

VILLAGE OF DOWNERS GROVE
Report for the Village Council Meeting

10/20/2015

SUBJECT:	SUBMITTED BY:
Municipal Code Amendments Chapter 7, Chapter 8, Chapter 10, Chapter 16	Stan Popovich, AICP Community Development Director

SYNOPSIS

Ordinances have been prepared amending the following Chapters of the Downers Grove Municipal Code:

- Chapter 7 – Buildings
- Chapter 8 – Business and Activity Licenses and Regulations
- Chapter 10 – Electricity
- Chapter 16 - Plumbing

STRATEGIC PLAN ALIGNMENT

The Goals for 2011-2018 include *Exceptional Municipal Services*.

FISCAL IMPACT

N/A

UPDATE & RECOMMENDATION

This was discussed at the October 13, 2015 Village Council meeting. Based on Council discussion staff contacted other DuPage County municipalities. Of the 21 contacted, 19 allow Type III construction and two prohibited Type III construction (Elmhurst and Bloomingdale), allowing only Type I and Type II.

Attached are staff responses to additional Council questions.

Staff recommends approval on the October 20, 2015 Active Agenda.

BACKGROUND

One of the high priority projects staff identified for 2015-2017 is to Review the Building and Development Permitting Process. One of the elements of this project was to review local amendments for improvement or elimination, while also creating a more business friendly environment. The following key concepts and strategies are the goals in this ongoing effort:

- Align the Village's regulations with comparable communities.
- Maintain long standing and recognized fire safety regulations.

- Provide code provisions that address local construction practices.
- Reduce the number of local amendments in order to follow the baseline codes representing recognized industry standards.

Key changes are summarized below.

Chapter 7 – Buildings.

Amendments to the 2006 International Building Code

These amendments pertain to construction type and fire protection measures, as summarized in the table below.

<u>Current Code Requirements (Local Amendment)</u>	<u>Proposed</u>
Considers parking garages to be subject to requirements for high-rise buildings for fire protection	Open parking garages (not walled in) are exempt from high-rise fire protection measures
Restricts use of Type III construction by zoning district and also reduced allowable height. Does not place fire protection restrictions on I-joists and open web wood trusses.	Allows Type III construction in all zoning districts, subject to fire protection measures. Allows I-joists and open web wood trusses only if rated for 1-hour fire resistance.
Requires Utility/Miscellaneous structures to have sprinklers if over 1,500 S.F.	Requires sprinklers for such structures only if over 5,000 S.F.
Requires all alarm systems to be upgraded to a system that would identify individual alarm locations on the alarm board (known as an ‘addressable’ alarm system)	Requires addressability only in new systems.

Chapter 10 – Electricity

Amendments to eligibility to receive an electrical permit.

- Permits for electrical work in the Village will continue to be issued only to qualified persons.
- The proposed amendment revises these qualifications to allow any of the following: An electrician’s license issued by a unit of local government in the State of Illinois; Successful completion of an electrical exam issued by an approved agency; Other qualification documentation deemed acceptable by the Building Official, including a valid 2016 Downers Grove Electrical License.

Chapter 8 – Business and Activity Licenses and Regulations

- Eliminate Village licensing for electrical contractors effective December 31, 2015. Existing licenses can be renewed and will remain valid through December 31, 2016. The safety and quality of electrical work in the Village will continue to be ensured through the permitting and inspection process codified in Chapter 10 of the Village Municipal Code.

Chapter 16 – Plumbing

Amendments to Illinois Plumbing Code to comply with State Law Conservation requirement

- 17 Ill. Adm. Code 3730.307 requires evidence of adoption of specific water conservation efforts by all Lake Michigan water permittees. One of these required conservation practices is adoption of ordinances requiring that new and replacement plumbing fixtures and irrigation controllers be a labeled WaterSense product, as specified by the USEPA.
- The proposed amendment will revise the current Illinois Plumbing Code to mandate this requirement and will be enforced on all applicable building permits.
- The USEPA states that WaterSense Products perform as well or better than their less efficient counterparts; are 20 percent more water efficient than average products in that category; realize water savings on a national level; and provide measurable water savings results.

