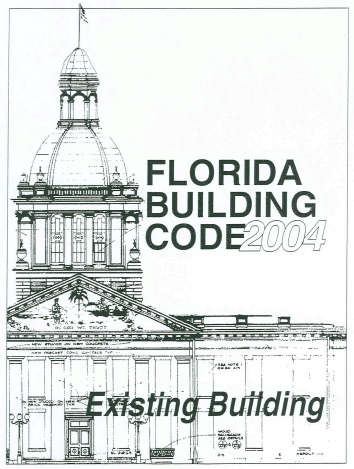
2004 Florida Building Code, Building
Building/Structural Summary

50-minutes (1 CEH)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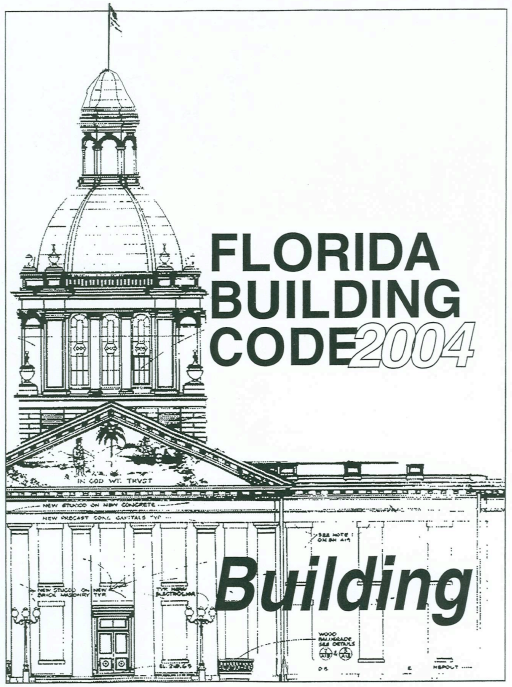
CODE2004
Existing Building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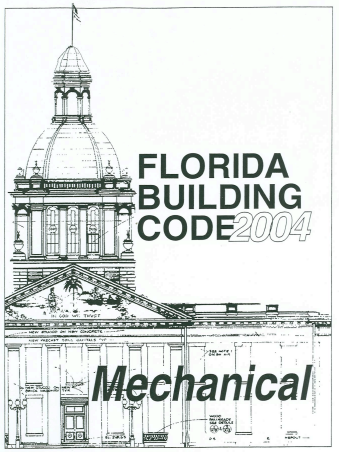
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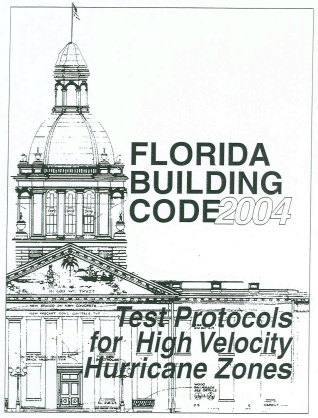
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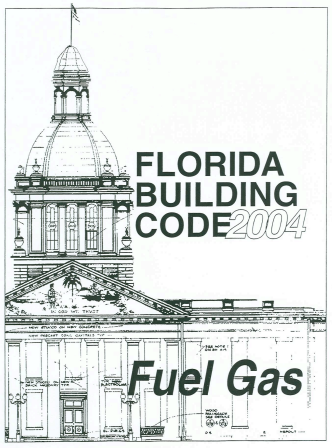
Test Protocols
for High Velocity
Hurricane Zones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BUILDING
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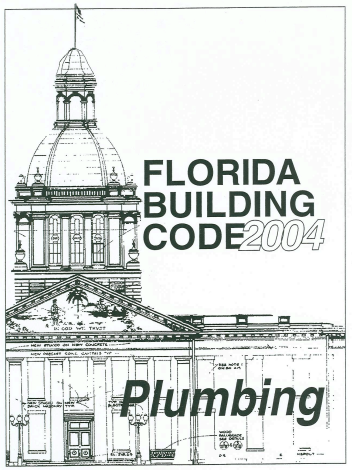
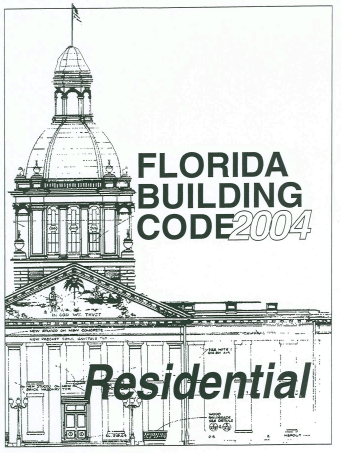
Fuel Gas


