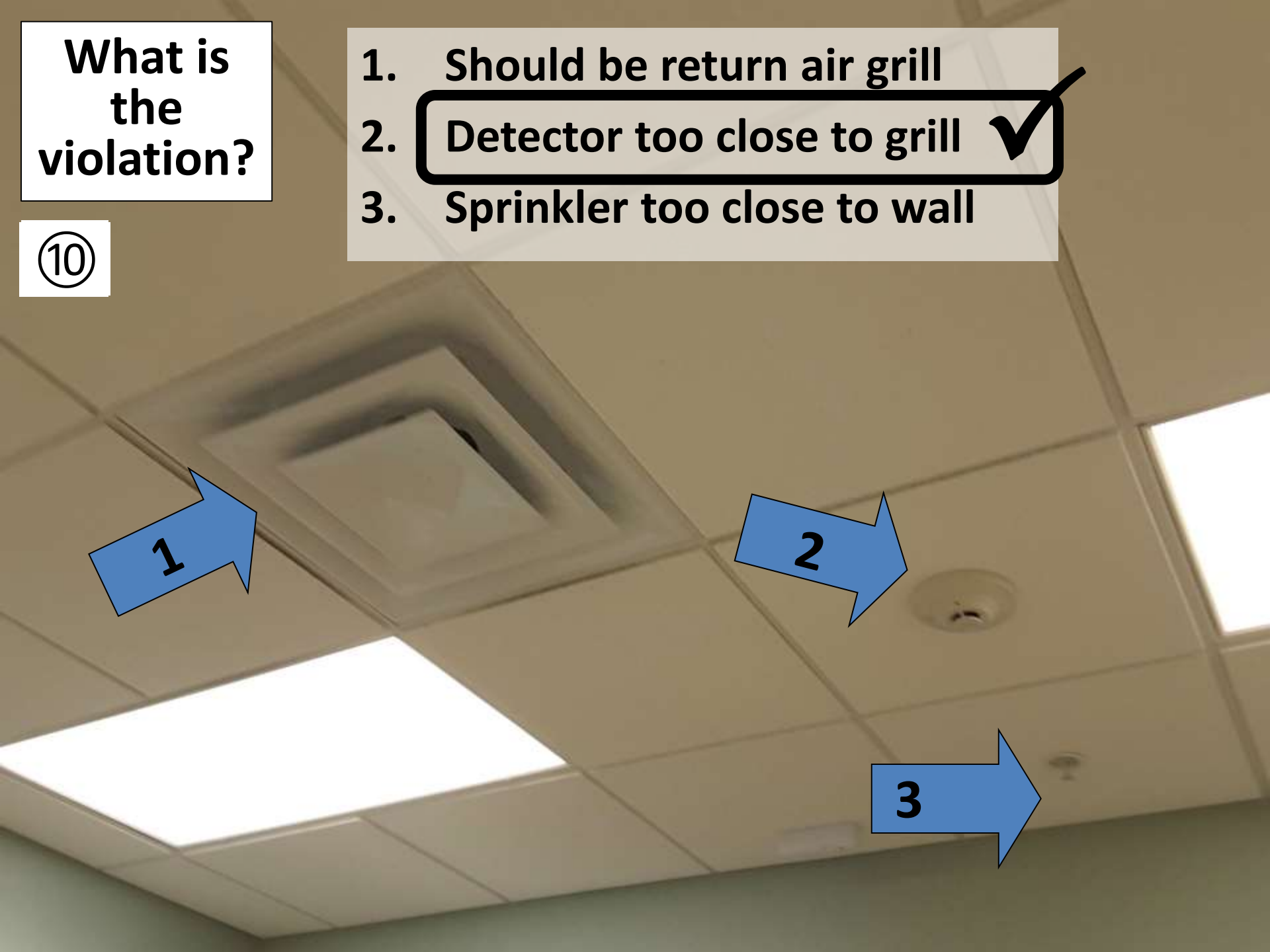
# 11 Fire Alarm

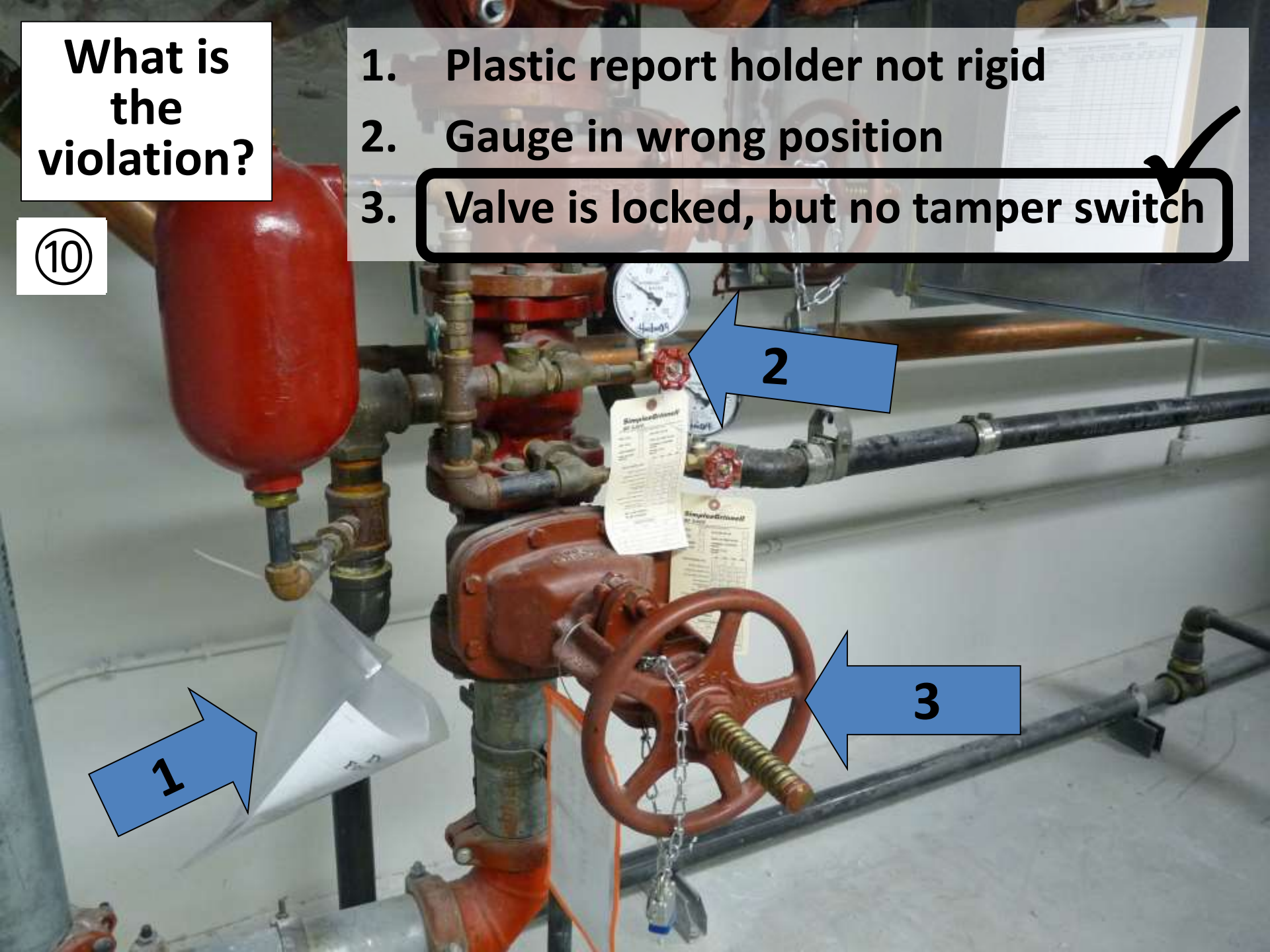
# What is the violation?

