

## **Building Systems Inspectable Items**

Items to inspect for “Building Systems” are as follows:

- ❑ Domestic Water
- ❑ Electrical System
- ❑ Elevators
- ❑ Emergency Power
- ❑ Exhaust System
- ❑ Fire Protection
- ❑ HVAC
- ❑ Sanitary System

### ❑ **Domestic Water (Building Systems)**

Portion of the building system that provides potable water conditioning, heating, and distribution taking its source from outside the building and terminating in domestic plumbing fixtures. The system typically consists of water conditioners (filters and softeners), water heaters, transfer and circulating pumps, strainers, and connecting piping, fittings, valves, and supports.

**Note:** This does not include portion of water supply that connects to the heating and cooling system. Also, the delivery points of the system such as sinks and faucets in units or common areas.

This inspectable item can have the following deficiencies:

- Leaking Central Water Supply
- Misaligned Chimney/ Ventilation System
- Missing Pressure Relief Valve
- Rust/Corrosion on Heater Chimney
- Water Supply Inoperable
- *MSHDA: Domestic Water Line Insulation*

### ● **Leaking Central Water Supply (Building Systems - Domestic Water)**

**Deficiency Description:** You see water leaking from any water system component, including valve flanges, stems, bodies, hose bibs, or any domestic water tank or its pipe or pipe connections.

**Note:**

1. This includes both hot and cold water systems, but does not include fixtures. Address fixtures in dwelling units or common areas.

2. Some pumps and valves are designed to leak as a normal function, particularly in fire pumps, water pressure pumps, and large circulating pumps, and should be considered accordingly.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see that water is leaking.

**Comments**

If leaking water is a health and safety concern (i.e., is leaking on or near electrical equipment), you must record it manually in “Health and Safety: Electrical Hazards.”

*MSHDA Comment*

*If there is no hot and (or) cold water supply to a living unit and the Owner is responsible for the water, the unit fails HQS. If the tenant is responsible for the water utility, the tenant is responsible to solve the violation.*

- **Misaligned Chimney/Ventilation System (Building Systems - Domestic Water)**

**Deficiency Description:** The ventilation system on a gas-fired or oil-fired water heater is misaligned.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see any misalignment that may cause improper or dangerous venting of exhaust gases.

*MSHDA Comment*

*Note the area affected by the emissions.*

*MSHDA: Automatic vent damper is not functioning properly.*

OR

*Exhaust vent is not properly capped at roof allowing moisture into the vent.*

OR

*Vent is incorrect size or type for the application.*

- **Missing Pressure Relief Valve (Building Systems - Domestic Water)**

**Deficiency Description:** The pressure relief valve on the central hot water heating system is missing or does not extend to the floor.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** There is no pressure relief valve.

-OR

The pressure relief valve does not extend to the floor.

- **Rust/Corrosion on Heater Chimney (Building Systems - Domestic Water)**

**Deficiency Description:** The water heater chimney shows evidence of flaking, discoloration, pitting, or crevices.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** The water heater chimney shows evidence of flaking, discoloration, pitting, or crevices that may create holes that could allow toxic gases to leak from the chimney.

- **Water Supply Inoperable (Building Systems - Domestic Water)**

**Deficiency:** Water is not available.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** There is no running water in any area of the building.

*MSHDA Comment*

*HQS: If water is not available in a unit, it is a Fail item for the unit.*

- **MSHDA: Domestic Water Line Insulation (Building Systems - Domestic Water)**

*Deficiency Description: Water lines do not have insulation to keep water hot or vapor barrier to prevent water damage to surrounding surfaces due to condensation.*

*Level of Deficiency:*

*MSHDA: Insulation is missing at water mains and lines  $\frac{3}{4}$ " or more on hot water lines.*

OR

*Vapor barrier is missing at cold water lines resulting in condensation resulting in damage to or discoloration of local surfaces.*

□ **Electrical System (Building Systems)**

Portion of the building system that safely provides electrical power throughout the building. Includes equipment that provides control, protection, metering, and service.

**Note:** This does not include transformers or metering that belongs to the providing utility. Equipment that is part of any emergency power generating system. Terminal equipment such as receptacles, switches, or panel boards that are located in the units or common areas.

This inspectable item can have the following deficiencies:

- **Blocked Access/Improper Storage**

- Burnt Breakers
- Evidence of Leaks/Corrosion
- Frayed Wiring
- Missing Breakers/Fuses
- Missing Covers

- **Blocked Access/Improper Storage (Building Systems - Electrical System)**

**Deficiency Description:** A fixed obstruction or item of sufficient size and weight can delay or prevent access to any panel board or main power switch in an emergency.

**Note:** If the panel board or main power switch is locked but authorized personnel can quickly gain access, do not record it as a deficiency.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** One or more fixed items or items of sufficient size and weight impede access to the building system’s electrical panel during an emergency.

**Comments**

If the condition is a Health and Safety concern, you must record it manually as “Health and Safety: Flammable Materials.”

- **Burnt Breakers (Building Systems - Electrical System)**

**Deficiency Description:** Breakers have carbon on the plastic body, or the plastic body is melted and scarred.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see any carbon residue, melted breakers, or arcing scars.