FLORIDA
BUILDING
CODE2004
Plumbing


FLORIDA
BUILDING
CODE2004
Residential

Building/Structural Summary

- The following Summary of the *Florida Building Code, Building* provides an overview of changes from the 2001 *Florida Building Code*. The changes are extensive because:
  - The 2003 *International Building Code, Building* is the base code (new for the 2004 version of the *Florida Building Code*)
  - One and two family and townhouse construction will comply with the **2004 *Florida Building Code, Residential,*** which uses the 2003 *International Residential Code* as the base code (new)

Building/Structural Summary

- It is **important** that one and two family and townhouse construction follow the provisions in the 2004 *Florida Building Code, Residential*.
- An overview of the *Florida Building Code, Residential* is separate and provided in:
  - **2004 *Florida Building Code, Residential* Technical Core (4-hour course)**
  - **Summary of the 2004 *Florida Building Code, Residential* (1-hour course)**

Building/Structural Summary

- The *Florida Building Code, Building* provisions apply to every building except:
  - Detached one- and two-family dwellings, and townhouses of not more than 3 stories
    - Refer to the *Florida Building Code, Residential*
  - Existing buildings
    - Refer to the *Florida Building Code, Existing Buildings*.

Building/Structural Summary

- The *Florida Building Code, Residential* refers to the following references in the *Florida Building Code, Building*
  - Chapter 1: Administration
    - Defers to *Florida Building Code, Building,* Chapter 1: Administration
  - Chapter 11: Energy Efficiency
    - Defers to *Florida Building Code, Building*, Chapter 13: Energy Efficiency