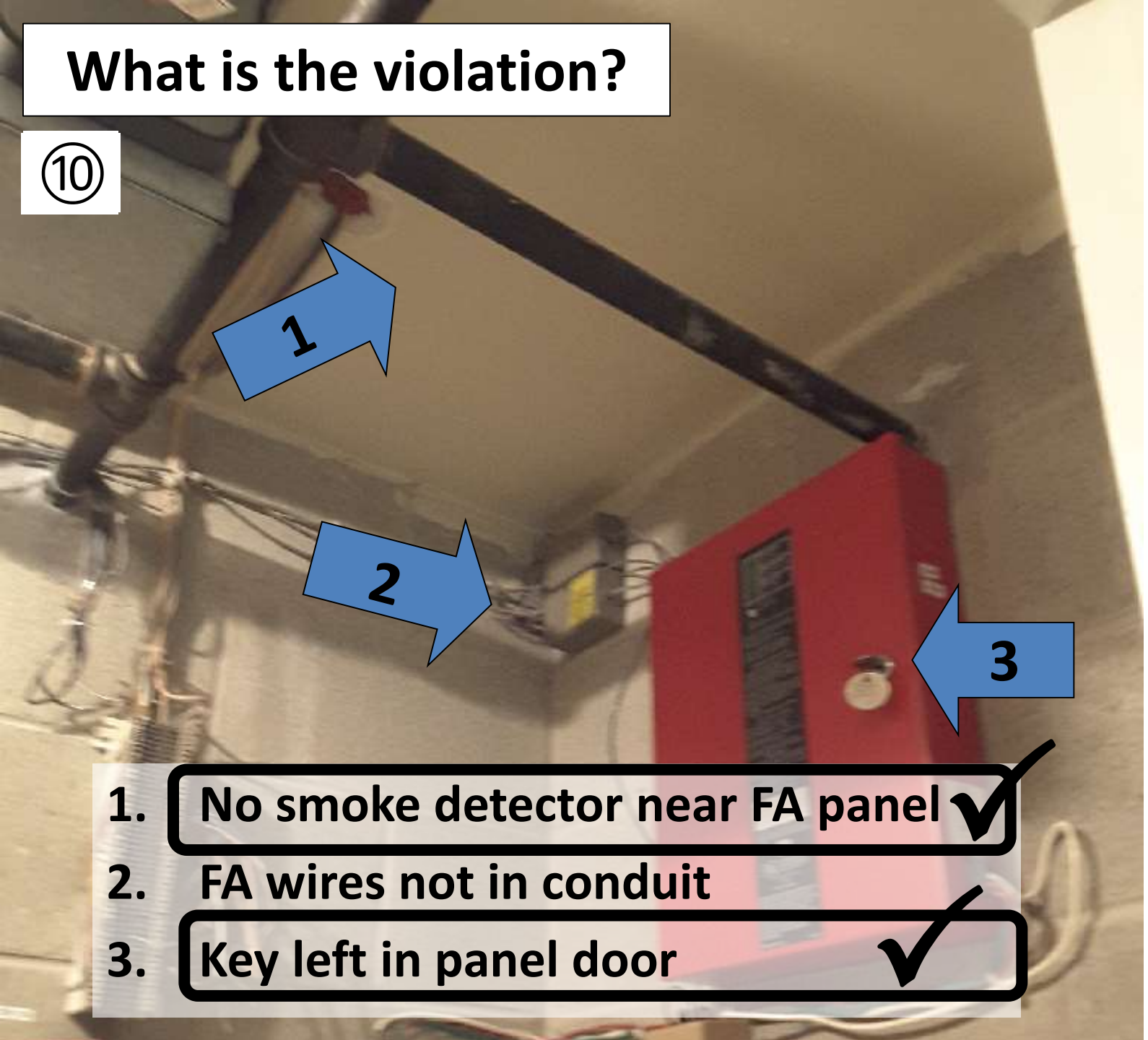
⑩



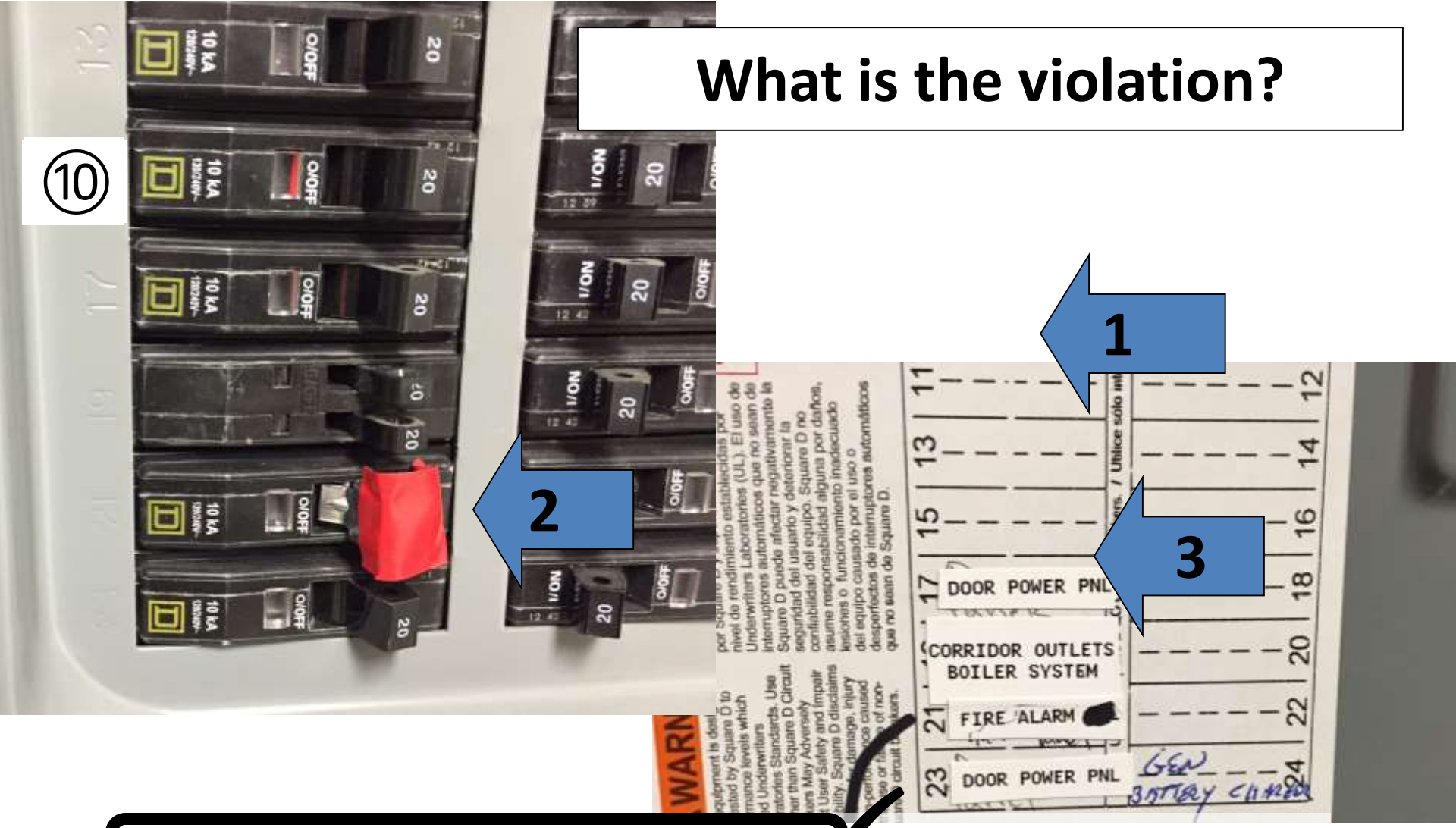

1. Sprinklers too close together ✓
2. Gap at ceiling tile; not in grid
3. Detector is 3’ from fan; < 5’ ✓


What is the violation?
⑩
1. Should be return air grill
2. Detector too close to grill ✓
3. Sprinkler too close to wall
1
2
3