ATTACHMENTS

Ordinance

WaterSense Program description from USEPA website

VILLAGE OF DOWNERS GROVE
COUNCIL ACTION SUMMARY

INITIATED: Community Development DATE: October 20, 2015
(Name)

RECOMMENDATION FROM: n/a FILE REF: _____
(Board or Department)

NATURE OF ACTION:

STEPS NEEDED TO IMPLEMENT ACTION:

- Ordinance
- Resolution
- Motion
- Other

Motion to adopt "AN ORDINANCE AMENDING CERTAIN PROVISIONS OF THE INTERNATIONAL BUILDING CODE", as presented.



SUMMARY OF ITEM:

Adoption of this ordinance shall amend certain provisions of the International Building Code.

RECORD OF ACTION TAKEN:

IBC Amend

ORDINANCE NO. _____

**AN ORDINANCE AMENDING CERTAIN PROVISIONS
OF THE INTERNATIONAL BUILDING CODE**

BE IT ORDAINED by the Village Council of the Village of Downers Grove in DuPage County, Illinois, as follows: (Additions are indicated by shading/underline; deletions by ~~strikeout~~):

Section 1. That Section 7.1102. is hereby amended to read as follows:

7.1102. International Building Code - Amendments.

The deletions from and modifications and amendments to the 2006 International Building Code as referred to in this Article are the following:

* * *

CHAPTER 4

Section 403.1 is amended by deleting the first paragraph in its entirety and by substituting in lieu thereof the following:

403.1 Applicability. The provisions of this section shall apply to buildings with an occupied floor located more than fifty-five (55) feet above the lowest level of Fire Department vehicle access as measured from grade to the floor elevation of the top occupied floor.

~~————All exceptions shall remain, however, Exception #2 shall be deleted in its entirety.——~~

Section 403.2 is amended by deleting the exceptions thereto in their entirety.

Section 403.12.1 shall be amended by deleting the same in its entirety and by substituting in lieu thereof the following:

403.12.1 Stairway communications system. See Section 907.2.12.3 for requirements.

Section 403.13 shall be amended by deleting the same in its entirety and by substituting in lieu thereof the following:

403.13 Smokeproof exit enclosures. Every required stairway serving floors more than fifty-five (55) feet above the lowest level of Fire Department vehicle access measured from grade to the floor elevation of the top occupied floor shall comply with Sections 909.20 and 1020.1.7.

Section 406.5.2 shall be amended by deleting the first paragraph in its entirety and by substituting in lieu thereof the following:

406.5.2 Canopies. Canopies under which fuels are dispensed shall have a clear, unobstructed height of not less than thirteen (13) feet six (6) inches to the lowest projecting element in the vehicle drive-through area. Canopy structures and their supports over pumps shall be of noncombustible materials. Plastic facing material shall comply with the following:

All exceptions shall remain, however, Exception #1 shall be deleted in its entirety.

IBC Amend

Section 414.5.4 shall be amended by deleting the "ICC Electrical Code" and by substituting in lieu thereof the following:

"National Electric Code as adopted and amended by the Village."

Section 415.6.4 shall be amended by deleting the "International Plumbing Code" and by substituting in lieu thereof the following:

"State of Illinois Plumbing Code as adopted and amended by the Village"

Section 415.8.2.8.1 is amended by deleting the words "ICC Electrical Code" and substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village".

CHAPTER 5

Table 503 is amended as follows:

1. Type V-A and V-B is not permitted for all use groups governed by this code in all zoning districts.
2. ~~Type III-A, III-B, and IV shall be limited to no more than thirty-five (35) feet in story height as defined by this code above the lowest level of Fire Department vehicle access for all use groups.~~
3. ~~Type III-A, III-B, shall not be permitted in the downtown business (DB) and downtown transition (DT) zoning districts.~~

Exception: Restoration or remodeling for existing non-conforming structures of type V-A, V-B, III-A, III-B shall be permitted when the project area does not exceed thirty-five percent (35%) of the total building square footage.