Chapter 1: Administration

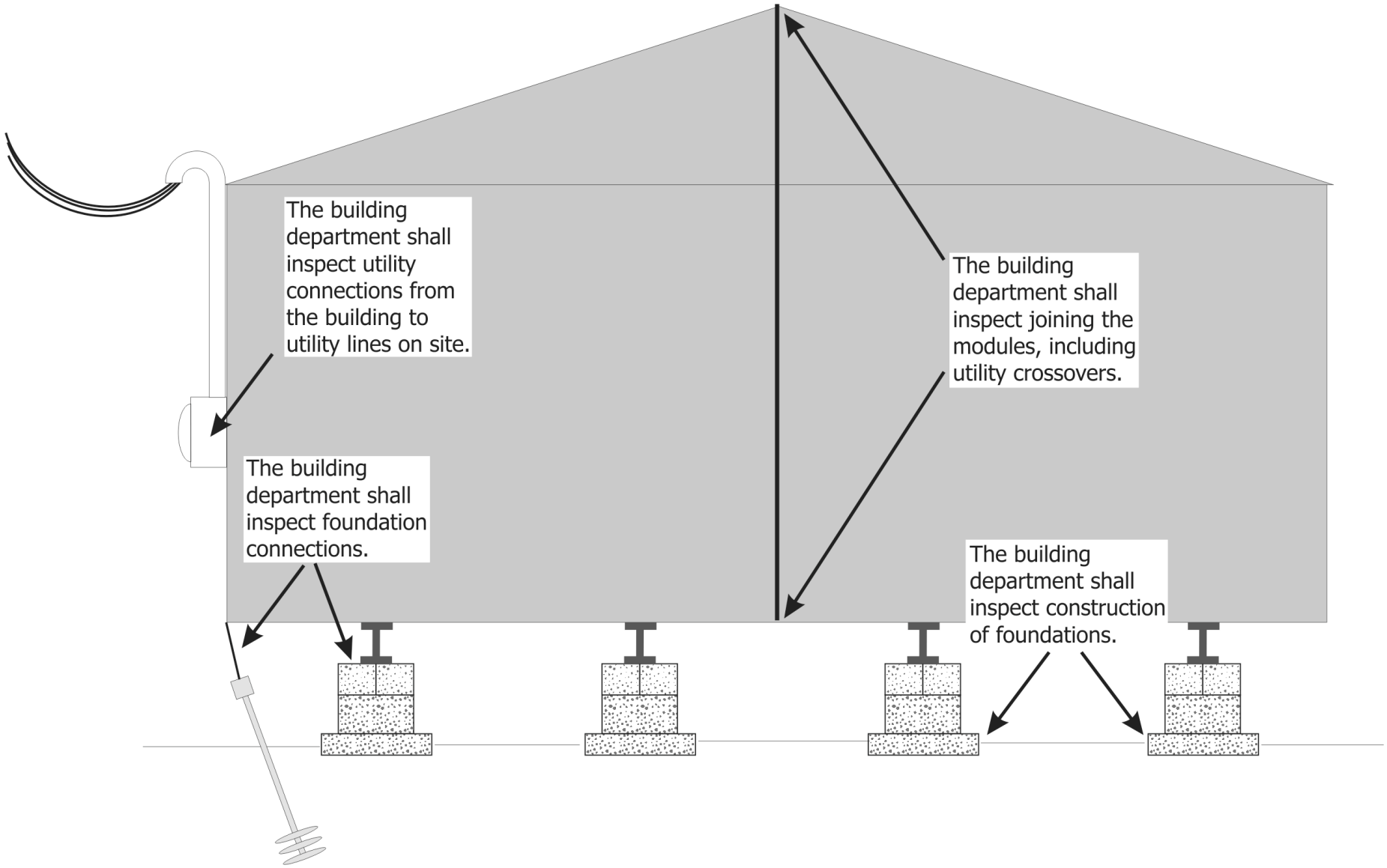
102 APPLICABILITY

- 102.2.6 This section does not apply to swings and other play-ground equipment accessory to a one – or two-family dwelling.
  - **Exception**: Electrical service to such playground equipment shall be in accordance with Chapter 27 of this code.

Chapter 1: Administration

102 APPLICABILITY

- 102.7 Relocation of manufactured buildings.
  - Relocation of an existing manufactured building does not constitute an alteration.
  - A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building Code shall be applicable.

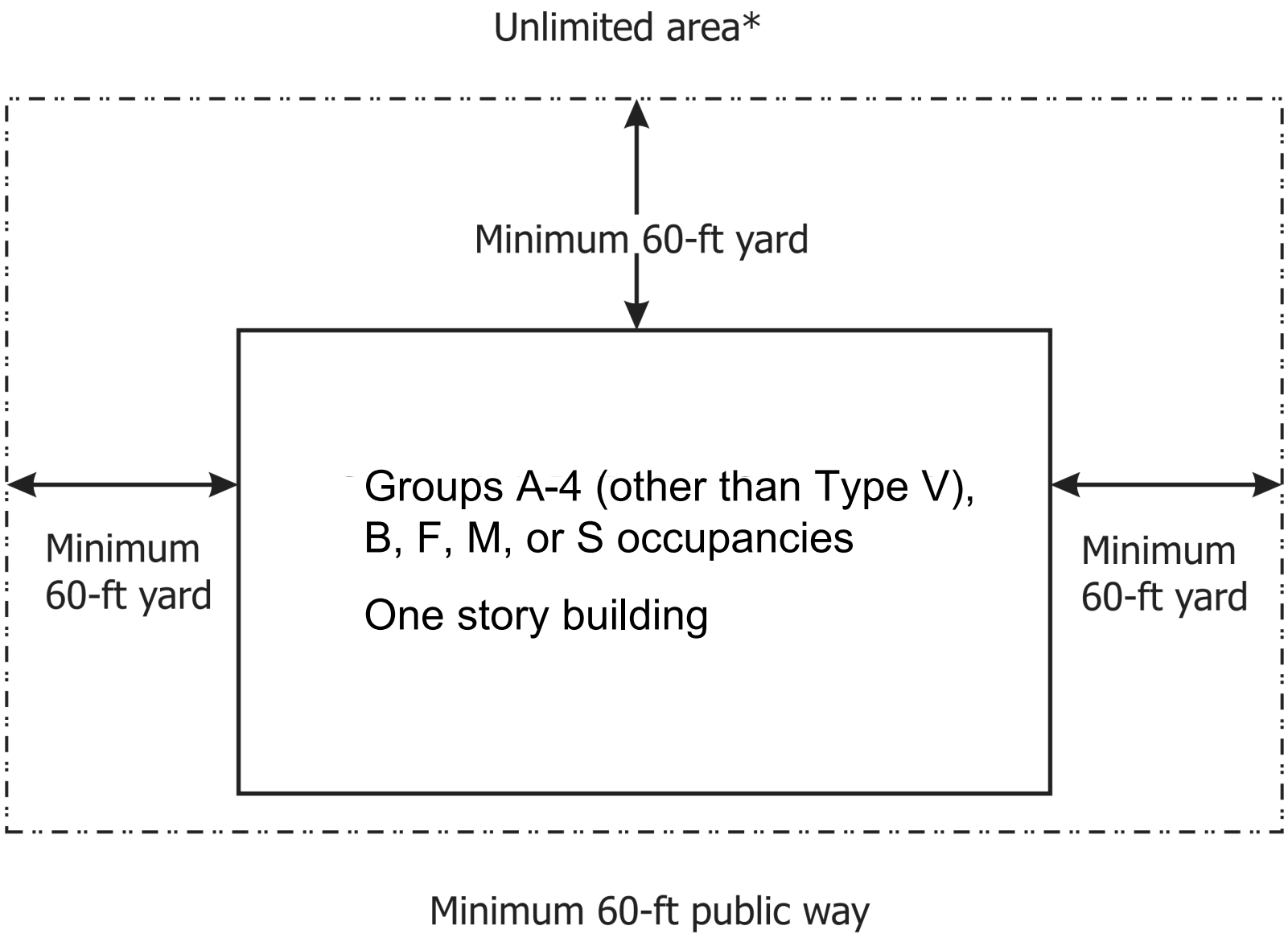


The building inspector shall inspect installation of items identified on plans as site-installed items, eg. Water coolers/drinking fountains, accessibility ramps, aesthetics/trim boards, fire alarms, fire sprinkler systems, etc.

