

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.

- **Existing Code with Adjustments to the existing code will be highlighted in yellow.**

Numbers in the left column represent the ordinance change reference

43. That Section 501.3 is added to Section 501.0 and shall read as follows:

501.3 WALLS, VENEERS AND FLOORS

501.3.1 SINGLE FAMILY EXTERIOR VENEERS: All single family attached and detached residences shall contain a face brick or stone anchored veneer, with a minimum 2.625" thickness on a minimum of 90% of their first floor and walk out area/ground level elevations. Any other material exceeding the 10% for the remaining ground level wall surfaces shall be approved by the code official.

501.3.2 EXTERIOR WALLS ALL OTHER USES: All exterior walls shall be of non-combustible construction using solid masonry, or steel column and beam construction **or metal studs** with a veneer of decorative masonry, decorative architectural concrete panels or similar materials. The same material shall be used for all of the exterior walls of a building. **See Section 503.2.1 items #7 for wood framing & item #8 for metal wall studs.**

a. EXCEPTION:

Use Group R-1 buildings equipped throughout with an automatic fire sprinkler system per 903.3.1.1, may use a structurally engineered noncombustible exterior wall system when special inspections are performed by a State of Illinois Licensed Architect or Structural Engineer per Sections 104.4, 1704.1 and 1704.2 of this code. (Ord. 3994, 3-7-05)

b. Agricultural Canopies as allowed in Section 312.1 for an Agricultural Use and are not classified as a Tent may use a roll up type side wall material. Pliable material may only be lowered for protecting plant material during frost conditions when the canopy is not open to the public or occupied. Permanent Canopy construction and materials shall also comply with the Village Fire Code (VC 5-5). (Ord. 4342, 3-3-08)

Construction and maintenance approval of permanent canopies using fabric or pliable materials shall comply with all of the following conditions: (Ord. 4342, 3-3-08)

1. Special inspection reports must be submitted to the Village by a qualified inspection agency, a State of Illinois licensed architect or engineer or the manufacturer's representative stating the canopy was installed per installation requirements. (Ord. 4342, 3-3-08)
2. Special Inspection reports shall review the canopy for: (Ord. 4342, 3-3-08)
 - a. Structural integrity conformance to the design engineer's plan and Building Code.
 - b. Design materials used in compliance to the Building and Fire Codes.
 - c. All matters regulated by the Fire Code for a permanent canopy.

Citations will be issued to the land owner and a court appearance is required for violations of this ordinance without preliminary warnings. (Ord. 4342, 3-3-08)

See Sections 202, 312, 907.2 and Chapter 35 Appendix C of this ordinance for additional code references. (Ord. 4342, 3-3-08)

c. 1-story Business (B) Use Group occupancies with less than 5000 total square feet of floor area, allow a 1-hour Type V-A Construction Type with a decorative masonry veneer. Lot line setbacks and multiple buildings located on the same lot must conform with Fire Limits exception in section 503.2.1

GENERAL

501.3.3 FLOORS FOR USE GROUPS R-1 AND R-2: Floors in Use Groups R-1 and R-2 shall be precast or engineered reinforced concrete where separating tenant spaces. See Section 503.5.

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
Existing Code with Adjustments to the existing code will be highlighted in yellow.

Continued

EXCEPTIONS:

1. Floors of an R-1 Use Group building may use an engineered combustible floor framing system to separate tenant spaces. A minimum fire separation shall not be less than a one (1)-Hour fire resistance rated assembly when buildings are designed having a minimum Type of Construction per Section 503.5 of this code. (Ord. 4056, 7-19-05)

501.3.3 FLOORS FOR USE GROUPS R-1 AND R-2:

EXCEPTIONS: continued

Approved fire rated opening assemblies shall be limited to a maximum membrane penetration as allowed in Section 711.4.2 for the floor ceiling assembly area. A minimum Sound Transmission Classification shall be as indicated in Section 1206.2 and 1206.3 of this code. (Ord. 3994, 3/7/05)

2. Floors of an R-2 use group may use a non-combustible floor joist (metal bar joist) with a non-penetrated 2-hour fire resistive separation rating under the following conditions
 1. When the residential floor is not located above a garage floor or other more hazardous use.
 2. When the building floor area does not exceed the height and area limitations for a non-fire sprinkler protected building (see 903.1.2 & 903.2.7)
 3. When a drop ceiling is installed below the fire rated floor/ceiling assembly for the installation of plumbing, electrical and mechanical equipment to rooms