Section 504.2 shall be amended by adding the following provision at the end of the first paragraph:

~~"This section shall not be applied to Type III-B construction."~~

Section 506.1 shall be amended by deleting the first paragraph in its entirety and substituting in lieu thereof the following paragraph:

~~**506.1 General.** With the exception of Type III-B construction, the areas limited by Table 503 shall be permitted to be increased due to frontage and automatic sprinkler system protection in accordance with the following:~~

Section 507.2 is amended by deleting the same in its entirety.

Section 507.3 shall be amended by deleting the first paragraph in its entirety and substituting in lieu thereof the following paragraph:

~~**507.3 Sprinklered one story.** The area of a one-story, Group B, F, M or S building or a one-story Group A-4 building, of other than Type V and Type III-B construction, shall not be limited when the building is provided with an automatic sprinkler system throughout it in accordance with Section 903.3.1.1 and is surrounded and adjoined by public ways or yards not less than sixty (60) feet (18 288mm) in width.~~

Exception #2 is deleted in its entirety.

~~The first sentence of Exception #3 is amended to read as follows:~~

~~Group A-1 and A-2 occupancies of other than a Type III-B or Type V construction shall be permitted, provided:~~

Section 507.4 shall be deleted in its entirety and substituting in lieu thereof the following:

507.4. Two story. The area of a two-story, Group B, F, M or S building of other than a Type III-B or Type V construction shall not be limited when the building is equipped throughout with an automatic

IBC Amend

sprinkler system in accordance with Section 903.3.1.1, and is surrounded and adjoined by public ways or yards not less than sixty (60) feet (18 288 mm) in width.

Section 509.4 is amended to add the following exception:

Exceptions:

1. See Table 503 as amended.

~~**Section 509.5** is amended by deleting the same in its entirety.~~

Section 509.7 is amended to add the words "as amended" following the phrase "limitations in Section 503" in the second sentence of the first paragraph.

* * *

CHAPTER 9

Section 901.6 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

901.6 Supervisory Service.

All fire protection systems shall be supervised by a connection to the Village Operations Center in the manner specified by Section 17.58 of the Municipal Code. All alarm and detection services shall transmit alarm, supervisory, and trouble signals.

Section 901.6.2 is amended by deleting Exception #1 and Exception #2 in their entirety.

Section 901.6.3 is amended by deleting the Exception in its entirety.

Section 901.8 is hereby added as follows:

901.8 NFPA Standard editions. The following NFPA standards editions including all appendices and hereby adopted:

NFPA 13, the most current edition
 NFPA 13-D, the most current edition
 NFPA 13-R, the most current edition
 NFPA 14, the most current edition
 NFPA 20, the most current edition
 NFPA 25, the most current edition
 NFPA 96, the most current edition
 NFPA 30B, the most current edition
 NFPA 72, the most current edition

Section 903.2 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

903.2 Where Required. Automatic sprinkler systems shall be installed and maintained in full operating condition, as specified in this code, in all buildings and structures, including open parking structures, which exceed two stories or twenty-five (25) feet in height or which have a total area in excess of the applicable square footage listed in Table 903.

TABLE 903

Total area square footages above which installation of automatic sprinkler systems is required:

IBC Amend

Types of Construction					
<u>Use Group</u>	Type 1A, 1B	Type 2A, 2B	Type 3A, 3B	Type 4	Type 5A, 5B
A-1 Assembly, theaters	0	0	0	0	0 <u>Not Permitted</u>
A-2 Assembly, nightclubs and similar uses	0	0	0	0	0 <u>Not Permitted</u>
A-3 Assembly (lecture halls, recreation centers, terminals, restaurants other than night clubs)	0	0	0	0	0 <u>Not Permitted</u>
A-4 Assembly, churches	0	0	0	0	0 <u>Not Permitted</u>
A-5 Assembly	0	0	0	0	0 <u>Not Permitted</u>
B Business	1,500	1,500	1,500	1,500	0 <u>Not Permitted</u>
E Educational	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
F-1 Factory and industrial, moderate	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
F-2 Factory and industrial, low	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
H-1 High hazard, detonation hazards	0	0	0	0	0 <u>Not Permitted</u>
H-2 High hazard, deflagration hazards	0	0	0	0	0 <u>Not Permitted</u>
H-3 High hazard, physical hazards	0	0	0	0	0 <u>Not Permitted</u>
H-4 High hazard, health hazards	0	0	0	0	0 <u>Not Permitted</u>
I-1 Institutional, residential care	0	0	0	0	0 <u>Not Permitted</u>
I-2 Institutional, incapacitated	0	0	0	0	0 <u>Not Permitted</u>
I-3 Institutional, restrained	0	0	0	0	0 <u>Not Permitted</u>
I-4 Institutional,	0	0	0	0	0 <u>Not Permitted</u>
M Merchantile	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
R-1, 2, 3, 4 (except detached one and two-family)	0	0	0	0	0 <u>Not Permitted</u>
S-1 Storage, moderate	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
S-2 Storage, low	2,500	2,500	2,500	1,500	0 <u>Not Permitted</u>
U Utility, misc.	1,500 <u>0</u>	1,500 <u>0</u>	1,500 <u>0</u>	1,500 <u>0</u>	0 <u>Not Permitted</u>

Section 903.2.1 through Section 903.2.9.1 are hereby deleted in their entirety.

IBC Amend

Section 903.2.10.1 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

903.2.10.1 Stories and basements without openings. An automatic sprinkler system shall be installed throughout every story and basement of all buildings in accordance with Table 903.

Section 903.2.10.1.2 is hereby deleted in its entirety.

Section 903.2.10.1.3 is hereby deleted in its entirety.

Section 903.2.10.3 is amended by deleting Exception #2 and Exception #3.

Section 903.3 shall be deleted in its entirety and substituting in lieu thereof the following:

903.3 Installation requirements. Automatic sprinkler systems shall be designed and installed in accordance with Section 903.3.1 through Section 903.3.7. In addition, a check valve shall be provided in all sprinkler risers.

Section 903.3.1 is amended by adding the following at the end of the paragraph:

The use of XL thin-wall pipe is prohibited.

Section 903.3.1.1.1 is amended by omitting Condition #4 and adding in lieu of the following exception at the conclusion thereof:

"4. Sprinklers may not be required in attics, crawl spaces, floor ceiling spaces, and other concealed spaces that are not used or intended for living purposes or storage if approved by the code official."

Section 903.3.2 is amended by adding the following condition:

"4. All business and assembly occupancies."

Section 903.3.5 is amended by deleting the words "International Plumbing Code" and substituting in lieu thereof the following:

"State of Illinois Plumbing Code as adopted and amended by the Village"

Section 903.3.5.3. is amended by adding the following section:

903.3.5.3 Post Indication Valve Prohibited. The use of post indicator valves and wall post indicator valves are prohibited.

Section 903.4 is amended by deleting Exception #2 through Exception #7.

Section 903.6 is hereby added as follows:

903.6 Hydraulic information and nameplate. For sprinkler drawing review and approval, a copy of the hydraulic calculations sealed by the fire protection engineer, shall be submitted for each calculated area. For full approval of the system, a copy of each hydraulic nameplate must be submitted.

Section 904.3.1 is amended by deleting the words "ICC Electrical Code" and substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village"

Section 905.2.1 is hereby added as follows:

905.2.1 Fire hose valve system. The fire hose valve piping system shall be:

1. A separate riser piping system from the domestic water service.
2. Hydraulically calculated for a minimum of 250 gpm at 75 psi at the most hydraulically remote fire

IBC Amend

hose valve.

3. Where system pressures exceed 100 psi, provide Potter reduced pressure field adjustable type valves.

Section 905.3.1 is amended by deleting "30 feet (9144 mm)" and by substituting in lieu thereof the following:
"22 feet"

Section 905.3.2 is amended by deleting the exceptions in their entirety.

Section 905.4 is amended by adding the following:

7. The number of risers for multi-story buildings shall be such that all parts of every floor area can be reached by a 30-foot hose stream from a nozzle attached to not more than 100 feet of hose connected to a riser outlet. Standpipe hose connections shall be required to be located in enclosed stairways at each level in multi-story buildings.

8. In all warehouse storage areas where storage exceeds twelve (12) feet in height, provide 2-1/2" fire hose valves with 1-1/2" reducer to a 1-1/2" connection. Locate the valves at each door entrance to the warehouse and /or storage area. Provide additional 2-1/2" fire hose valves throughout the space so that no portion of the warehouse/storage area is more than one hundred twenty (120) feet maximum travel distance to a fire hose valve.

Section 905.7.3 is amended by adding a new section as follows:

905.7.3 Hose connection within the cabinet. The hose connection shall be not more than 5 feet above the floor and consist of a 2 1/2" size, with valves and threads in conformance with Village standards.

Section 905.7.3.1 is hereby added as follows:

905.7.3.1 Additional/alternate hose requirement. An additional or alternate hose connection consisting of one hundred (100) feet of 1-1/2" fire hose, shut-off valve, nozzle, couplings, rack or cabinet may be required as determined by the code official.

Section 907.1.2.1 is hereby added as follows:

907.1.2.1 Addressable fire alarm systems. All new fire alarm systems shall be of the addressable type.

Section 907.1.2.2 is hereby added as follows:

907.1.2.2 Separate zones required. Manual fire alarm pulls, audio visuals, and other detection devices shall be on separate zones per floor of a multi-story building.

Section 907.2 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

907.2 Where Required. An approved manual and automatic fire alarm system installed in accordance with NFPA 72 shall be provided in all new buildings, structures, and additions governed by this code. For existing buildings, the requirements of the International Fire Code, Section 907.3, as amended, shall apply. The automatic fire detectors shall be smoke detectors. Where ambient conditions prohibit installation of automatic smoke detection, other automatic fire detection shall be allowed.

Exception: Fully Sprinkled Buildings. Detection shall follow International Fire Code ~~970.3~~**907.3** in Chapter 17 of the Downers Grove Municipal Code.

Section 907.2.1 through Section 907.2.10.4 are amended by deleting the same in their entirety.

Section 907.2.12 is amended by deleting "75 feet (22 860 mm)" and substituting the following in lieu thereof:
"55 feet"

Section 907.2.12 is further amended by deleting Exception #2 through Exception #5 in their entirety.

IBC Amend

Section 907.2.12.3 is amended by deleting the first and second sentences of the first paragraph in their entirety and by substituting in lieu thereof the following:

907.2.12.3 Fire department communication system. An approved two-way hard-wired and radio fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 911 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, building engineer's office, remote alarm panel and remote sprinkler riser locations, areas of refuge and inside enclosed exit stairways.

Section 907.2.12.3 is further amended by deleting the exception.

Section 907.2.12.3.1 is hereby added as follows:

907.2.12.3.1 Communication system equipment. The two-way hard-wired communications system shall consist of a telephone system with plug-in handsets capable of use in the designated jacks. Location of the jacks, zoning of the two-way system, and the number of handsets required is subject to review and approval by the Fire Department for site specific conditions.

Section 907.2.12.3.2 is hereby added as follows:

907.2.12.3.2 High rise wireless communication system standards and testing. Minimum standards for wireless radio communication systems design and testing shall be obtained from the Fire Prevention Bureau and consist of the following:

1. A professionally engineered system shall be capable of transmitting at a minimum of -90 decibel milliwatt (dBm) for over 90% of in-building coverage. The owner shall furnish a test report upon completion of the system installation verifying compliance with this requirement.
2. The system shall be capable of operating on an independent battery and/or generator system for a period of at least ~~twelve~~ twelve (12) hours without external power input. The battery system shall automatically charge in the presence of external power input. There shall be no connectivity between the radio system and fire alarm system.
3. Proof of maintenance and an annual inspection by a qualified radio technician shall be provided to the fire department through a certificate of annual inspection.
4. Village personnel shall have the right to enter onto the property to conduct field testing to be certain that the required level of radio coverage is present.
5. The property owner shall be responsible for repairs, replacement, or upgrades to the system as directed by the Village should the system fail or no longer function.