Chapter 1: Administration

109 INSPECTIONS

- **109.3 Required inspections.**
  - 8. Manufactured buildings.
    - The building department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site which requires compliance with the Florida Building Code. Additional inspections may be required for public educational facilities. See 423.27.20.


Unlimited area*
Minimum 60-ft yard
Groups A-4 (other than Type V),
B, F, M, or S occupancies
One story building
Minimum
60-ft yard
Minimum
60-ft yard
Minimum 60-ft public way

Chapter 6: Type of Construction

602 CONSTRUCTION CLASSIFICATION

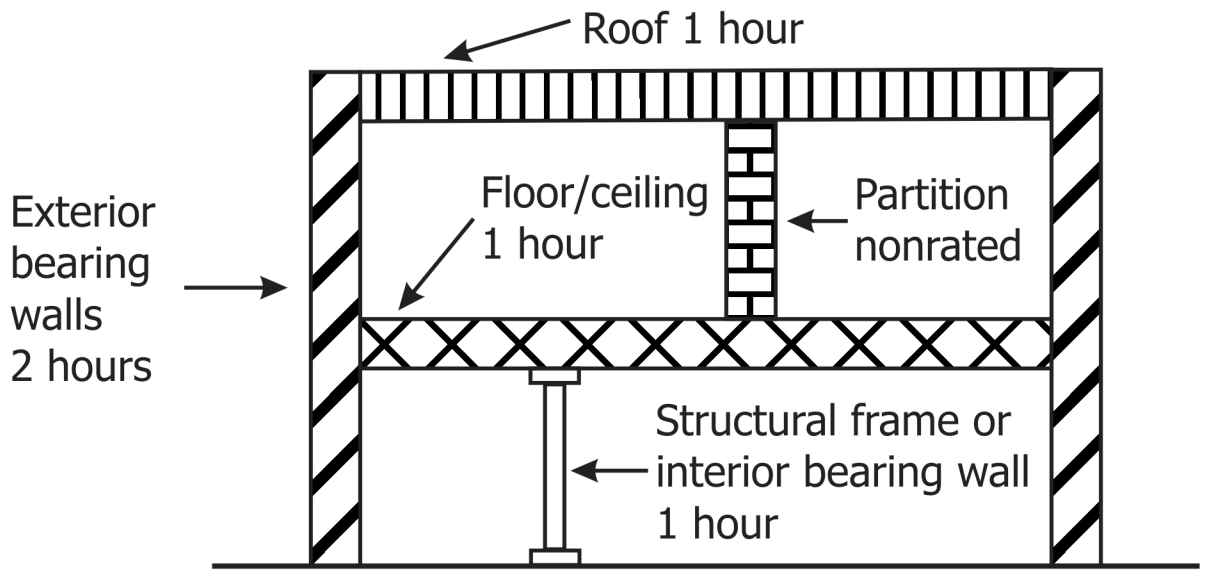
- **602.1 General.**
  - Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of **the five construction types** defined in Sections 602.2 through 602.5.