501.3.4 INTERIOR WALLS: Interior walls totally separating dwelling units in Use Group R-1 & R-2 shall be solid masonry.

EXCEPTION:

- a. Buildings with an approved automatic fire sprinkler system throughout may use a metal stud 3-wall system with a tested/listed 2-hour fire rating. (See Section 310.3 for intent).

b. R-1 HOTELS AND MOTELS

Hotel, Motel rooms and corridors of an R-1 Use Group building may be separated with a single non-combustible wall system having a one (1) hour fire resistance rating when the building has a minimum Construction of Type II-B or III-B (602.2 and 602.3) and is fully fire sprinkler protected per 903.2.7. (see Section 310.3.1). (Ord. 4056, 7-18-05)

Fire barrier wall partitions shall continue from a fire rated floor assembly below to a fire rated floor ceiling assembly above or to the roof deck above. Fire retardant sheathing shall be installed as described in Section 310.3. Wall penetrations shall be as specified in Section 711.3.1.1. The wall assembly shall be insulated to provide an STC rating per Sections 1206.2 and 1206.3.

In multi-story buildings, plumbing drain, waste and vent piping shall not be located within tenant wall fire separation assemblies. Plumbing drain, waste and vent piping shall be located in separate fire rated shafts of a two (2) hour fire rated assemblies per Section 707.

c. R-2 MULTI-FAMILY

Multi-family R-2 use groups may reduce the 2-hour fire rated 3-wall assembly to a 1-hour tested fire rating with no penetrations if the building is fully fire sprinkler protected in accordance with Section 903 and when a minimum STC sound ratings are provided in accordance with Sections 503.2.1 and 708.3.

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
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46. That the title of Section 503.0 and Table 503 shall read as follows:

SECTION 503.0 GENERAL HEIGHTS AND AREA LIMITATIONS AND FIRE LIMITS.

TABLE 503
ALLOWABLE HEIGHT AND BUILDING AREAS
Height limitations shown as stories and feet above grade plane.
Area limitations as determined by the definition of "Area, building," per story.

GROUP		TYPE OF CONSTRUCTION									
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V		
		A	B	A	B	A	B	HT	A	B	
HGT (ft) HGT (S)	UL	160	65	55	65	55	55	65	Not Permitted	35	
A-1	S	UL	5	3	2	3	2	3	Not Permitted	Not Permitted	
	A	UL	UL	15,500	8,500	14,000	8,500	15,000			
A-2	S	UL	11	3	2	3	2	3	Not Permitted	Not Permitted	
	A	UL	UL	15,500	9,500	14,000	9,500	15,000			
A-3	S	UL	11	3	2	3	2	3	Not Permitted	Not Permitted	
	A	UL	UL	15,500	9,500	14,000	9,500	15,000			
A-4	S	UL	11	3	2	3	2	3	Not Permitted	Not Permitted	
	A	UL	UL	15,500	9,500	14,000	9,500	15,000			
A-5	S	UL	UL	UL	UL	UL	UL	UL	Not Permitted	Not Permitted	
	A	UL	UL	UL	UL	UL	UL	UL			
B	S	UL	11	5	4	5	4	5	1	Not Permitted	
	A	UL	UL	37,500	23,000	28,500	19,000	36,000	4999		
E	S	UL	5	3	2	3	2	3	Not Permitted	Not Permitted	
	A	UL	UL	26,500	14,500	23,500	14,500	25,500			
F-1	S	UL	11	4	2	3	2	4	Not Permitted	Not Permitted	
	A	UL	UL	25,000	15,500	19,000	12,000	33,500			
F-2	S	UL	11	5	3	4	3	5	Not Permitted	Not Permitted	
	A	UL	UL	37,500	23,000	28,500	18,000	50,500			
H-1 503.5.2	S	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	
H-2 503.5.2	S	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	
H-3 503.5.2	S	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	
H-4 503.5.2	S	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	
H-5 503.5.2	S	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	
I-1	S	UL	9	4	3	4	3	4	Not Permitted	Not Permitted	
	A	UL	55,000	19,000	10,000	16,500	10,000	18,000			