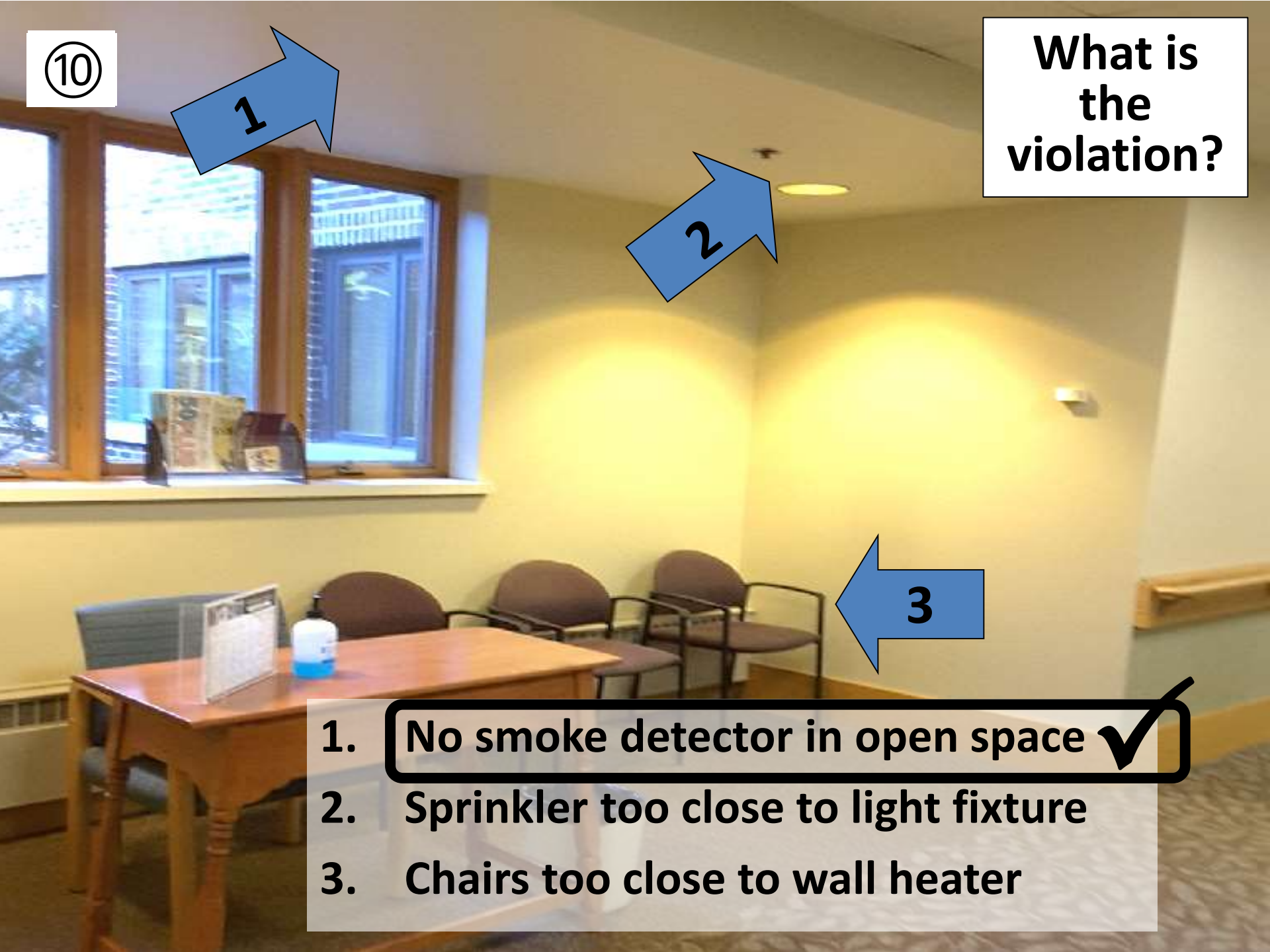

What is the violation?
⑩
1. Plastic report holder not rigid
2. Gauge in wrong position
3. Valve is locked, but no tamper switch
1
2
3


What is the violation?
⑩
1
2
3
1. No smoke detector near FA panel ✓
2. FA wires not in conduit
3. Key left in panel door ✓

# What is the violation?

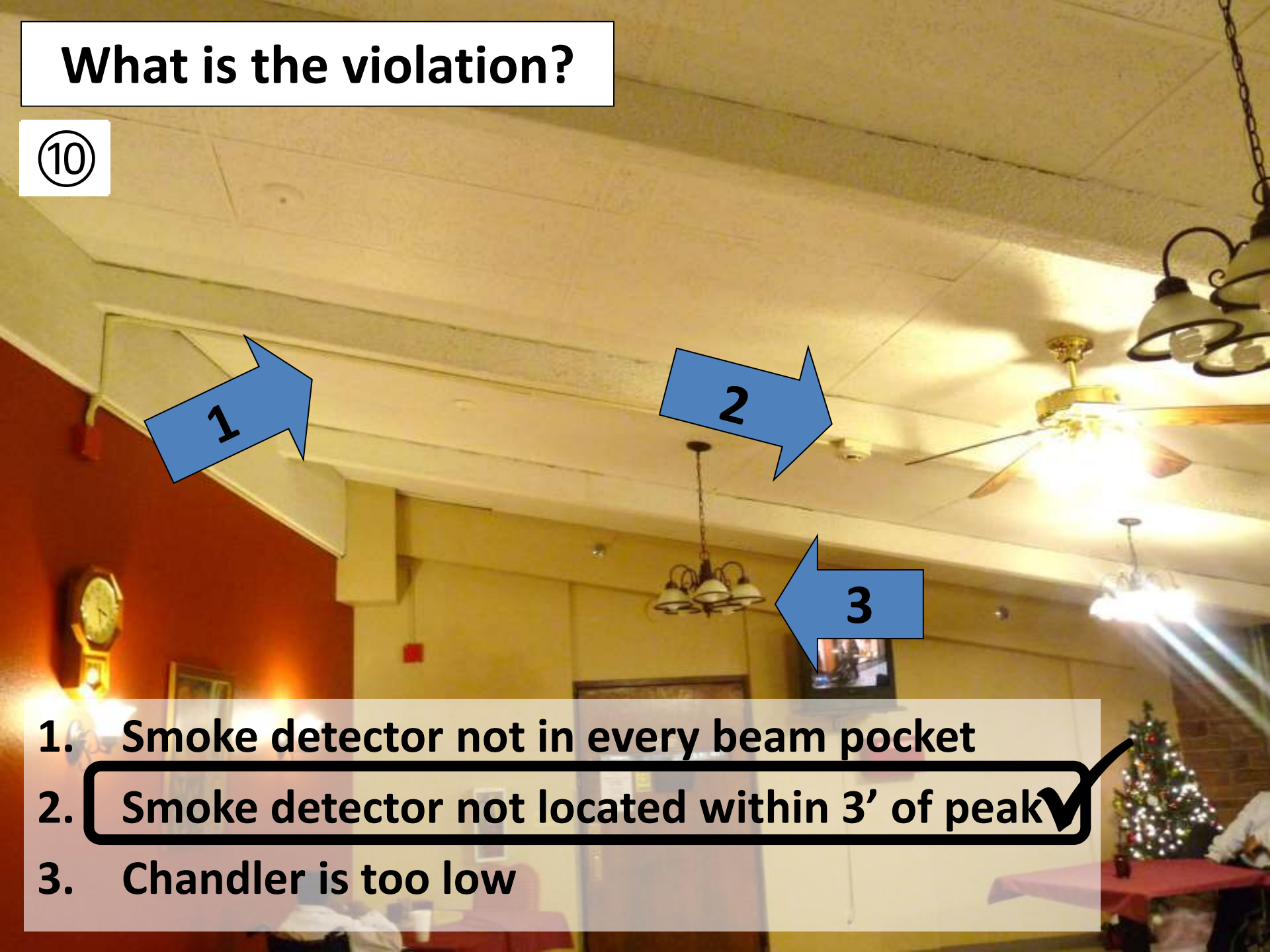



1. Ckt 13&15 not labeled ✓
2. FA breaker is not painted red
3. Ckt 21 not labeled “Fire Alarm Control Circuit” ✓


⑩
1
2
3
What is the violation?
1. No smoke detector in open space ✓
2. Sprinkler too close to light fixture
3. Chairs too close to wall heater