Chapter 6: Type of Construction

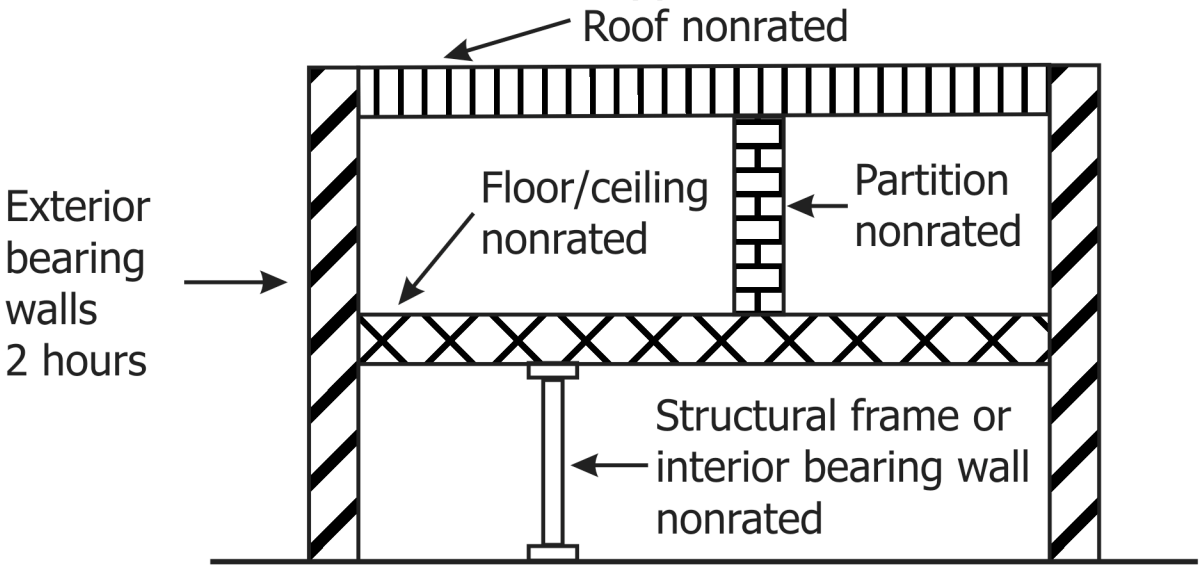
602 CONSTRUCTION CLASSIFICATION

- **602.2 Types I and II.**
  - Types of construction in which the building elements listed in Table 601 are of noncombustible materials.
- **602.3 Type III.**
  - The exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code.
  - Fire-retardant-treated wood framing are permitted within exterior wall assemblies of a 2-hour rating or less.