Section 907.2.18.1 is amended by deleting the phrase "or similar rooms" and adding the following to #1 after the word "machine": "fire alarm room and sprinkler room".

Section 907.2.19 is amended by adding the words "and automatic fire detection system" after the words "manual fire alarm system".

Section 907.5 is amended by deleting the words "ICC Electrical Code" and substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village"

Section 907.8.2 is amended by deleting "75 feet (22 860 mm)" and substituting the following in lieu thereof: "55 feet"

Section 907.14 is amended by ~~by~~ deleting the same in it's entirety are substituting in lieu thereof the following:

IBC Amend

907.14 Monitoring. All alarm and detection systems as described in Section 907 of this code shall be supervised by a connection to the Village Operations Center per the requirements of Section 17.58 of the Municipal Code and shall transmit alarm, supervisory, and trouble signals.

Exceptions:

1. Supervisory service is not required for automatic sprinkler systems in one- and two-family dwellings.
2. Any property within the municipal limits of the Village which is under the jurisdiction of a fire protection district organized pursuant to state law shall connect to the alarm receiving panels of the fire protection district and must be approved by the Village.

Section 909.11 is amended by deleting the words "ICC Electrical Code" and substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village"

Section 909.12.1 is amended by deleting the words "ICC Electrical Code" and by substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village"

Section 909.16.3 is amended by deleting the words "ICC Electrical Code" and substituting in lieu thereof the following:

"National Electrical Code as adopted and amended by the Village"

Section 911.1 is amended by deleting 12 in its entirety and by substituting in lieu thereof the following:

911.1 Features.

12. A complete set of fire alarm plans, specifications, instruction manual, and building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire fighting equipment, and fire department access.

Section 911.1 is further amended by adding the following:

16. Handsets for the communications system, properly labeled, and in locked box(es).
17. A current list of key personnel with phone numbers.
18. A number of complete sets of keys for the building, elevators, alarm system, and other locked systems as specified by the Fire Department.
19. A high-rise equipment box secured in close proximity to the fire command room. Box and content per the Fire Department's specifications.

Section 912.1 is amended by deleting the same in its entirety and substituting in lieu thereof the following:

9.12.1 Installation. Fire Department connections shall be installed in accordance with the NFPA standard applicable to the system design and shall comply with all applicable requirements of the Municipal Code.

Section 912.1.1 is hereby added as follows:

912.1.1 Yard hydrants. Fire hydrants shall be provided around the perimeter of the building in three hundred (300) feet increments. A municipal fire hydrant shall be located within one hundred (100) feet of the fire department connection on the fire protection water supply to the building. All locations are subject to review and approval by the code official for site specific conditions.

Section 912.1.1.1 is hereby added as follows:

912.1.1.1 Hydrant testing. Yard hydrants shall be tested annually and a report must be submitted to the Fire Department for review and approval.

IBC Amend

Section 912.1.1.1.1 is hereby added as follows:

912.1.1.1.1 Stortz connections. For buildings with large sprinkler systems or water demands as determined by the code official, a minimum of a five (5) inch STORTZ connection is required.

Section 912.5 is amended by deleting the words "International Plumbing Code" and substituting in lieu thereof the following:

"State of Illinois Plumbing Code as adopted and amended by the Village"

Section 913 FIRE PUMPS is hereby added

Section 913.1 is hereby added as follows:

913.1 Fire pump. When a fire pump is installed, it shall operate automatically at all times by connection to an automatically switched emergency power generator sized per the requirements of the National Electrical Code.

Section 913.2 is hereby added as follows:

913.2 Fire pump test headers and valves. Where fire pumps are installed, an outside test header and an OS & Y control valve is required.

Section 913.3 is hereby added as follows:

913.3 Fire rating for valve room and fire pump rom. All rooms containing sprinkler valve equipment and fire pumps shall be separated from adjoining spaces with a minimum of 2-hour rated assemblies.

Section 913.4 is hereby added as follows:

913.4 Access for valve room and fire pump room. A minimum of two-3 foot wide, 1-hour rated doors shall provide access to the valve and fire pump room, located at an interior and exterior wall of the building.