# What is the violation?

⑩




1. Smoke detector not in every beam pocket
2. Smoke detector not located within 3’ of peak ✓
3. Chandler is too low

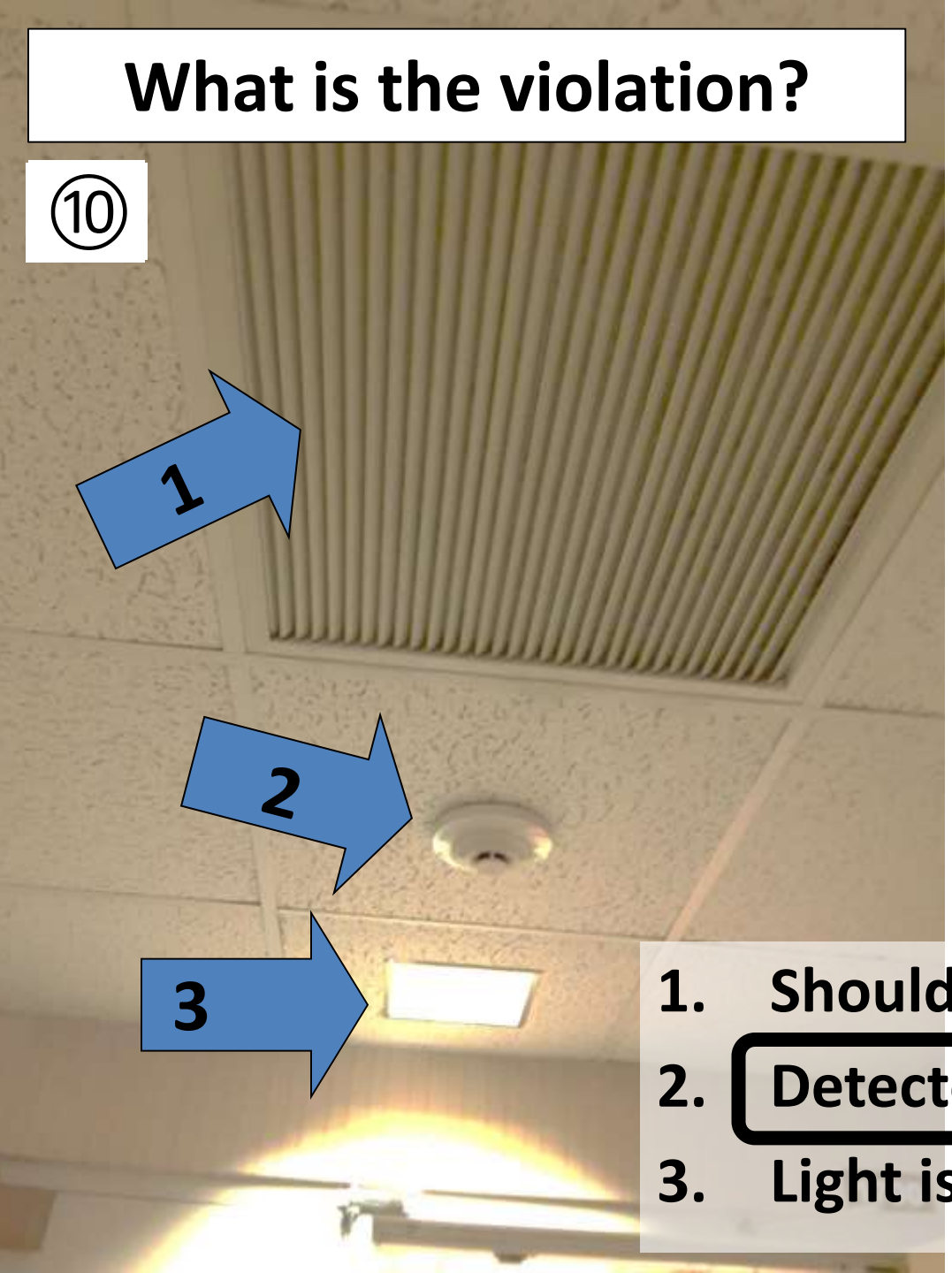
# What is the violation?

