MSFC Occupancies

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2020 Minnesota State Fire Code (MSFC)

- Hope you have your book with you today
- Or the electronic version at ICC’s website
  - It will be helpful to follow along
Learning Objectives

• Brief history of definitions and how they have evolved
• Identifying occupancy classifications and apply to buildings and uses
• Role of the architect and code official
• Why it is so important to get this right
• Understand change in use
Quick Reference to Occupancy Classifications

- Go to page xix of the 2020 MSFC
- Short list of most common uses

<table>
<thead>
<tr>
<th>Quick Reference to Occupancy Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OCCUPANCY CLASSIFICATIONS</strong></td>
</tr>
<tr>
<td>MN State Fire Code = 2020</td>
</tr>
</tbody>
</table>

Group A – Assembly (10 or more persons):
- A-1. Theaters (performing arts, shows, etc.)
- A-2. Dance and drinking (bars, restaurants, clubs)
- A-3. Auditoriums, meeting rooms, worship, libraries, reception, amusement, etc.
- A-4. Amusements, swimming pools, tennis courts (indoors, not covered)
- A-5. Steam, smoke shops (outdoor seating)

Group B – Business:
- Professional services
- Colleges, universities, classrooms
- Offices
- Clinics (including ambulances)
- Motor vehicle showrooms
- Electronic data processing
- Assembly – less than 50 persons

Group C – Educational (through 12th grade):
- Pre-school
- K
- C-1. Adult Day Care (occupant capable of personal care)
- Day Care – older children (see L-4 for younger)

Group D – Factory/Industrial:
- D-1. Metals Fabric (constructable materials):
  - Aircraft
  - Ammunition
  - Boxes
  - Trunk
  - Tires
  - Woodworking
- D-2. Low Hazard – Not a significant fire risk (e.g., non-construction materials):
  - Non-alcoholic beverages
  - Milk & Dairy
  - Canned products
  - Glass
  - Gypsum
  - Ice
- D-3. Metal Products (fabrication & assembly)

Group E – Industrial:
- E-1. Construction:
  - Metal framework
- E-2. Dwellings – Commercial buildings (light construction):
  - Light frame (Class 2 or 3 materials)
- E-3. Mobile home parks:
  - Mobile home parks (not considered
  - Commercially licensed, Class 2 or 3 materials)
- E-4. Medical facilities (corrosive, toxic and highly flammable materials)
- E-5. Cement factory

Group F – Institutional:
- F-1. High hazard (more than 16 persons):
  - Hospitals
  - Residential care facilities
  - Convalescent care
  - Special care
  - Industrial
  - Intermediate care facilities – Class A-2
- F-2. Low hazard (less than 16 persons):
  - Nursing homes
  - Senior housing
  - Residential care facilities – Class B-3
- F-3. Medium hazard (25 or less occupants):
  - Lodging houses
  - Group homes – Class A-2
  - Other care facilities (less than 25 occupants)
  - Supported living facilities
- F-4. Low hazard (5 or less occupants):
  - Lodging houses
  - Group homes – Class B-3
  - Other care facilities
  - Supported living facilities

Group G – Storage:
- G-1. Low hazard (less than 25 occupants):
  - Conventional materials
- G-2. High hazard (more than 25 occupants):
  - Metal frame
  - Ceramic, glass products
  - Plastic

Group H – Livestock:
- H-1. Hay barns
- H-2. Corn cribs
- H-3. Storage
- H-4. Grain elevators
- H-5. Tobacco storage

Group I – Miscellaneous:
- I-1. Private groups
  - Agricultural buildings
  - Greenhouses
  - Fish ponds
  - Traps
  - Trees
  - Other
Letter Designations in Front of Section Numbers

- Development Committees
  - See pages xxii and xxiii
  - No bracket = International Fire Code
  - [A] = Administrative Code
  - [BE] = IBC – Egress Code Development
  - [BG] = IBC - General Code Development
  - [BF] = IBC – Fire Safety Code Development
  - [M] = International Mechanical Code
  - [EB] = International Existing Building Code Development
History of Definitions

- 2009 IFC Introduced *italicized* terms
  - Not all definitions are italicized
    - Chapter 2 Unwanted fire
    - 401.3.1 Fire events. In the event an *unwanted fire* occurs on a property…
  - *Italicized terms*
    - Recommended reading
    - Don’t assume you understand the definition
  - *Examples*
    - 503.4.1. Traffic calming devices. Traffic calming devices shall be prohibited unless *approved* by the *fire code official*.
    - APPROVED. Acceptable to the *fire code official*. 