Type III-A



Type III-B



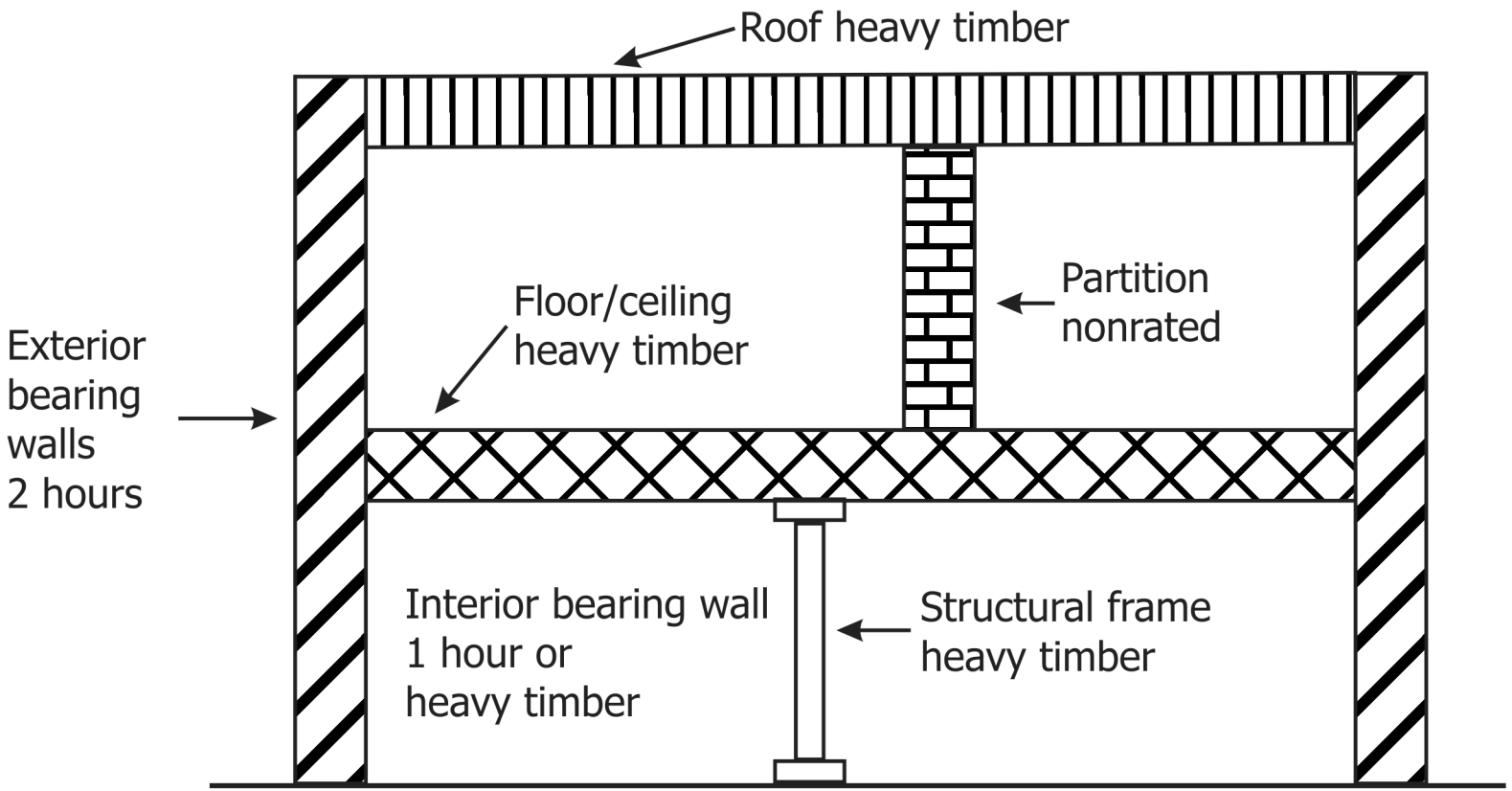
* See Notes to Tables 601 and 602

Chapter 6: Type of Construction

602 CONSTRUCTION CLASSIFICATION

- **602.4 Type IV.**
  - Type IV construction (Heavy Timber, HT).
  - The exterior walls are of noncombustible materials.
  - The interior building elements are of solid or laminated wood without concealed spaces.
  - Fire-retardant-treated wood framing are permitted within exterior wall assemblies with a 2-hour rating or less.