- **Evidence of Leaks/Corrosion (Building Systems - Electrical System)**

**Deficiency Description:** You see liquid stains, rust marks, or other signs of corrosion on electrical enclosures or hardware.

**Note:** Do not consider surface rust a deficiency if it does not affect the condition of the electrical enclosure.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** Any corrosion that affects the condition of the components that carry current.

-OR

Any stains or rust on the interior of electrical enclosures.

-OR

Any evidence of water leaks in the enclosure or hardware.

*MSHDA: You note surface rust that does not affect the function of the equipment.*

- **Frayed Wiring (Building Systems - Electrical System)**

**Deficiency Description:** You see nicks, abrasions, or fraying of the insulation that expose wires that conduct current.

**Note:** Do not consider this a deficiency for wires that are not intended to be insulated, such as grounding wires.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see any nicks, abrasions, or fraying of the insulation that expose any conducting wire.

**Comments**

If the condition is a Health and Safety concern, you must record it manually as "Health and Safety: Electrical Hazards."

- **Missing Breakers/Fuses (Building Systems - Electrical System)**

**Deficiency Description:** In a panel board, main panel board, or other electrical box containing circuit breakers, you see an open circuit breaker position that is not appropriately blanked off.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see an open breaker port.

- **Missing Covers (Building Systems - Electrical System)**

**Deficiency Description:** The cover is missing from any electrical device box, panel box, switchgear box, or control panel with exposed electrical connections.

**Note:** If the accompanying authority identifies abandoned wiring, capped wires do not pose a risk, therefore, do not record this as a deficiency.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** A cover is missing, which results in exposed visible electrical connections.

*MSHDA: You see any missing electrical cover.*

- **Elevators (Building Systems)**

Vertical conveyance system for moving personnel, equipment, materials, household goods, etc.

This inspectable item can have the following deficiency:

- **Not Operable**

- **Not Operable (Building Systems - Elevators)**

**Deficiency Description:**

The elevator will not ascend or descend.

-OR-

The elevator door will not open or close.

-OR-

The elevator door opens when the cab is not there.

**Note:** Some elevators are designed/programmed for special applications--stopping at every floor, for example. For these special cases, the elevator is serving its designed purpose and is therefore not deficient.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** The elevator does not function at all.

-OR

The elevator doors open when the cab is not there.

*MSHDA: Elevator needs roller repair.*

OR

*Elevator does not stop level with floor by  $\frac{1}{4}$ " to  $\frac{3}{4}$ ". See Elevators in "Health and Safety" for an elevator that is misaligned with the floor by more than  $\frac{3}{4}$ ".*

OR

*You see damage to elevator controls, walls, ceiling, or floor surfaces.*

❑ **Emergency Power (Building Systems)**

Standby/backup equipment intended to supply illumination or power or both, (battery or generator set) during utility outage.



This inspectable item can have the following deficiencies:

- Auxiliary Lighting Inoperable
- Run-Up Records/Documentation Not Available

- **Auxiliary Lighting Inoperable (Building Systems - Emergency Power)**

**Deficiency Description:** Emergency lighting that provides illumination during power outages does not function, as it should.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** Auxiliary lighting does not function.

- **Run-Up Records/Documentation Not Available (Building Systems - Emergency Power)**

**Deficiency Description:** Records are not properly maintained or available.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** Current records--from the last 12 months--are lost, but older records are properly maintained and available.

**Level 3:** No records are available.

*MSHDA Comment*

*If the generator is on an automatic timer, site is to create a log of the run times and maintain 12 months worth on site.*

- **Exhaust System (Building Systems)**

The system used to primarily exhaust stale air from the building. Primarily from the kitchen and bathroom areas.

**Note:** This does not include elements related to the HVAC system.

This inspectable item can have the following deficiencies:

- Roof Exhaust Fans Inoperable

- **Roof Exhaust Fans Inoperable (Building Systems - Exhaust System)**

**Deficiency Description:** The ventilation system to exhaust kitchen or bathroom air does not function.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** The roof exhaust fan unit does not function.

- **Fire Protection (Building Systems)**

Building System designed to minimize the effects of a fire. May include the following: fire walls and doors, portable fire extinguishers, and permanent sprinkler systems.

**Note:** This does not include fire detection, alarm, and control devices.

This inspectable item can have the following deficiencies:

- **Missing Sprinkler Head**
- **Missing/Damaged/Expired Extinguishers**

- **Missing Sprinkler Head (Building Systems - Fire Protection)**

**Deficiency Description:** You see that a sprinkler head--or its components--connected to the central fire protection system is either missing, visibly disabled, painted over, blocked, or capped.

**Note:** Components include test plugs, drains, and test fittings.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** Any sprinkler head is missing, visibly disabled, painted over, blocked, or capped.

*MSHDA Comment*

*A sprinkler head is recessed into the wall or near an obstruction to the point that the spray pattern would not reach areas that should be covered by that head is "blocked".*

- **Missing/Damaged/Expired Extinguishers (Building Systems - Fire Protection)**

**Deficiency Description:** A portable fire extinguisher is not where it should be, is damaged, or the extinguisher certification has expired.

**Note:**

1. This includes missing/damaged fire hoses where there are fire cabinets.
2. For buildings with multiple fire control systems--standpipes, sprinklers, etc.-- 5% or less of the extinguishers for a given building may be missing, damaged, and/or expired. In such cases do not record as a deficiency.
3. If the inspection tag is missing during the REAC inspection, the accompanying authority may produce proof that the fire extinguisher certification is current. If you see such proof, do not record a deficiency for a missing tag.

**Level of Deficiency:**

**Level 1:** For a building with only one fire control system, 5% or less of the fire extinguishers are missing, damaged, or expired.

**Level 2:** For all buildings, 5-10% of the fire extinguishers are missing, damaged, or expired.

**Level 3:** For all buildings, more than 10% of the fire extinguishers are missing, damaged, or expired.

-OR

There is not an operable/non-expired fire extinguisher on each floor.

*MSHDA: Glass in extinguisher cabinet doors is missing or broken.*

*Note: If the condition is a Health and Safety concern, you must record it manually as "Health and Safety; Hazards."*

OR

*The tool used to gain access to the extinguisher is missing.*

### ❑ **HVAC (Building Systems)**

Portion of the building system that provides ability to heat or cool the air within the building. Includes equipment such as boilers, burners, furnaces, fuel supply, hot water and steam distribution, and associated piping, filters, and equipment. Also includes air handling equipment and associated ventilation ducting.

This inspectable item can have the following deficiencies:

- **Boiler/Pump Leaks**
- **Fuel Supply Leaks**
- **General Rust/Corrosion**
- **Misaligned Chimney/Ventilation System**

#### • **Boiler/Pump Leaks (Building Systems - HVAC)**

**Deficiency Description:** Water or steam is escaping from unit casing or system piping.

**Note:**

1. This does not include fuel supply leaks. See Building Systems - HVAC fuel supply leaks.
2. Also, do not include steam escaping from pressure relief valves.

**Level of Deficiency:**

**Level 1:** You see water or steam leaking in piping or pump packing.

**Level 2:** N/A

**Level 3:** Water or steam is leaking in piping or pump packing to the point that the system or pumps should be shut down.

#### **Comments**

If the condition is a Health and Safety concern, you must record it manually as "Health and Safety; Hazards."

#### • **Fuel Supply Leaks (Building Systems - HVAC)**

**Deficiency Description:** There is evidence that fuel is escaping from a fuel storage tank or fuel line.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** Any amount of fuel is leaking from the supply tank or piping.

*MSHDA Comment*

*If the condition is a health and safety concern, you must record it manually as "Health and Safety: Hazards - Other."*

- **General Rust/Corrosion (Building Systems - HVAC)**

**Deficiency Description:** The equipment or associated piping and ducting shows evidence of flaking, discoloration, pitting, or crevices.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** You see significant formations of metal oxides, significant flaking, discoloration, or the development of a noticeable pit or crevice.

**Level 3:** The equipment or piping does not function because of this condition.

**Comments**

If the condition is a health and safety concern, you must record it as "Health and Safety; Hazards."

- **Misaligned Chimney/Ventilation System (Building Systems - HVAC)**

**Deficiency Description:** The exhaust system on a gas-fired or oil-fired unit is misaligned.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see a misalignment of an exhaust system on a gas-fired or oil-fired unit that causes improper or dangerous venting of gases.

*MSHDA: Automatic vent dampers are not working properly.*

□ **Sanitary System (Building Systems)**

Portion of the building system that provides for the disposal of waste products with discharge to the local sewage system. Can include sources such as domestic plumbing fixtures, floor drains, and other area drains. Consists of floor drains and traps, collection sumps, sewage ejectors, sewage pumps, and collection piping, fittings, valves, and supports.

**Note:** This does not include site storm drainage. Refer to Site - Storm Drainage.

This inspectable item can have the following deficiencies:

- Broken/Leaking/Clogged Pipes or Drains (Sanitary System)
- Missing Drain/Cleanout/Manhole Covers
  
- **Broken/Leaking/Clogged Pipes or Drains (Building Systems - Sanitary System)**

**Deficiency Description:** You see that a drain is clogged or that components of the sanitary system are leaking.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** You see active leaks in or around the system components.

-OR

You see evidence of standing water, puddles, or ponding--a sign of leaks or clogged drains.

*MSHDA: You smell sewer gas, indicating that water in traps may have evaporated.*

OR

*You note that rubber fittings connecting piping are cracked and in danger of failing, even if no present leaks are noted.*

- **Missing Drain/Cleanout/Manhole Covers (Building Systems - Sanitary System)**

**Deficiency Description:** You see that a protective cover is missing.

**Note:** This also includes covers you see while walking the site.

**Level of Deficiency:**

**Level 1:** N/A

**Level 2:** N/A

**Level 3:** A protective cover is missing.

**Comments**

If the condition is a health and safety concern, you must record it manually as “Health and Safety: Air Quality.”

*MSHDA: Floor drain cover is wrong type for the application.*