History of Definitions

• 2012 IFC all definitions moved to Chapter 2
  – 302.1 Definitions. These terms are defined in Chapter 2
    o BONFIRE
    o HI-BOY
  – 502.1 Definitions. These terms are defined in Chapter 2
    o AGENCY
    o FIRE COMMAND CENTER
  – 5302.1 Definitions. These terms are defined in Chapter 2
    o COMPRESSED GAS CONTAINER
    o NESTING
Occupancy Classifications

• Pages 38 to 45
Occupancy Classification

- Occupancy definition describing the use
- A list of uses under the definition includes this
  - “including, but not be limited to, the following:”
Who is responsible for defining the use?

- Minnesota licensed design professional
  - Minnesota Rule 1800.5200
- Code official’s role
  - Agree or disagree with the architect
  - Must get this right
  - Impacts many code sections
    - Especially Chapter 9 and 10
Assembly

• Important to read the general definition
• A number of exceptions
  – Small buildings or tenants
  – Small assembly spaces
  – Associated with Group E
  – Accessory with places of religious worship
Assembly

• Group A-1
• Group A-2
• Group A-3
• Group A-4
• Group A-5
Group A-1 Movie Theater
Group A-1 Ordway
Group A-2 Restaurant

Food and/or drinks consumed
Group A-2 Nightclub
Casino Gaming Areas
Group A-4 Arenas
A-4 State Fair Coliseum
Group A-4 becomes…
...Group A-5
Bleachers
A-5 Amusement Park
Group A-3 Museum
A-3 Places of Religious Worship
Family and Friends gathering
A-3 Lecture Hall
The Courtroom
Group B - Businesses
Ambulatory Care Facility *

- Buildings or portions of buildings
- Medical, surgical, psychiatric, nursing, or similar care
- Less than 24-hour basis
- Patients are rendered incapable of self-preservation by the services provided
  - It is not a Kidney dialysis facilities on the level of exit discharge
  - It is not sedation dentistry
3rd Floor Surgery Center
Group E - Education
**Day Care Facilities**

- Group E when there are 6 or more kids over 2-1/2 years of age
- In a building with 5 or fewer kids it is classified as part of the primary occupancy
- This same operation in a dwelling unit with 5 or fewer kids is classified as Group R-3 or shall comply with the residential code
Places of Religious Worship

- Accessory use for education rooms or auditoriums
  - When less than 100 per room or space
  - Part of the Group A-3

- Day care
  - When used during religious functions, part of A-3
• Group F-1 Moderate Hazard
Factory

- **Group F-2 Low Hazard**
  - Fabrication or manufacturing noncombustible materials
Hazardous Occupancies

- Manufacturing, processing, generation, or storage of materials inside buildings
- Pose physical or health hazard
- Exceed the MAQ per control area
  - Tables 5003.1.1(1) and 5003.1.1(2)
- On roofs or canopies is outdoor storage
- See 17 exceptions page 40
Hazardous

- Group H-1 *Detonation* (> speed of sound)
- Group H-2 *Deflagration* (< speed of sound)
- Group H-3 Physical hazard, support combustion
- Group H-4 Health hazard
- Group H-5 Semiconductor
  - See Chapter 27
- See Section 104.7.2 for technical assistance
Institutional

- Group I-1 – 17 or more supervised and cared for
  - Group R-4 6 to 16 residents
  - Group R-3 1 to 5 residents
- Group I-2 – Hospitals, nursing homes, SLF Class B-3
  - Medical treatment & incapable
- Group I-3 – Detention, Correctional, Jail
  - Conditions 1 to 5
  - Based on the occupant’s freedom to move about
- Group I-4 – Day care, adult and child
Group I-1 - 127 Units Ind. & AL / 43 Dementia Units
Chapter 2 – Definitions

**Group I-1 Conditions** (residential care facilities)

- **Condition 1**: Where all persons in custodial care are capable of responding and evacuating without assistance during an emergency

- **Condition 2**: Where one or more persons in custodial care require limited verbal or physical assistance to respond and evacuate during an emergency
63 Bed Nursing Home
Group I-2 Conditions (24 hour medical care - nursing homes, hospitals)

- **Condition 1:** Does not provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification (e.g. nursing homes)

- **Condition 2:** Provides nursing and medical care and could provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification (e.g. hospitals)
Duplex or Group R-4?
Group R-4 Conditions (residential care)

- Condition 1: Where all persons in custodial care are capable of responding and evacuating without assistance during an emergency

- Condition 2: Where one or more persons in custodial care require limited verbal or physical assistance to respond and evacuate during an emergency
Group R-3 or a House?
Group I-4 Day Care and Day Services

- Adult day services
- Child care centers

- Qualifications to be classified as Group E
  - This will have an impact on fire sprinkler protection in child care centers

- Adult day services go to Chapter 81
  - Defines when Group I-4 or Group E
ADULT DAY CARE CENTER OR ADULT DAY SERVICES CENTER*

A facility, licensed by the Department of Human Services under Minnesota Rules, parts 9555.9600 to 9555.9730, that provides a program of adult day care services to functionally impaired adults for periods of less than 24 hours per day in a setting other than a participant’s home or the residence of the facility’s operator.
Chapter 2 – Definitions

Group I-4, day care & day services facilities*

- Revised language for Classification as Group E
- Includes classification options from Chapter 81 for adult day care/day services
  - All persons capable of self-preservation, or
  - Not more than 50% incapable of self-preservation, and
    - Care rooms located on LED
    - Exits discharge direct to grade without intervening stairs
    - Fire alarm system including smoke detection in egress corridors
Residential

- Group R-1 Hotel, motel, bed & breakfast (6+), et al
  - People are transient in nature, ≤ 30 days
- Group R-2 more than 2 dwelling units
  - Non-transient, primarily permanent in nature, > 30 days
- Group R-4 with 6 to 16 residents
  - Receiving custodial care
  - Same Condition 1 and Condition 2 for Group I-1
- Group R-3 not classified as one of the others
  - Single family, two-family and townhouses
  - Licensed facilities and residential hospice <6
Residential

- Group R-4 with 6 to 16 residents
  - Receiving custodial care
  - Same Condition 1 and Condition 2 as for Group I-1
  - New Group R-4 will require sprinklers

- Group R-3 not one of the others
  - Single family, two-family and townhouses
  - Hospice with 5 or less
  - Two dwelling units above a store front
Chapter 2 – Definitions

Group R* (residential)

- Revised for clarity
- R-3 and R-4 care facilities
  - Group R-3 and R-4 occupancies located in a one- or two-family dwelling or townhouse and classified as a “dwelling unit” in Table 202.1:
    - Constructed in accordance with either the Building Code or the Minnesota Residential Code, and
    - Equipped with an automatic sprinkler system where required by Section 903.2.8.

Section 202
Group R* (residential)

- Group R-3 owner-occupied lodging houses
  Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer total occupants shall be permitted to be constructed in accordance with the MN Residential Code.
Townhouse

- A single-family *dwelling unit*
  - Group of three or more attached
  - Each unit extends from the foundation to roof
  - Open space on at least two sides
Supervised Living Facility *

SLF

- A facility in which supervision, lodging, meals provided
- Under the rules of the DHS and the MDH
  - Counseling and developmental habilitative or rehabilitative services are provided
  - To persons who are
    - Chemically dependent
    - Adult mentally ill
    - Physically or developmentally disabled
- 5 Classes of sub-definitions
SLF *

- 5 classifications
  - Class A-1 - 6 or less capable - R-3
  - Class A-2 - 7 or more capable - R-4
  - Class B-1 - 6 or less not capable - R-3
  - Class B-2 - 7 to 16 not capable - R-4
  - Class B-3 - 17 or more not capable - I-2
- Based on capability to respond to emergency
- Total number of occupants
- Occupancy classification based on Section 8104
Residential Hospice Facilities

- Chapter 81, Section 8103
- Group R-4 - 6 to 12 residents
- Group R-3 - 1 to 5 residents
Storage

- Group S-1 Moderate Hazard
Storage

• Group S-2 Low Hazard
Utility - Accessory
# Table 202.1: Care Facility Classifications

<table>
<thead>
<tr>
<th>Type of Licensed Facility</th>
<th>Number or Type of Recipients</th>
<th>IBC Occupancy Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child foster care</td>
<td><strong>Foster care</strong> 1–6 foster children without severe disability or assisted medical technology</td>
<td>R-3 Dwelling unit</td>
</tr>
<tr>
<td></td>
<td><strong>Foster care</strong> 1–4 foster children with medical or special care services</td>
<td>R-3 Dwelling unit</td>
</tr>
<tr>
<td>Housing with services establishment</td>
<td><strong>Housing with services establishment providing assisted living services</strong> 1–5 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025</td>
<td>R-3 Dwelling unit</td>
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<td><strong>Housing with services establishment providing assisted living services</strong> 6–16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025</td>
<td>R-4 Condition 2</td>
</tr>
<tr>
<td></td>
<td><strong>Housing with services establishment providing assisted living services</strong> &gt; 16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, Section 144D.025</td>
<td>I-1 Condition 2</td>
</tr>
</tbody>
</table>
### Changes:

- Merged adult day care and adult day services
- Adjusted for new “condition” definitions for Groups I-1 and I-2
- Added to table:
  - Mental health treatment programs (merged with chemical dependency programs licensed by DHS)
  - Added day training and habilitation programs (licensed by DHS)
  - Ambulatory care facility
  - Nursing home
  - Hospitals

### TABLE 202.1: CARE FACILITY CLASSIFICATIONS*

<table>
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<tr>
<td>Mental health treatment programs (merged with chemical dependency programs licensed by DHS)</td>
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<tr>
<td>Added day training and habilitation programs (licensed by DHS)</td>
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<tr>
<td>Ambulatory care facility</td>
</tr>
<tr>
<td>Nursing home</td>
</tr>
<tr>
<td>Hospitals</td>
</tr>
</tbody>
</table>
### TABLE 202.1: R-3 vs R-3 dwelling unit

<table>
<thead>
<tr>
<th>Boarding and lodging</th>
<th>( \leq 16 ) residents in sleeping rooms or ( \leq 2 ) dwelling units in one building</th>
<th>R-3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult foster care home</td>
<td>1–5 impaired adults</td>
</tr>
</tbody>
</table>

**Example:**

- A boarding and lodging facility in single family dwelling with 16 or fewer residents is classified as an **R-3**
  - Per 903.2.8, Group R-3 occupancies require sprinkler protection
- An adult foster care home with 1-5 impaired adults is classified as an **R-3 dwelling unit**
  - Per 903.8, a Group R-3 dwelling unit less than 4,500 ft\(^2\) is exempt from sprinkler requirements unless specifically required under condition of licensing
Classification Exercise

8 – 1,200 sf apartments

16 unit HWS - AL
<table>
<thead>
<tr>
<th>Strip Mall Mixed Use Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jake’s Subway</td>
</tr>
<tr>
<td>Seating for 20 and standing space 15</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Ice Manufacturing
Air Traffic Control Tower
Radio City Music Hall
Xcel Energy Center
Post Office
Motion Picture Filming
Semiconductor
Water Treatment Plant

Exceeds MAQ of 810 cu ft for toxic product
Senior Housing

3-story independent living apartments, assisted living, dementia units
Nursing Home
Looks like a Duplex?
Looks like?
Minneapolis Children’s
Child Care Center
Group U?
Quick Reference Guide to Care Facilities

- Developed by CCLD, MDH and DHS
- [2020-Quick-Reference-Guide.pdf](mn.gov)

FIRE CODE INFORMATION SHEETS

General information

The majority of the information sheets, policies and interpretations have not been updated to the 2020 Minnesota State Fire Code. The process to update will take some time to complete. When an information sheet, policy or interpretation has been updated, it will be noted with *2020 MSFC.

In addition to the information sheets below, this quick reference guide is for statues, rules and code information regarding care facilities in Minnesota.

If you have questions about an existing sheet, you can email the Fire Code Team.
Changes Coming to Assisted Living

- New law in 2019
- Statute 144G has been amended
- Effective August 1, 2021
  - MDH will license assisted living facilities
  - Housing with services establishments will go away
- SFMD has been working with MDH on amendments for
  - Fire drills and evacuations and training
  - Smoke alarm requirements for sleeping units and dwelling units
  - Fire extinguishers for Group R-3
Questions

Website: https://sfm.dps.mn.gov