Type IV Heavy Timber



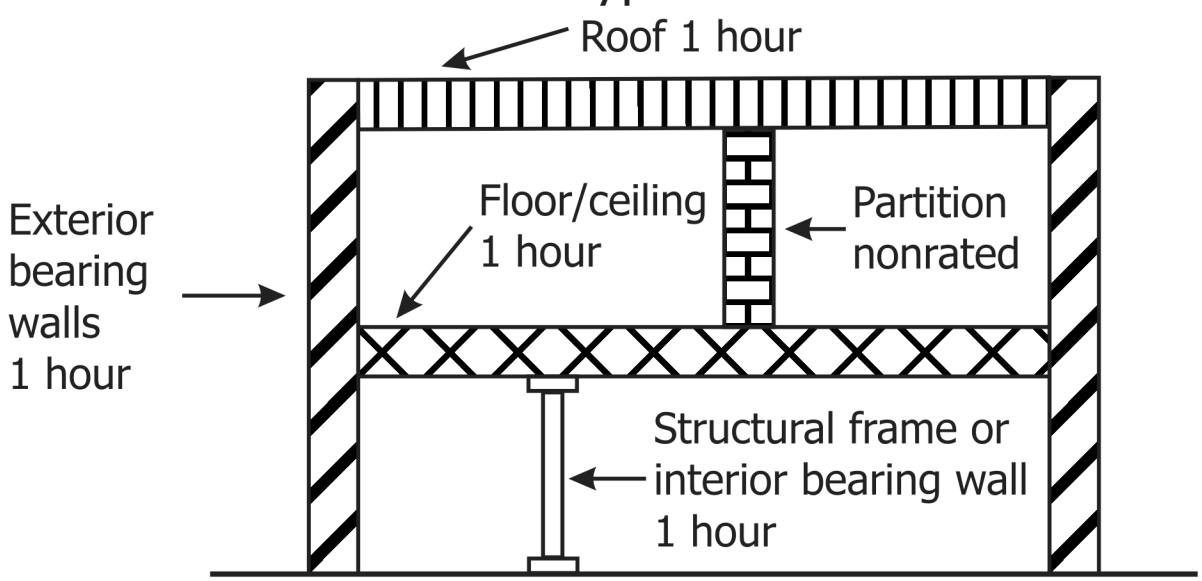
* See Notes to Tables 601 and 602

Chapter 6: Type of Construction

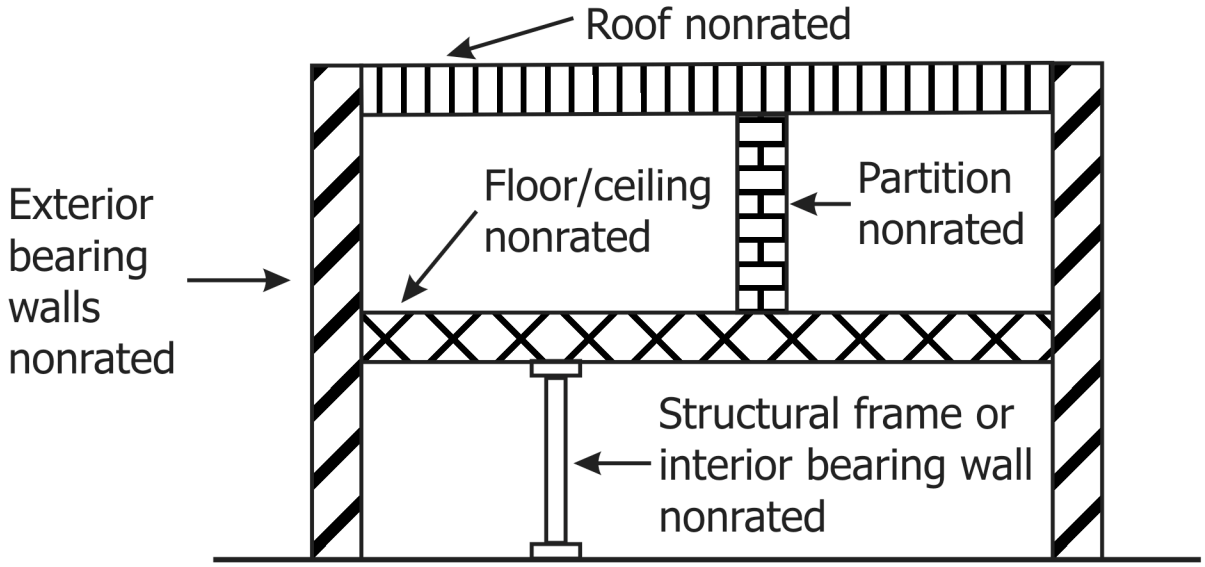
602 CONSTRUCTION CLASSIFICATION

- **602.5 Type V.**
  - Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.

Type V-A



Type V-B



* See Notes to Tables 601 and 602

SUMMARY TABLE

Noncombustible	Exterior and interior (bearing or nonbearing) walls, floors, roofs and structural elements to be of noncombustible materials	I	A	B
		II	A	B
Combustible	Exterior walls to be of noncombustible materials	III	A	B
		IV	A	B
		V	A	B

Characteristics of combustion types

Chapter 6: Type of Construction

603.1 Allowable Materials

- Combustible materials permitted in buildings of Type I and Type II construction in the following applications:
  - Fire-retardant-treated wood in:
    - nonbearing partitions with fire-resistance rating $\leq$ 2 hours
    - nonbearing exterior walls requiring no fire rating
    - roof construction as permitted in T601, note C, Item 3
  - Thermal and acoustical insulation, other than foam plastics, with limited flame spread
  - Foam plastics per Chapter 26

...continued on next slide

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - A, B, or C roof coverings
  - Interior floor finish, trim, millwork, doors, frames, etc.
  - Where not installed over 15 feet (4572 mm) above grade, show windows, nailing or furring strips, wooden bulkheads below show windows, their frames, aprons and show cases.
  - Finished flooring applied directly to the floor slab or to wood sleepers that are firestopped in accordance with Section 717.2.7
  - Partitions dividing portions of stores, offices or similar places occupied by one tenant only and which do not establish a corridor serving an occupant load of 30 or more shall be permitted to be constructed of fire-retardant treated wood, 1 hour fire resistance-rated construction or of wood panels or similar light construction up to 6 feet (1829 mm) in height.

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - Platforms per Section 410
  - Combustible exterior wall coverings, balconies, bay or oriel windows, or similar appendages in accordance with Chapter 14.
  - Blocking for handrails, cabinets, fixtures, etc.
  - Light-transmitting plastics per Chapter 26
  - Mastics and caulking materials applied to provide flexible seals between components of exterior wall construction.
  - Exterior plastic veneer installed in accordance with Section 2605.2
  - Nailing or furring strips per Section 803.3
  - Heavy timber for specific components

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - Aggregates, component material and admixtures as permitted by Section 703.2.2
  - Sprayed cementitious and mineral fiber fire-resistance- rated materials installed to comply with Section 1704.11
  - Materials used to protect penetrations in fire-resistance-rated assemblies in accordance with Section 712
  - Materials used to protect joints n fire-resistance-rated assemblies in accordance with Section 713
  - Materials allowed in the concealed spaces of buildings of Type I and II construction in accordance with Section 717.5
  - Materials exposed within plenums complying with Section 602 of the Florida Building Code, Mechanical
  - Additional applications as specified

2004 FLORIDA EXISTING BUILDINGS CODE, APPENDIX D

Type of Construction	
2001 Florida Building Code	**2004 Florida Building Code**
Type I	Type I-A
Type II	Type I-B
Type III	Type IV
Type IV 1-hour protected	Type II-A
Type IV Unprotected	Type II-B
Type V 1-hour protected	Type III-A
Type V Unprotected	Type III-B
Type VI 1-hour protected	Type V-A
Type VI Unprotected	Type V-B

Source: *2003 Life Safety Code Handbook,* Commentary Table 8.1, Cross-Reference of Building Construction Types.

Chapter 6: Type of Construction

TABLE 601: FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

- Provide fire-resistive requirements for building elements by construction types.
- Elements include structural frame, bearing walls, non-bearing walls and partitions, floor construction, and roof construction.
- The fire-resistive rating are provided in hours.

