

# Carroll County Department of Fire & EMS Standard Operating Procedure

# **DOCUMENT DETAILS**

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Subject: Building Type & Use	Section: Fire/Rescue Operations
Authorized: Deputy Chief Paul Supko	Revision Date: N/A

Applicability: [X] Volunteer [X] Career

## I. PURPOSE

In the brief initial report (BIR), units shall provide the incident address's construction type and occupancy type. The inclusion and accuracy of this information in the BIR is essential. Knowing these items will drive the tactics and resource allocation of an incident. When provided effectively, these items provide a wealth of information beyond just building construction and occupancy type. Information may include:

- 1. Building construction materials, fuel load, and how fire will affect the building's structure.
- 2. Structural considerations that may affect how fire and smoke will move through the building.
- 3. How many occupants may be in the building and what the conditions are.
- 4. General floor plan or layout, potential building hazards, etc.

### II. DEFINITIONS

None

### III. PROCEDURES

# A. Construction Types

The following is a description and examples of the five construction types that should be included in your building size up. The focus should not be on using the "type" specifically, but rather providing a more detailed description that MAY give a better understanding or paints a better picture.

1. **TYPE I – Fire Resistive** – Generally found in high-rise buildings. It consists of concrete and protected steel support systems, walls, floors, and roof. It may also be found in some mid-rise or other large commercial buildings.

- 2. **TYPE II Non-Combustible** Typical modern commercial and mercantile buildings such as stores, warehouses, restaurants. These buildings are generally concrete walls and floors with unprotected steel support structures. The roof will likely be steel bar joist and sheeting covered with combustible material such as felt and tar.
- 3. **TYPE III Ordinary** –Generally older buildings such as strip centers, taxpayers, garden apartments, etc. These buildings usually have masonry or concrete-bearing walls with wood roofs, floors, and structural components.
- 4. **TYPE IV Heavy Timber** Seen in many older churches, barns or agricultural buildings, and older warehouses or commercial structures. Becoming more popular again and incorporated into restaurants, hotels, and even condos and single-family homes. These buildings have masonry walls like type III buildings, but the interior wood consists of heavy timber. In a heavy-timber building, a wood column cannot be less than 8" thick in any dimension, and a wood girder cannot be less than 6" thick. The floor and roof are plank board. One difference between a heavy timber type IV building and type III construction is that a heavy-timber type IV building does not have plaster walls and ceilings covering the interior wood framework.
- 5. **TYPE V Wood Frame** Typical construction for single-family homes, townhomes, and condominiums. Wood-frame construction is the most combustible of the five building types. This is because the interior framing, exterior walls, and structural support are usually all wood.

\*\*Additional details may provide a better understanding; here are a few examples:

"E21 on location of a three and a half story balloon frame construction dwelling believed to be sub-divided into apartments..."

"E21 on location of a two-story middle of the row, ordinary construction taxpayer, side alpha is access to a carry-out, second-floor apartment access is on the Charlie side..."

"E21 is on location side alpha of a two-story type III middle of the group rowhouse with a flat roof..."

# **B.** Occupancy Types

The following use and occupancy classifications are listed from the building codes and relate to the buildings' construction and fire code requirements. They are given here for guidance and understanding in determining an occupancy type to provide a background. These construction types affect the allowable construction materials, fire ratings, and protection systems of the building and therefore affect our building size-up considerations and tactical plan.

More specific common terms such as the examples below in parentheses should be used during size-up. Providing a basic description of the building occupancy provides an additional critical factor to consider as it relates to interior arrangement, rescue profile, fuel load, and other potential hazards.

# Code classification (Common terminology example) - Description

- 1. **Assembly (Theatres, churches, halls, restaurants, bars, casinos, nightclubs, bus stations)** Places where people gather together for civic or social reasons or for entertainment. "E21 on location side bravo of a two-story Type IV church..."
- 2. **Business** (Banks, Doctors office, real estate office) Office buildings where services are rendered or business is transacted for a service.

"E21 on location side alpha of a four-story Type II medical office building..."

3. **Educational (Schools, daycares)** - Assembly for educational purposes up to the 12<sup>th</sup> grade.

"E21 on location side alpha of a one-story wood-frame daycare center..."

4. **Factory and Industrial (Manufacturing facilities)** - Assembly, finishing, manufacture, and packaging of products.

"E21 on location side Charlie of a one-story Type II electronics manufacturing facility...."

5. **High Hazard (Physical or Health Hazard)** - Processing, manufacture, packaging, or storage of items that pose a high health or physical hazard.

"E21 on location side alpha of a seven-story coal-burning power plant..."

6. **Institutional (Hospital, Nursing home, prison)** - Facility that houses those with no self-preservation capability without assistance.

"E21 on location at the security gate of a five-story fire resistive prison...."

7. **Mercantile** (**Retail stores, gas stations, dealerships, etc**). - Places publicly available for the sale and purchase of goods.

"E21 on location side bravo of a one-story type II automotive parts and service center..."

8. **Residential (Hotels, Dorms, Apartments, Group homes)** - Structures used for sleeping purposes that are not institutional.

"E21 on location side alpha of a four-story wood frame center corridor apartment building..."

9. **Storage (Warehouses, storage units, etc.)** - Storage facilities not classified as a high hazard.

"E21 on location side alpha of a one-story type II carpet warehouse..."

10. Utility and Miscellaneous (Garages, Barns, sheds, carports, greenhouses, airport hangers)

"E21 on location of a one-story non-combustible 200 x 300 airplane hangar..."

## IV. RECISION

This Standard Operating Procedure rescinds all directives regarding Building Type & Use or similar content previously issued for personnel of the Carroll County Department of Fire & EMS.

# V. RELATED STANDARD OPERATING PROCEDURES / DOCUMENTS

- 1. Policy Incident Management System 4.1.1
- 2. Policy Radio Reports 4.1.3

## VI. ATTACHMENTS

None