⑩


1. Exit sign not centered over door
2. Fire pull blocked by table ✓
3. Egress blocked by table & TV

# What is the violation?

⑩




1. Should be a supply grill
2. Detector is too close to grill ✓
3. Light is too close to wall

# 12 Electrical

# What is the violation?

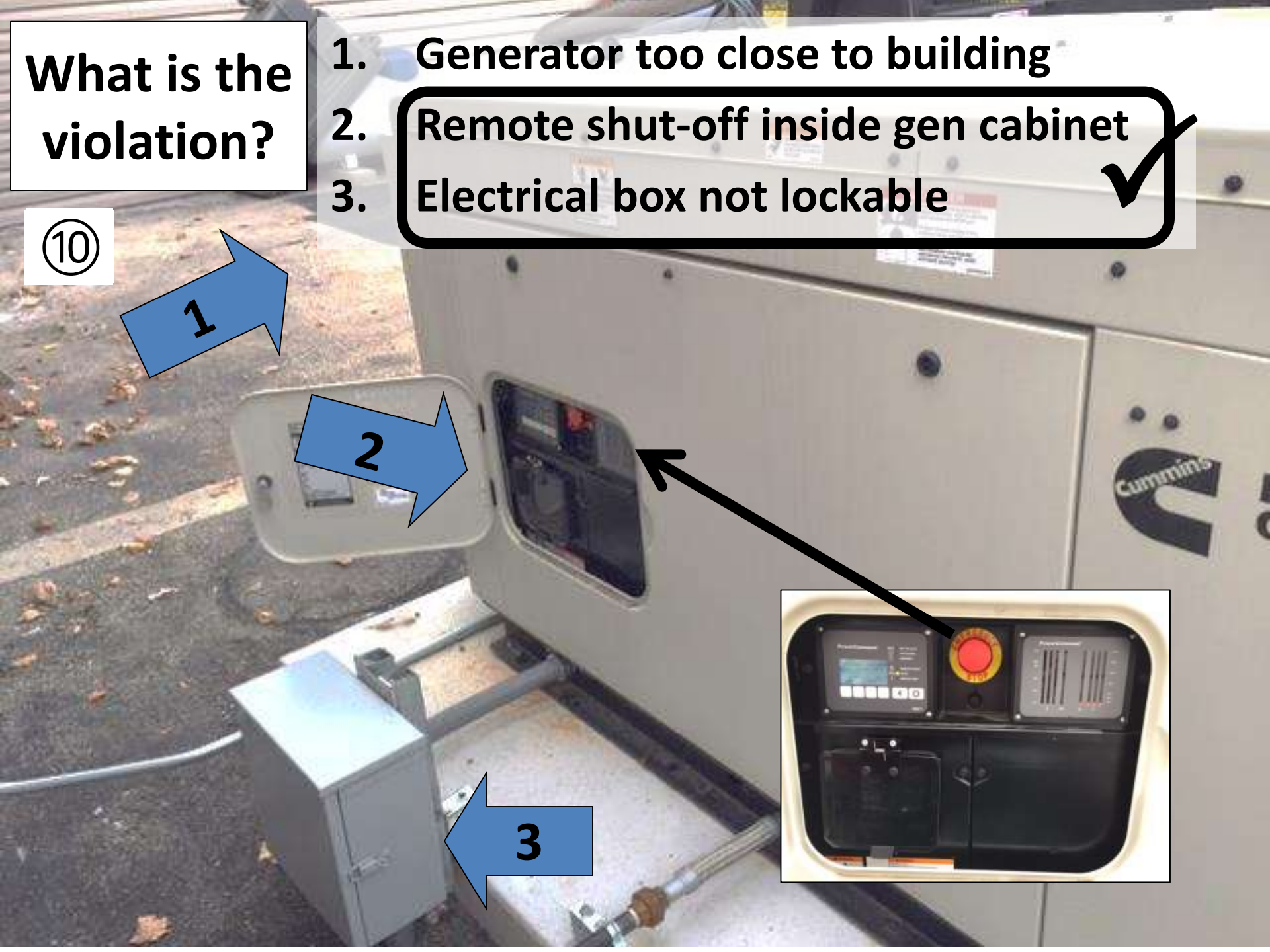
⑩


1. Trash throughout room ✓
2. Open electrical box
3. Evidence of water leakage

# What is the violation?

⑩

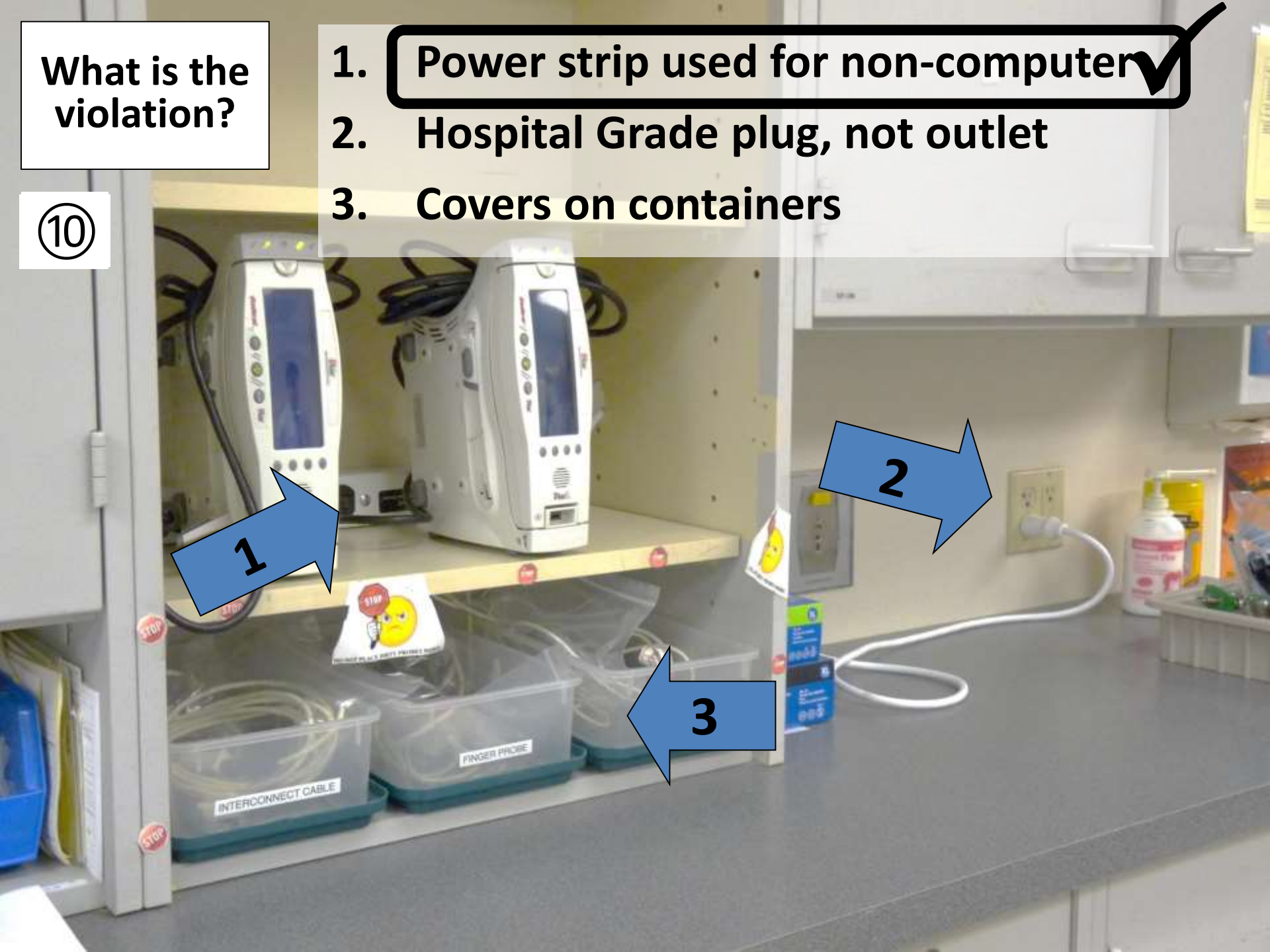
1. Generator too close to building
2. Remote shut-off inside gen cabinet ✓
3. Electrical box not lockable



**What is the violation?**

⑩

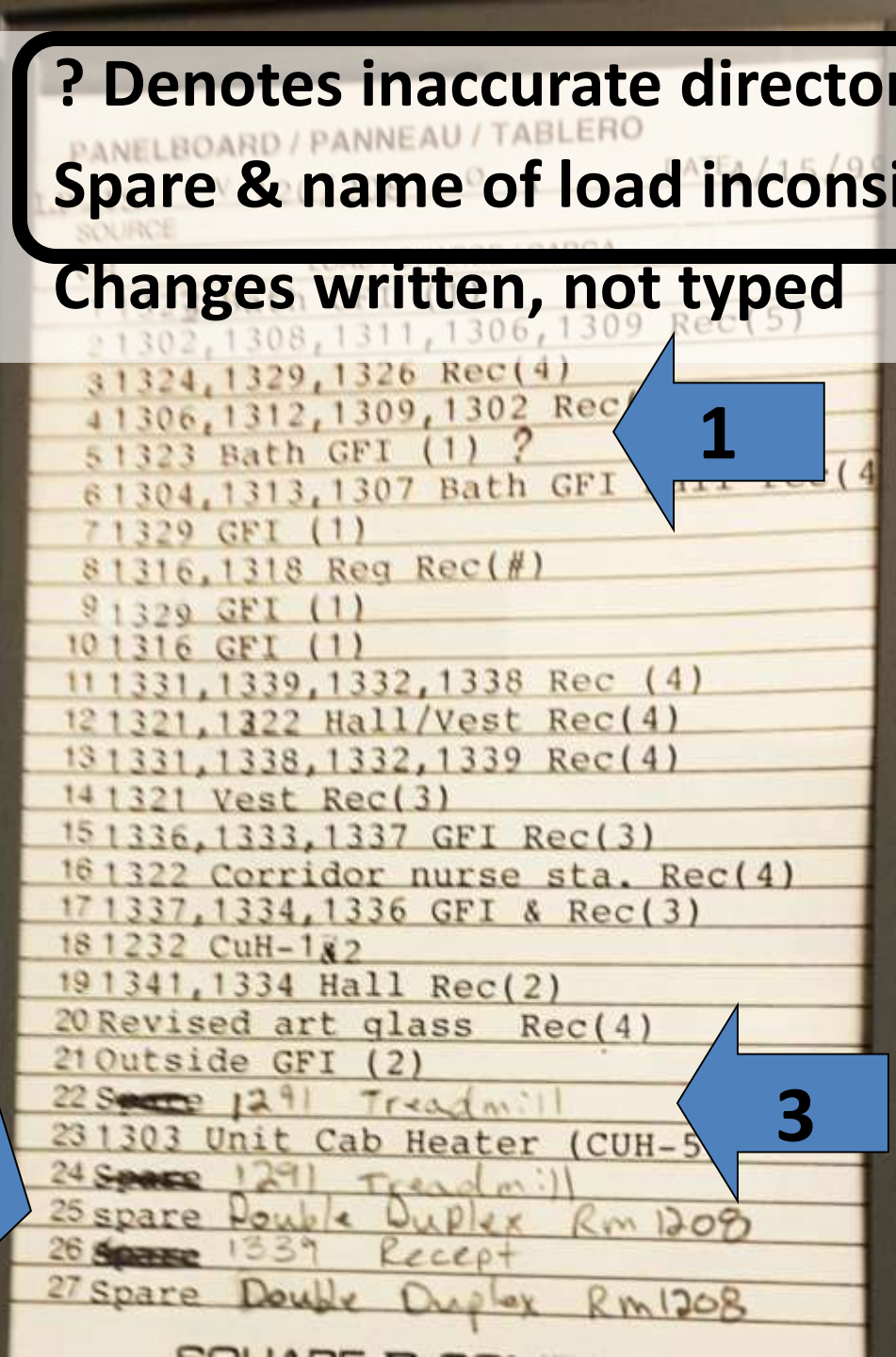
1. Power strip used for non-computer ✓
2. Hospital Grade plug, not outlet
3. Covers on containers



**What is the violation?**

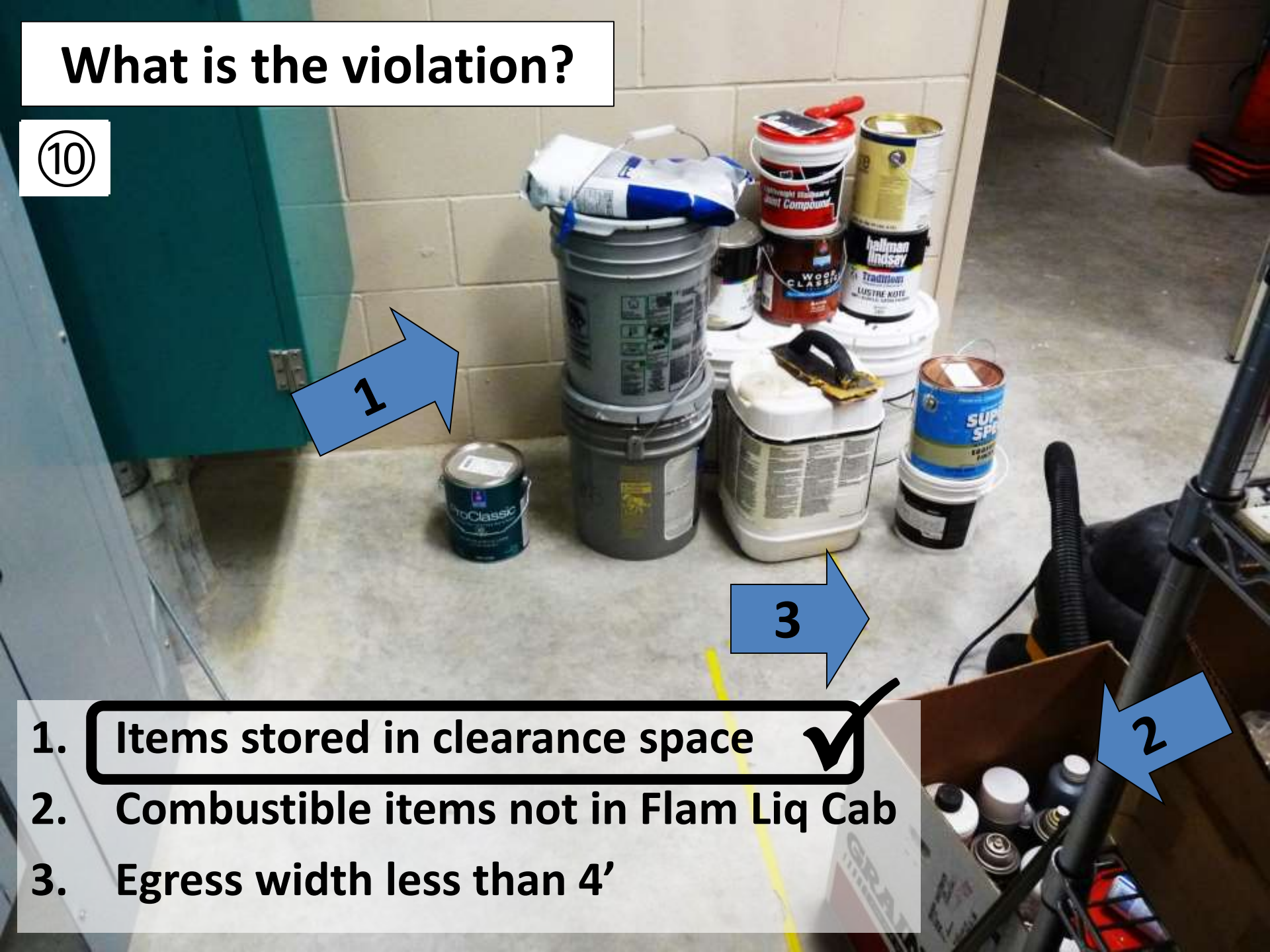
⑩

1. ? Denotes inaccurate directory ✓
2. Spare & name of load inconsistent
3. Changes written, not typed

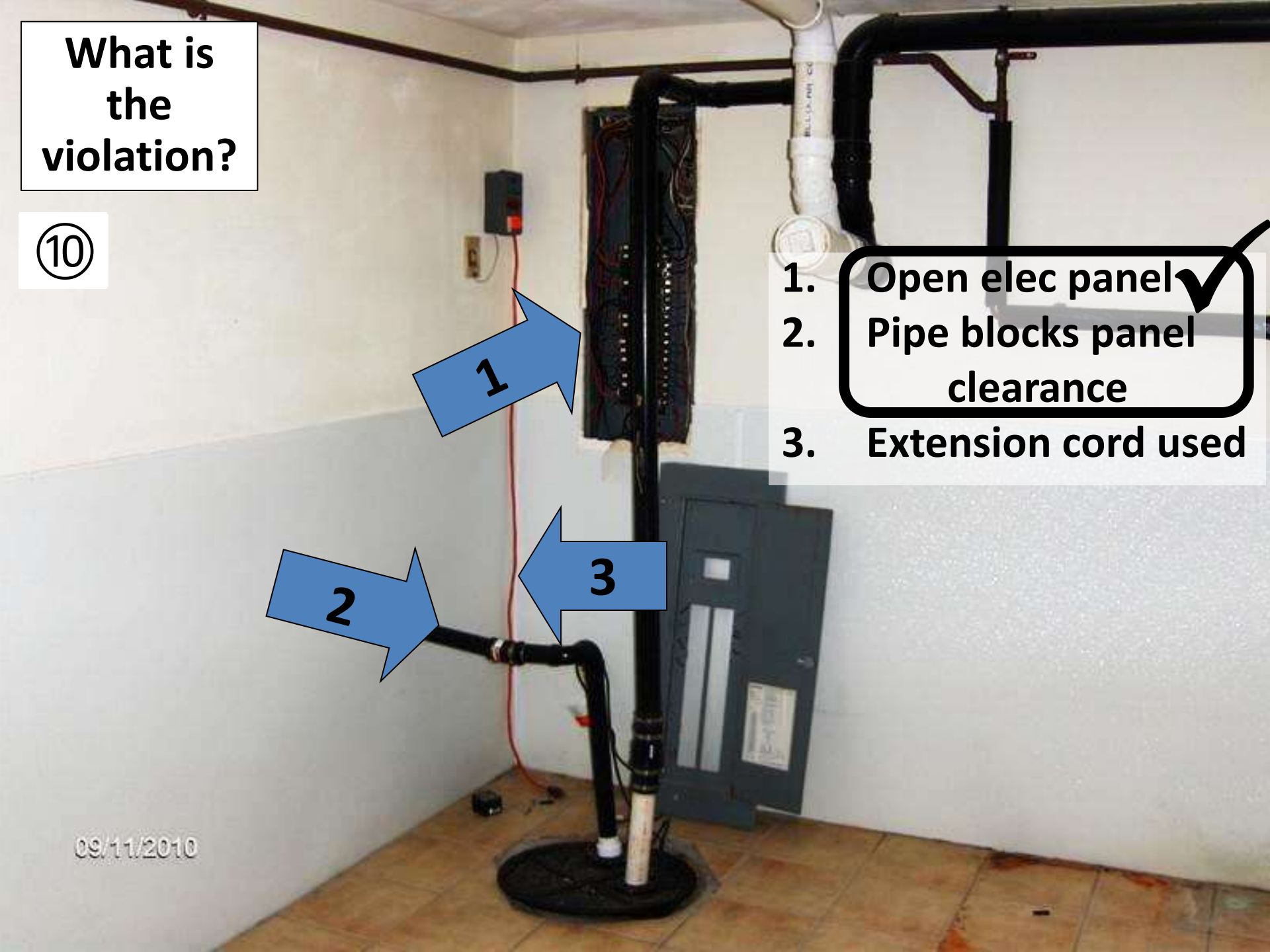


# What is the violation?

⑩

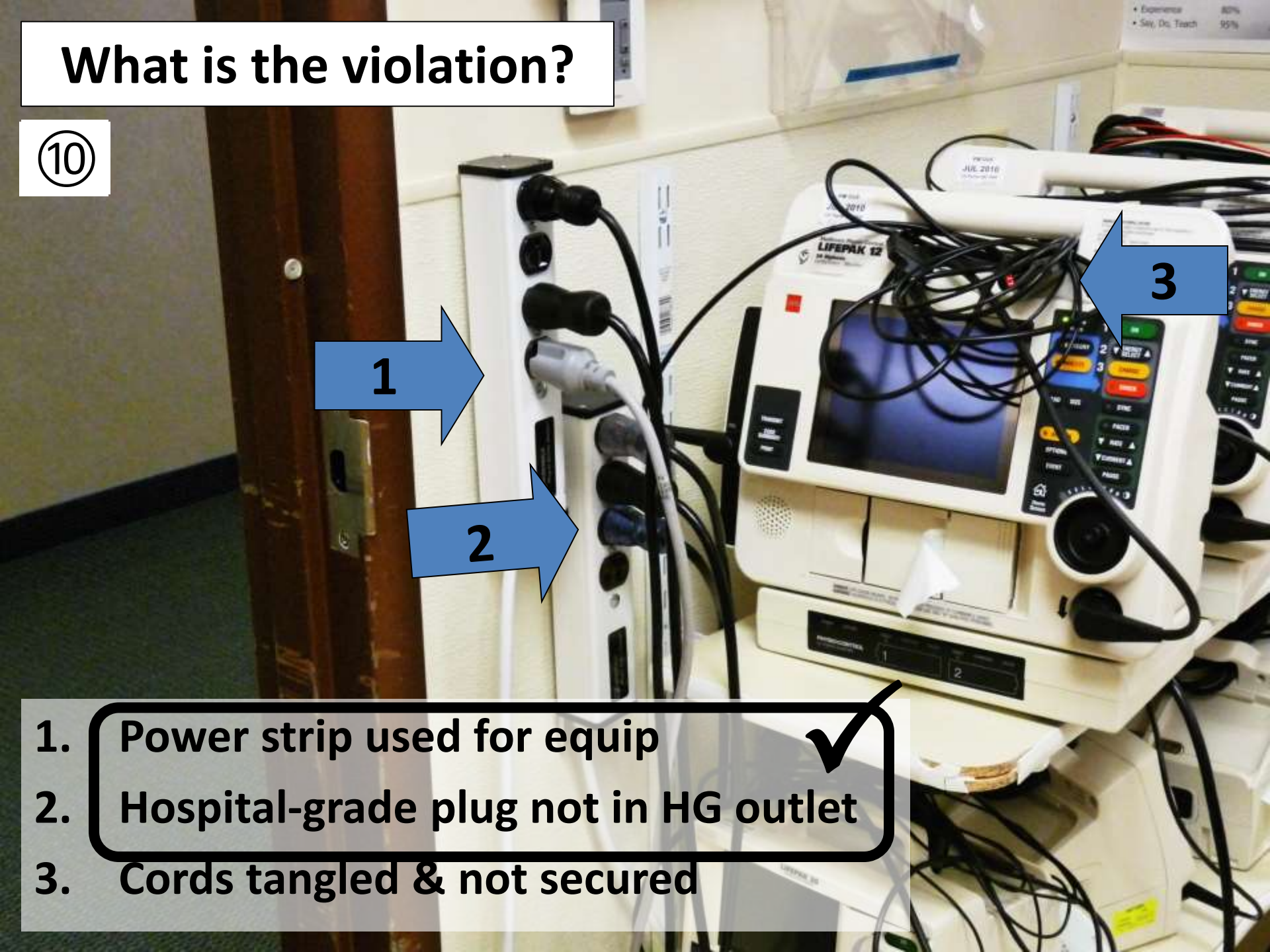



1. Items stored in clearance space ✓
2. Combustible items not in Flam Liq Cab
3. Egress width less than 4’

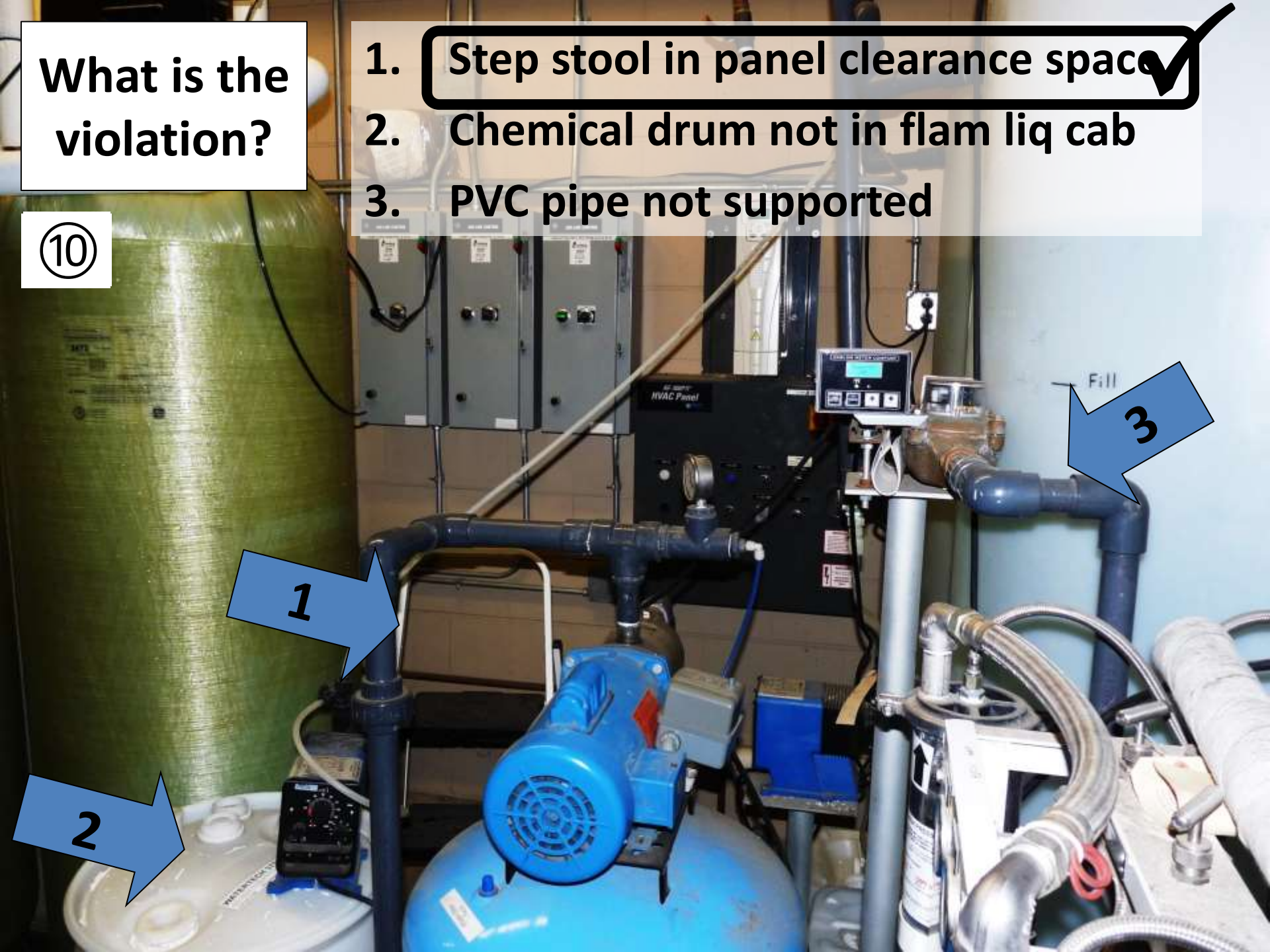

What is the violation?
⑩
1
2
3
1. Open elec panel ✓
2. Pipe blocks panel clearance
3. Extension cord used
09/11/2010

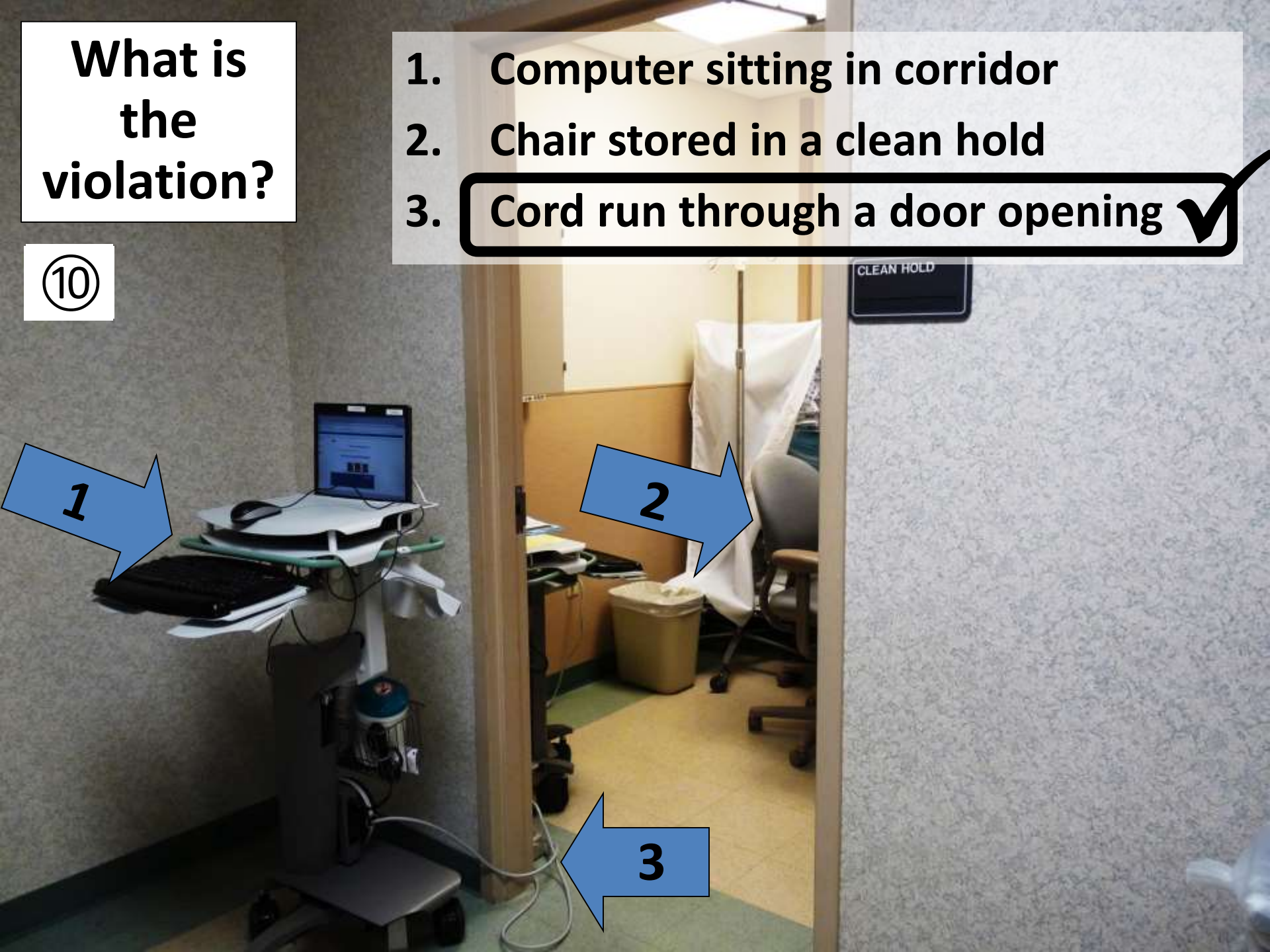
# What is the violation?

⑩



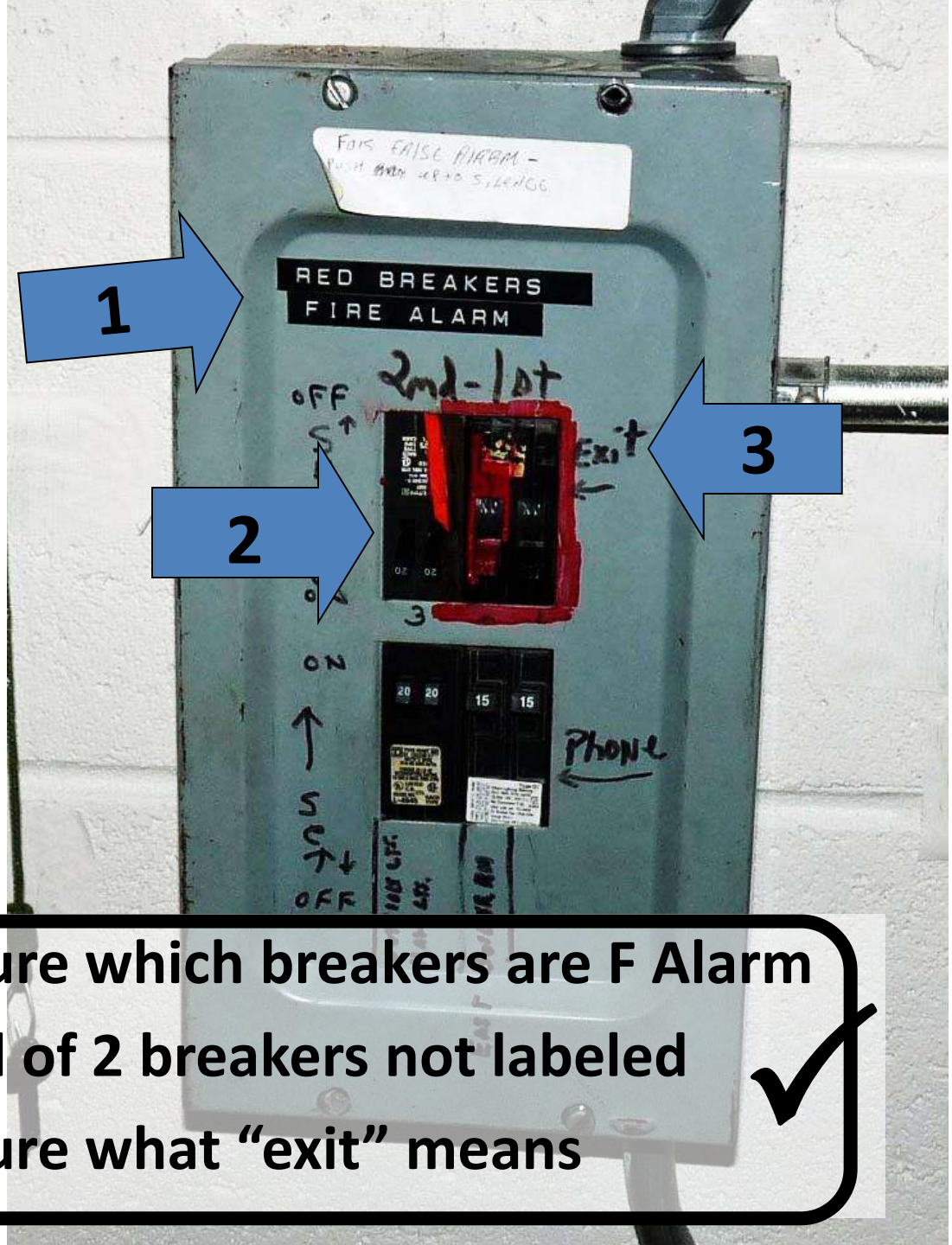

1. Power strip used for equip ✓
2. Hospital-grade plug not in HG outlet
3. Cords tangled & not secured


What is the violation?
⑩
1. Step stool in panel clearance space ✓
2. Chemical drum not in flam liq cab
3. PVC pipe not supported
1
2
3
Fill
HVAC Panel


What is the violation?
⑩
1. Computer sitting in corridor
2. Chair stored in a clean hold
3. Cord run through a door opening ✓
CLEAN HOLD
1
2
3

**What is the violation?**

⑩

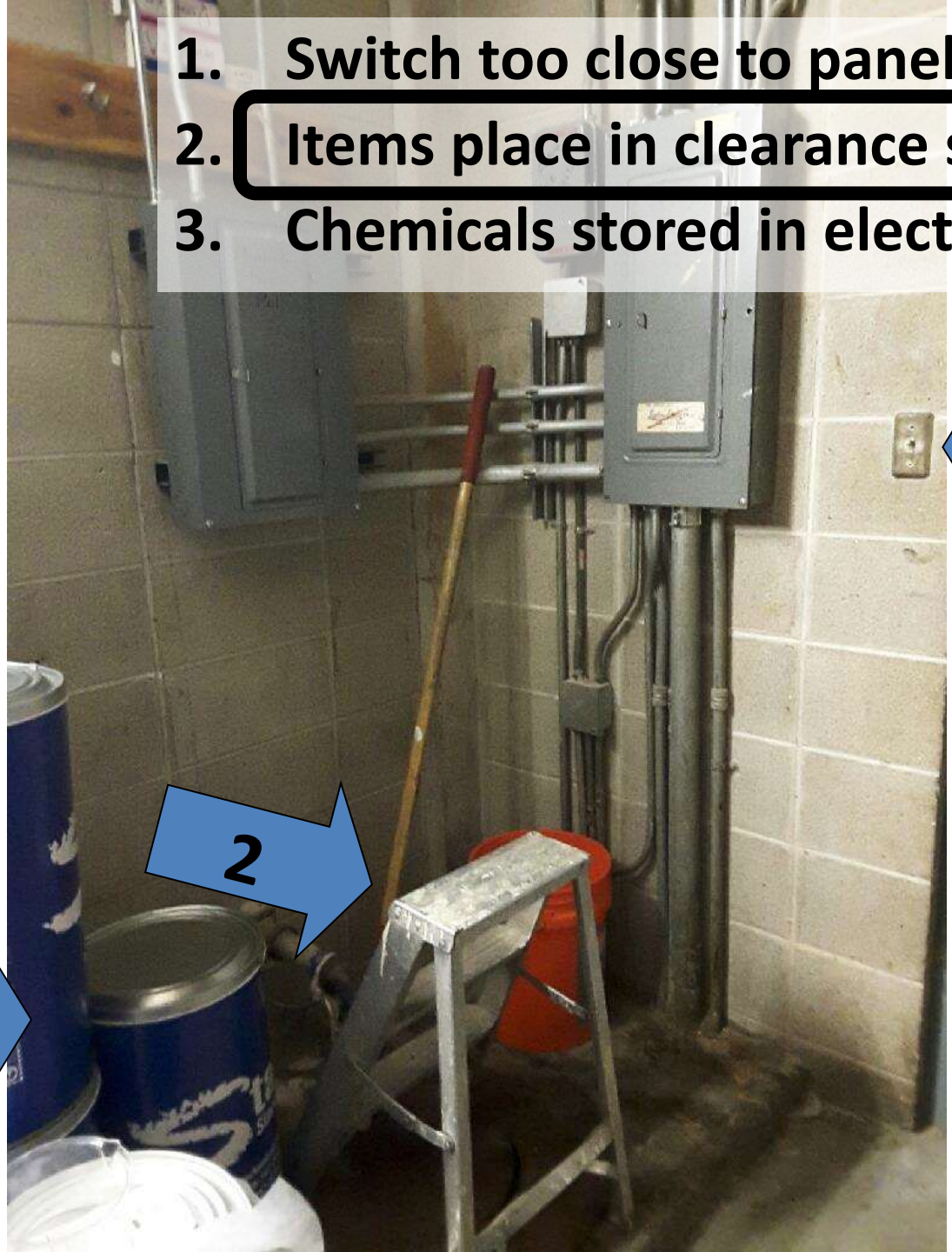



1. Unsure which breakers are F Alarm
2. Load of 2 breakers not labeled
3. Unsure what “exit” means

**What is the violation?**

⑩

1. Switch too close to panel
2. Items place in clearance space ✓
3. Chemicals stored in electrical room



# Some actual pictures to see if you can spot the issues

# You ARE the Inspector

PART 2

WHEA
Lunch & Learn

**Bill Lauzon**
**Heather Lauzon Werner**

**Lauzon Life Safety Consulting, LLC**

**Thurs Mar 10, 2016**
**11:30-1:00**