I-2	S A	UL UL	4 UL	2 15,000	1 11,000	1 12,000	NP NP	1 12,000	Not Permitted	Not Permitted
I-3	S A	UL UL	4 UL	2 15,000	1 11,000	2 10,500	1 7,500	2 12,000	Not Permitted	Not Permitted
I-4	S A	UL UL	5 60,500	3 26,500	2 13,000	3 23,500	2 13,000	3 25,500	Not Permitted	Not Permitted
M	S A	UL UL	11 UL	4 21,500	4 12,500	4 18,500	4 12,500	4 20,500	Not Permitted	Not Permitted
R-1 Note a	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	Not Permitted	Not Permitted
R-2 Note a	S A	UL UL	11 UL	4 24,000	4 16,000	4 24,000	4 16,000	4 20,500	Not Permitted	Not Permitted
R-3 Height Note; See LDC (Ord. 3910)	S A	UL UL	11 UL	4 UL	4 UL	4 UL	4 UL	3 UL	3 7,000	2 7,000
S-1	S A	UL UL	11 48,000	4 26,000	3 17,500	3 26,000	3 17,500	4 25,500	Not Permitted	Not Permitted
S-2	S A	UL UL	11 79,000	5 39,000	4 26,000	4 39,000	4 26,000	5 38,500	Not Permitted	Not Permitted
U	S A	UL UL	5 35,500	4 19,000	2 8500	3 14,000	2 8,500	4 18,000	2 9,000	1 5,500

For SI: 1 foot = 305 mm, 1 square foot = 0.0929 m².

S = Number of Stories, A = Building Footprint or Horizontal Projection Area, UL = Unlimited.

See general exceptions to Table 503 for: height increase (504.2), street frontage area (506.2), area (506.3) and Unlimited area building (507)

LDC = LAND DEVELOPMENT CODE ARTICLE 6.

Note a. For interior walls and floors, see Sections 501.2 and 503.5.
b. For open parking structures, see Section 406.3
c. For private garages, see Section 406.1

47. That Section 503.2 and its Subsections are added and shall read as follows:

503.2 FIRE LIMITS: For the purpose of control of use and construction of buildings to prevent danger of or damage from fire, the code official may establish limiting districts designated "fire limits" and "outside fire limits," under the legal procedure of the jurisdiction for creating and establishing fire limits. All other areas not included in the fire limits shall be designated as outside the fire limits.

All real estate now included within the corporate limits of the Village of Orland Park, Illinois, and all real estate which may be hereafter included within the Village's corporate limits is hereby declared to be within the "fire limits," except real estate improved with single family detached dwellings and associated accessory buildings, and real estate improved with single family row dwellings where there is not a dwelling unit above another unit or use, and associated accessory buildings.

503.2.1 GENERAL: All buildings and structures, and all additions to existing buildings and structures, hereafter erected within the boundaries of the fire limits shall be of Type 1, 2A, or 3A construction as defined in Chapter 6 and regulated in Table 602; and shall be constructed within the height and area limitations of Table 503 except as herein provided. Open parking structures may be constructed as permitted under Section 406.0.

Within the "fire limits," no building or structure or part thereof shall hereafter be constructed, erected or

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
Existing Code with Adjustments to the existing code will be highlighted in yellow.

503.2.1 GENERAL: continued

installed unless the exterior walls thereof shall be constructed of **non-combustible material** or solid material: brick, stone, decorative masonry, decorative architectural concrete panels or similar materials or constructed of **non-combustible metal**, steel columns and beams with a veneer of anchored masonry, decorative architectural concrete panels or similar materials, except as hereinafter provided in subparagraphs 1 through 6, inclusive. The same material shall be installed on all of the exterior walls of the building.

EXCEPTION: Use Group R-1 buildings equipped throughout with an automatic fire sprinkler system per 903.3.1.1, may use a structurally engineered noncombustible exterior wall system when special inspections are performed by a State of Illinois Licensed Architect or Structural Engineer per Section 104.4, and Chapter 17 of this code. (Ord. 3994, 3-7-05)

This Solid Masonry requirement shall not apply to:

