

Building Codes

Protect people and property

Key points

- Why important to construction manager?
- Why important to the public?
- Where does it apply?
- What is covered?
- Who is responsible for enforcing?

Why important to you?

- Design/build requires contractor to obtain permits.
- "Comply with provisions of Ohio Basic Building Code"
- Keep clients in compliance
- Inspections and testing

Why important to the public?

- Protection of people
 - Fire safety in construction
 - Construction materials
 - Building area and stories
 - Sprinkler protection
 - Smoke and fire alarms
 - Means of egress
 - Electric safety
 - Indoor air quality
 - Water and sanitary systems

Why important to the public? - 2

- Structural safety
 - Soil loads
 - Minimum structural loads
 - Minimum construction details
- Energy conservation

Where does code apply?

- Ohio Basic Building Code (OBBC)
 - Shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

OBBC exceptions

- Detached one, two and three family dwellings and structures incidental to those dwellings which are not constructed as industrialized units shall comply with local residential codes, if any, adopted by the local authority having jurisdiction. Chapter 13, Energy Efficiency must be met.

OBBC exceptions

- Buildings owned by and used for a function of the United States Government
- Buildings or structures which are incident to the use for agricultural purposes of the land on which said buildings or structures are located, providing such buildings or structures are not used for the purpose of retail trade. Exception farmer's markets.

References codes

- Mechanical code
- Plumbing code
- Elevator code
- Fire prevention code
- Boiler code
- Pressure piping code

Section 109, Inspections and Testing

- Call for appropriate inspections, phone and project number on the permit
- Remain accessible and exposed for inspection purposes until approved
 - Inspector has 4 working days to inspect
- Permit and official site plans at site
- Stop work order
 - Work not in compliance

When inspections required?

- See appropriate codes, e.g. building code, plumbing code, etc.
- Other inspections that building official needs to verify compliance with the code
- Approval by building official before connecting to utility or source of energy

Occupancy

- Temporary – allows occupancy while last work is being completed.
 - Application, fee and inspection
- Certificate of Occupancy
 - Required before occupied

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- See handout

Use and Occupancy Classifications

- Classifies buildings according to risks
- Used to define different requirements in sections of the code
- Examples:
 - Assembly group, A
 - Business group, B
 - Factory group, F
 - Mercantile group, M
 - Storage group, S

Allowable building heights and areas

- Based on
 - Use classification
 - Construction type
- Defines maximum area and height
- Defines area and height modifications

Type of construction

- Based on protection of main structural support components from fire – length of time the building can withstand a fire without collapse.
 - Types 1 & 2, components of noncombustible materials
 - Type 3, exterior walls of noncombustible materials, interior of approved materials
 - Type 4, exterior walls of noncombustible materials, interior of heavy timber construction
 - Type 5, all walls of any material permitted by code

Fire resistant rated construction

- Special materials and construction details to maintain fire rating must be used
 - Enclosing penetrations through walls to keep fire from quickly spreading
 - Fire retardent treatment of steel columns and beams
 - Fire rated doors
 - Limited amount of glass in doors or walls
 - Blocking of interior wall spaces to limit area.

Energy efficiency

- Commercial – ASHRAE 90.1 or International Energy Conservation Code
- Residential – analysis or Table 1301.1

Asphalt shingles

- "Installation . . . shall comply with the provisions of this section and Table 1507.2

Wood fastner requirements

- "Connections for wood members shall be designed in accordance with the appropriate methology in Section 2301.2. The number and size of nails connecting wood members shall not be less than that set forth in Table 2304.9.1."

Electrical

- 2701.1 – "Electrical components, equipment, and systems shall be designed and constructed in accordance with the provisions of NFPA 70."
- NFPA 70 – the National Electric Code, current edition

Certified municipal, township, and county building departments

- Appendix "Z" as a reference and not part of the code
- Certification applies to all use groups of OBC unless otherwise noted and does not apply to one-, two-, and three-family dwellings which are not constructed as industrialized units.
- "P" Plumbing approval agency

Summary

- OBBC defines minimum for life safety and property protection.
- Provides information that is important in helping clients be in compliance and for managing project.