* * *

CHAPTER 23

Section 2303.1.2 shall be amended to add the following:

Floor/roof assemblies utilizing wood I-joists, or similar products, shall require a minimum 1-hour UL fire resistance rating design or equivalent.

Section 2303.4.1 shall be amended to add the following:

Floor/roof assemblies utilizing wood trusses shall require a minimum 1-hour UL fire resistance rating design or equivalent.

Section 2305.2.4.1 is hereby deleted in its entirety.

Section 2305.3.11 is hereby deleted in its entirety.

Section 2307.1.1 is hereby deleted in its entirety.

Section 2308.12 is hereby deleted in its entirety.

Section 2308.12.1 is hereby deleted in its entirety.

IBC Amend

Section 2308.12.2 is hereby amended to delete the exceptions.

Table 2308.12.4 is hereby deleted in its entirety.

Section 2308.12.6 is hereby deleted in its entirety.

Section 2308.12.9 is hereby deleted in its entirety.

* * *

Section 2. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3. That this ordinance shall be in full force and effect from and after its passage and publication in the manner provided by law.

Mayor

Passed:

Published:

Attest: _____
Village Clerk

1\mw\Ord.15\IBC-Short

Staff Responses to Council Questions

Beyond fire life safety, my questions regarding type III include

- *Longevity and the ability to maintain value over several decades*
- *Soft "squishy" floors*
- *Sound proofing*
- *Increased risk of total loss in the event of a smallish fire”*

Longevity and the ability to maintain value over several decades

As materials go, concrete and masonry are expected to last longer than wood; however the longevity and value of a building over time is more often a case of functional or aesthetic obsolescence than degradation of the actual materials. Buildings are typically demolished not because their materials have become structurally unsound but rather because there is an economic redevelopment desire for a new building to take its place that represents a higher and better use of the available land.

Soft “squishy” floors:

Section 1604.3 of the Building Code limits the allowed deflection, or bounce, of a floor. The bounce that may be felt in a floor assembly is a product of the deflection or bending of the structural floor member. Lighter weight structural floor members bounce more than heavier ones. Wood members bounce more than lightweight steel joists, and lightweight steel joists bounce more than reinforced concrete floor slabs. Regardless of the material used, floors must fall under the maximum permitted bounce in Section 1604.3 of the code.

Sound proofing:

Staff does not expect the type of construction to significantly affect soundproofing performance. Soundproofing of both Type II and Type III buildings should be very similar. Section 1207 of the Building Code limits the amount of sound transmission. Sound transmission through walls and floors is regulated between adjacent dwelling units and between dwelling units and public spaces. Regardless of the construction type, the same sound transmission standards must be met. There are two types of sound transmission that are regulated: air-borne sound and structure-borne sound. Each has different standards to be met. In general, air-borne sound (loud music) travels easier through lighter weight assemblies like wood or metal stud walls while structure borne sound (heels on a floor) travels easier through denser assemblies like concrete floors. The inclusion of a sound insulating material in the cavity of wall, floor and ceiling assemblies is the primary method for achieving compliance with the sound transmission standard.

Increased risk of total loss in the event of a smallish fire:

While the risk of property damage due to fire is less in Type II buildings than in Type III, the risk of a total loss in the event of small fire is extremely low in both construction types when fire sprinklers are installed. Fire sprinklers are required to be installed in both Type II and Type III buildings pursuant to Village Code.

By definition the Construction Types represent the level of resistance to fire. Type I is therefore the most fire-resistant and Type V is the least. Automatic fire sprinklers greatly enhance the ability of a structure, of any construction type, to withstand fire and prevent total loss. Automatic fire sprinklers are required in all residential, assembly, institutional, and hazardous uses regardless of size of structure. Business uses over 1,500 square feet would require sprinklers as would all other uses over 2,500 square feet. The only exception is the proposed increase to 5,000 square feet for Utility and Miscellaneous structures. The additional fire protection measures being proposed on wood trusses and wood I-joists would further mitigate the risk of total loss by giving more time for fire fighting efforts.