1. Multi-family garages. These may be of anchored brick veneer construction **and allowed to be of wood frame exterior walls** when located **10 feet or more from all property lines**. Less than a **10 feet setback** requires construction in accordance with the principle building as amended;
2. Temporary one-story frame construction shed for builders use may be of wooden construction;
3. One-story frame sheds accessory to residential uses as defined in the Land Development Code;
4. Wood fences not over six feet in height;
5. Industrial buildings. These may be constructed of metal siding under the following conditions:
 - a. The metal siding shall consist of panels described as Architectural Composite Panels, but not of the corrugated style or type;
 - b. The panels shall be factory assembled;
 - c. The panels shall have concealed fasteners;
 - d. The panels shall have an exterior protective finish with a guaranteed minimum 20-year protection color life.
 - e. A solid brick or solid decorative masonry knee wall shall be constructed to a minimum height of seven (7) feet on all sides of the building.
 - f. The knee wall shall enclose a minimum building floor area of 30,000 feet on all sides of the building.
 - g. When offices are built as part of or adjacent to the building, the wall material of the office areas shall be of the same material as the knee wall for the full height of the office areas.
6. Buildings over 5 stories or 60 feet in height when exterior walls have a tested 2 hour fire-resistance rated assembly. Protected openings are required per Section 503.2.3 and Section 705.3.
7. **Exterior walls for 1-story office buildings of less than 5000 square feet in gross exterior building footprint area are permitted within the fire limits under the following conditions:**
 - a. **Construction type must be a minimum of 5A (1-hour fire rating for structural members per Table 601).**
 - b. **Buildings exterior walls and their roof projection more than 30 inches, are not permitted to be located less than 30 feet from an adjacent structure on the same lot. An interior lot line setback shall not be less than 15 feet.**

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
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503.2.1 GENERAL: item # 7 continued

c. The occupant load of the entire building shall not exceed 50 persons.

8. Building exterior walls constructed of structural metal studs are allowed when structurally engineered by a State of Illinois Licensed Architect or Structural Engineer (also see Sections 104.4, 106.3.4.1 and 1704.1). Special inspections must be performed by an approved agency as specified in Section 1703 and inspection reports shall be submitted before any interior finishes for a rough or partial rough framing approval are requested. Plans and special inspections for metal studs shall include:
 - a. Metal wall design shall be in accordance with AISI-WSD for cold-formed steel studs, per Section 2210 for Light-Framed Construction.
 - b. Labeling of metal studs for the gauge/thickness on bearing wall conditions.
 - c. The connections for support and bracing of all members shall be installed as structurally designed to resist vertical and horizontal loads.
 - d. A statement of special inspections required by the responsible contractor as noted in Sections 1705 and 1706 of this code.
 - e. All exterior walls require an anchored masonry veneer as noted above and in Table 1405.2

65. That Section 708.1 General, shall read as follows:

708.1 FIRE PARTITIONS GENERAL

Wall assemblies of a minimum 1-hour fire rating shall be installed as required by Sections, 310.3, 402.7.2, 1004.3.2.1 and 302.3 shall comply with this section. These include:

1. Walls separating dwelling units (see variations in village amendments).
2. Walls separating sleeping units in Group R-1, R-2 and I-1 Occupancies (see variations in village amendments).
3. Walls separating tenant spaces in covered mall buildings.
4. Corridor walls as required by Section 1017.1.
5. Elevator lobby separation as required by Section 707.14.1.
6. Residential aircraft hangars.
7. See Table 601 Footnote "i"
8. Wall separating tenants in multi-tenant business and commercial buildings shall be of a 1-hour fire rated assembly. Buildings with 100% fire sprinkler protection may reduce the tenant wall fire rating to ½ hour and allow non-fire rated glass to be installed where facing open area lobbies accessible to all tenant space similar to a covered mall application.

(Ord. 3910, 7-19-04)

66. That Section 708.3 is revised and shall read as follows:

708.3 FIRE-RESISTIVE RATING OF FIRE PARTITIONS AND FLOORS

The fire-resistance rating of fire partitions shall be 1 hour.

EXCEPTIONS:

1. Corridor walls as permitted by Table 1017.1 EXCEPTIONS ONLY.
2. MULTIPLE SINGLE FAMILY DWELLINGS: Single family dwelling units (Use Group R-3) may be located adjacent to other single family dwelling units (Use Group R-3) provided each dwelling unit is completely separated from the adjacent dwelling unit(s) by fire separation wall(s) of not less than two hours fire-resistance rated construction as required by Section 310.3. The fire

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
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66.