TABLE 601:
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hrs)

BUILDING ELEMENTS	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Structural frame [a] Including columns, girders, trusses	3 [b,g]	2 [b]	1	0	1	0	HT	1	0
Bearing walls Exterior [f] Interior	4 4 [b]	3 3 [b]	1 1	0 0	2 1	2 1	2 2 [b]/ HT	1 1	0 0
Nonbearing walls and partitions Exterior	See Table 602								
Nonbearing walls and partitions Interior [e]	0	0	0	0	0	0	see section 602.4.6	**0**	**0**
Floor construction Including supporting beams and joists	3 [g]	2	1 [d]	0 [d,h]	1 [d]	0 [d,h]	HT	1	0
Roof construction Including supporting beams and joists	1 [c, g]	1 [c]	1 [c]	0	1 [c]	0	HT	1 [c]	0

Chapter 6: Type of Construction

TABLE 602: FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

- Addresses exterior wall fire-resistance based upon setbacks to property lines ranging from less than five feet to greater than thirty feet.
- The fire-resistive requirements of exterior walls are a function of both construction type and occupancy classification. The rating range from four hours to zero hours.

...continued on next slide

Chapter 6: Type of Construction

TABLE 602: FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE *(cont'd)*

- Table 602 regulates exterior walls only
- Table 602 used in conjunction with 601 for fire resistance of exterior bearing walls
- Only Table 602 used for nonbearing exterior walls
- Highest required rating for exterior wall is 3 hours
- Final threshold at $\geq$ 30 feet
- Additional provisions for exterior walls and openings in Section 704

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

CHAPTER 7:

- Provides prescriptive fire-resistance and calculated fire-resistance.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

703 FIRE-RESISTANCE RATING AND FIRE TESTS

- Rating of assemblies and structural elements are required to meet ASTM E 119, a test that evaluates the ability of an assembly to meet structural integrity and fire containment criteria.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

704 EXTERIOR WALLS

- Address the exterior enclosures of buildings to prevent the spread of fire between buildings and between stories in a buildings.
- **Table 704.8: Maximum Area of Exterior Wall Openings** *(see notes)*

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

705 FIRE WALLS

- **705.1 General.**
  - For the purposes of determining height and area in accordance with Table 503, fire walls dividing buildings into separate buildings shall provide a 4-hour fire resistance rating. The extent and location of such fire walls shall provide a complete separation. Where a fire wall also separates groups that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply.
  - **705.4.1 Townhouse fire separation**

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

706 FIRE BARRIERS

- Assemblies with required fire resistance rating used to separate fire areas, exits, and mixed use areas.
- The locations of fire barriers are generally provided in other sections of the Code, such as Chapter 10 for exits and Chapter 3.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

709 SMOKE BARRIERS

- Divide buildings into smoke compartments and are required to be of one-hour construction, except as permitted by the exception for steel barriers in Group I-3 occupancies.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

720 PRESCRIPTIVE RESISTANCE

- **720.1 General.**
  - The provisions of this section contain prescriptive details of fire-resistance-rated building elements. The materials of construction listed in Tables 720.1(1), 720.1(2), and 720.1(3) shall be assumed to have the fire-resistance ratings prescribed therein.

CHAPTER 8: INTERIOR FINISHES

801 GENERAL

- 801.1 Scope.
  - Governs the use of materials used as interior finishes, trim and decorative materials.
  - Intent is to control the rapidity of fire development and spread in a building due to finishes applied to walls, ceilings, and floors.
  - Classifies interior finishes in Classes A, B, C.

TABLE 803.5:
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY [k]

GROUP	SPRINKLERED [l]			UNSPRINKLERED		
	Vertical exits and exit passageways [a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces [c]	Vertical exits and exit passageways [a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces [c]
A-1 and A-2	B	B	C	A	A [d]	B [e]
A-3 [f], A-4, A-5	B	B	C	A	A [d]	C
B, D, E, M, R-1, R-4	B	C	C	A	B	C
F	C	C	C	B	C	C
H	B	B	C [g]	A	A	B
I-1	B	C	C	A	B	B
I-2	B	B	B [h, i]	A	A	B
I-3	A	A [j]	C	A	A	B
R-2	C	C	C	B	B	C
R-3	C	C	C	C	C	C
S	C	C	C	B	B	C
U	No restrictions			No restrictions		

Chapter 9:
Fire Protection Systems

903 AUTOMATIC SPRINKLER SYSTEMS

- 903.2.1.2 Group A-2.
  - An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:
    1. The fire area exceeds 5,000 sq ft.
    2. The fire area has an occupant load of 300 or more.
    3. The fire area is located on a floor other than the level of exit discharge.
    4. Nightclubs or similar usage when occupant load is 100 or more.

Chapter 9: Fire Protection Systems

903 AUTOMATIC SPRINKLER SYSTEMS

- **903.6 Buildings three stories or more in height.**
  - **903.6.1** Any building which is of three stories or more in height shall be equipped with an approved automatic sprinkler system installed in accordance with §903.1.

Chapter 9:
Fire Protection Systems

905 STAND PIPE SYSTEMS

- **905.3.1 Building height.**
  - Class III standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet above the lowest level of fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet below the highest level of fire department vehicle access. High-rise buildings shall be protected throughout by a Class I standpipe system.
  - Added Exception number 5.