708.3 FIRE-RESISTIVE RATING OF FIRE PARTITIONS AND FLOORS 2. Continued

separation wall shall not be penetrated. Single family dwelling units having independent means of egress when attached in this manner, shall be considered as one building classified as Use Group R-3 for the purpose of determining the applicable provisions of this code.

(3/07)

3. FLOORS FOR USE GROUPS R-1 AND R-2:

Floors in Use Groups R-1 and R-2 as specified in Section 501.3.3 shall be a precast or engineered reinforced concrete fire barrier of at least a two (2) hour fire resistance rating where separating guest rooms, tenant spaces, dwelling units and exit corridors. (See Section 503.2 concerning fire limits and restrictions).

EXCEPTIONS:

- a. Floors In Hotels or Motels of an R-1 Use Group building may be reduced to a combustible one (1) hour horizontal fire resistance rating as required by Section 711.3 when a building is fully fire sprinkler protected per Section 903.2.7 and is designed with a minimum construction of Type IIB or IIIB. (See Section 501.3.3) (Ord. 3994, 3-7-05; Amd Ord. 4056, 7-18-05).
- b. Floors of a multi-family (R-2) use group may use a non-combustible floor joist (metal bar joist) with a non-penetrated 2-hour fire resistive separation rating under all the following conditions when:
 1. The residential floor is not located above a garage floor or other more hazardous use.
 2. The building floor area does not exceed the height and area limitations when the building is not non-fire sprinkler protected per Sections 903.2.7 (as amended) and 903.3.1.
 3. A drop ceiling is installed below the fire rated floor/ceiling assembly for the installation of plumbing, electrical and mechanical equipment supply to rooms.
 4. An airborne sound transmitting (STC) rating of at least 60, and a structure borne (IIC) rating of 55 are provided.

(See Sections 406.2, 501.3.3 and 711.3 for references)

4. TENANT SPACE SEPARATIONS:

Walls and floor/ceilings separating tenants in multi-tenant business and/or commercial buildings shall be a 1 hour fire resistive rated assembly continuing through attic spaces tight to the roof deck or to a rated floor above. (Ord. 3910, 7-19-04)

Buildings with 100% fire sprinkler protection may reduce the tenant wall and floor fire ratings to $\frac{1}{2}$ hour and allow non-fire rated glass to be installed where facing open area lobbies accessible to all tenant space similar to a covered mall application. This reduction does not apply where sections of the code are specific to a certain use or application (example multi-family dwelling corridors)

95. That Section 907.2 and its Subsections shall read as follows:

907.2 FIRE ALARM AND DETECTION SYSTEM WERE REQUIRED:

An approved manual, automatic, or manual and automatic fire alarm system shall be provided in accordance with Sections 907.2.1 through Section 907.2.23. Where automatic sprinkler protection, installed in accordance with Section 903.3.1.1 or 903.3.1.2, is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required. An approved automatic fire detection systems shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall comply with Section 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in

sufficient quantity to actuate a smoke detector.

5-1-13 Building Code Changes. 6-22-09 Committee meeting to Board of Trustees.
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907.2 FIRE ALARM AND DETECTION SYSTEM WERE REQUIRED: continued

Fire Alarm and Detection systems are required in all buildings and/or portions thereof unless the building has 100% fire sprinkler system protection per this code.

EXCEPTIONS:

1. An Agricultural Canopy that is less than 8000 square feet in area of an Agricultural use not containing combustible storage except for plant sales, may be permitted without a fire alarm system when design complies with the Village Code and Land Development Code regulations. (Ord. 4342, 3-3-08)

See Sections 202, 312.1, 501.3.2, 3105, 2404.5 and Chapter 35 Appendix C for other code amendments. (Ord. 4342, 3-3-08)

2. Single story buildings less than 5000 square feet for gross exterior footprint area and with an occupant load of less than 50 persons are allowed with a local alarm only, when no other type of fire suppression system protection is required by this code. A local alarm does not apply to Institutional, residential or other hazardous uses.

907.2.10.2 POWER SOURCE:

In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for over current protection.

(3/08)

The Illinois Smoke Detector Act shall apply and take precedence where more restrictive to all residential units

EXCEPTIONS:

1. Smoke alarms are not required to be equipped with battery backup in Group R-1 where they are connected to an emergency electrical system.
2. Smoke alarms are permitted to be solely battery operated in existing buildings, buildings not served from a commercial power source and in existing areas where alterations or repairs regulated for Residential alterations and repairs and do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes.