
BBS MEMO

Ohio Board of Building Standards

June 1, 2007

6606 Tussing Road, P.O. Box 4009, Reynoldsburg, Ohio 43068-9009

Update on Ohio's Industrialized Unit Program

New Codes for Commercial & Residential

The Ohio design & construction codes are being updated. The board took action to incorporate the 2006 editions of ICC's Building, Mechanical & Plumbing Codes as well as updating the associated standards to create the 2007 Ohio Building Code (OBC), Mechanical Code (OMC), and Plumbing Code (OPC). For IU home manufacturers, the design standard is also being updated to the 2006 edition of the *Residential Code of Ohio For One-, Two-, and Three-Family Dwellings* (RCO), which references the 2007 OPC and 2006 IECC upon their effective dates.

EFFECTIVE DATES

Site Construction: The new 2007 Ohio Building, Mechanical, and Plumbing Codes will be effective July 1, 2007. This means that applications for plan approval for site related construction submitted to the state or local certified building departments on and after July 1, 2007 must be designed to the new codes.

Projects with Industrialized Units:

- Construction documents for IUs approved by the board in accordance with the current Code (2005) will continue to be valid and are allowed to be submitted to a building department for the IU portion of a project until Sept. 30, 2007.
- On Oct. 1, 2007, construction documents approved by the board in accordance with the 2005 codes will be considered invalid unless they had been submitted to a building department for permits prior to 10/1/07.

Applications for board approval of Industrialized Units:

- Prior to 10/1/07, construction documents submitted for new commercial units will be reviewed in accordance with the 2005 codes. However, we are willing to review submitted documents for compliance with the new code before this date if the submitter provides a request with the documents and the documents make reference to the new code(s).
- October 1, 2007, commercial units will be reviewed in accordance with the 2007 codes.
- Documents submitted for 1, 2 & 3 Family Dwelling IUs prior to 7/1/07 will be reviewed in accordance with the 2004 RCO.
- Between 6/1/07 and 10/1/07 applications can be designed to either the 2004 Residential Code of Ohio or the 2006 RCO.
- Submissions received 10/1/07 or after will be reviewed in accordance with the 2006 RCO.

Approved Documents In-Plant:

- In-plant inspections of IUs thru 9/30/07 shall be done using approved documents in accordance with the 2005 or new codes (2007).
- On Oct. 1, 2007 and after, in-plant inspections of IUs must be done using approved documents in accordance with the new codes (2007).

Availability of New Codes

West Law Publishing (800)362-4500 and the International Code Council (800)214-4321 will continue to sell the Ohio building, mechanical and plumbing codes. It is our understanding that they both had versions of the new codes available by April, 2007. The 2006 Residential Code of Ohio is currently available through the ICC Mid-east office (614)890-1064.

CODE UPDATE SUBMITTAL PROCESS

(see over)

Systems

We do allow and encourage system manual submittals. However, there are significant differences in what folks think should be acceptable to satisfy the requirements for document review, based on their experience with other states. This seems to be the reason for some out-of-state manufacturers believing we don't allow system submittals. Construction documents, including any system design, must be submitted, and in an adequate format so the plans examiner can determine compliance. The plans must be organized so that it's clear what is going to be constructed, and that the details and specifications are clear enough so that we can determine if the design is in compliance. If you want Ohio to approve a design, the submittal must be understandable so that we know how the parts fit together. We have received a few submittals where the applicant expected an approval for drawings that didn't cross-reference one another, and it was impossible for us to understand the end design. The applicant responded by indicating that the "system" was approved by other states. Based on conversations with our counterparts in other states, our requirements are the same as theirs regarding the degree of required documentation. Mike Regan, our Master Plans Examiner, produced an outline to help:

System Document sets typically contain structural, plumbing, mechanical, and electrical detail information. This includes:

- Index
- Building code references
- Structural load information
- Fastening schedules
- Typical structural and architectural details
- Window and door schedules and their elevations
- Specifications and product cut sheets of materials and equipment
- Cross sections
- Sealed truss diagrams with loads information
- ICC-ES reports for alternate materials

We will again allow manufacturers and the responsible designers to verify by affidavit that certain documents, previously approved (under the outdated code) are in compliance with the new codes. If a manufacturer chooses this option for documents we have on file as "approved" that with a copy of the affidavit with reference to the related drawings/documents and we would jointly, with the manufacturer's representative, reseal the

- Calculations or Ohio design professional seal for support of special IU systems not within the prescriptive parameters of the RCO. Calculations must be adequately referenced.

System Document sets do not typically contain specific model designs or floor plans.

Model documents contain information unique to a specific design for one model. This includes:

- Index that cross references related System documents
- Building code references
- Structural load information
- Architectural floor plans that include the door and window sizes (or reference to the door & window schedule)
- Roof plans for complex designs
- Elevations
- Plumbing isometrics
- HVAC plans
- Electrical plans, including a symbol legend
- Electrical panel diagrams with conductor & circuit protection specification
- Energy calculations for HVAC design
- Electrical loads
- Options for the model's floor plan
- Section cut arrows on the plans and/or elevations with detail and page numbers referencing the System details or cross sections;
- CPA number of the referenced Systems documents.

An approvable set of documents for a model includes the model specific documents and the appropriate cross references to the System set(s). Options for a model should be limited to detail differences that are accounted for in the same documents and that, when one option is chosen vs another, it is still clear that the building's systems (mechanical, plumbing, structural, etc.) are in compliance.

Appointments for Verifying Existing Documents

would mean that no revision is necessary to the document in order for the document to be in compliance with the new requirements. This would require that the manufacturer schedule an administrative appointment in our offices, provide us

old electronic drawings with an updated approval or seal a clean set of unchanged documents.

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We strongly urge that all documents be submitted in electronic format. We are no longer setup internally to efficiently process, review and store hard copy documents. Therefore, we will allow those who have presently a hard copy systems manual the opportunity to submit an updated manual in electronic format, with an honor system such that we will only address the items related to the new code revisions (we promise). The same offer is extended to those who already have on file with us an approved electronic systems manual. A new

updated systems manual can be submitted, with all of the revisions indexed on the cover sheet along with the general index. The new code references

must be provided, along with revisions reflecting the items listed in the following outline. With the limited revisions associated with this new code, we do not want your industry and our department be subjected to an unnecessary complete document replacement and review.

This same applies to model documents, and please note the new IECC has changed energy efficiency requirements, which require the replacement of the REScheck, COMcheck or other energy efficiency calculation forms. The item for Chapters 25-32 below applies to both one to three family and commercial OBC related projects, which will require updates for plumbing code changes.

As we have always pleaded with you in the past, **please..please only submit what you know you will be building.** We have limited resources and cannot keep up (with the turn-around time you expect) if we must review drawings for units that only serve to expand the "portfolio" of approved models.

An Outline of Changes to the Residential Code of Ohio

Chapter 1:

- Modified chapter to be consistent with OBC, Ohio law, and committee recommendations.

Chapter 2:

- Added definitions for: Alteration, Equipment, Fixture, Historic Building, Load-Bearing Element, Manufactured Home, Minor Repair, Residential Building Official, Safe, Sanitary, and Serious Hazard.
- Corrected definitions for: Approved, Building, Building- Existing, Building Official, Change of Occupancy, Construction Documents, Dwelling, Existing Installations, Jurisdiction, Permit, Plumbing, Registered Design Professional, and Residential Building Type.

Chapter 3:

- Eliminated old CABO tables and terminology and made charts and figures Ohio specific rather than using national maps, charts, and figures.
- Clarified requirements for residential structures with more than two dwelling units and clarified accessibility requirements when the RCO is used for R-3 occupancies.

Chapter 4:

- Removed concrete requirements from text already included in ACI referenced standard.

Chapter 5:

- Removed Ohio changes to footnotes of span tables, making them consistent with the model code.

Chapter 6:

- Removed Ohio addition of outdated stud height and spacing wind speed in seismic zone tables and other minor fixes to return to model code language.

Chapter 11:

• Referred energy requirements to OBC Chapter 13. This involves having the new 2006 IECC, which has completely new zones, thus increased efficiency requirements.

Chapter 12, 13:

• Revised mechanical requirements to refer to new Chapter 1 and included revised definitions for: Code, Code Official, and Hazardous Location.

Chapters 14-25:

• No changes – mechanical/fuel gas.

Chapters 25-32:

• Deleted – referred to OPC which is the new 2006 OPC. For a simple presentation of the scope of plumbing revisions, obtain a copy of ICC's 2006 IPC Update document, which includes, but not limited to, in it's outline:

- Definition of a branch interval,
- Addition of condensate overflow switch,
- Addition of access requirements to whirlpool tub circulation pumps,
- Requirements for bidet, bathtub and whirlpool tub water temperature limiting device ASSE 1070,
- New language addressing heel and side inlet quarter bends,
- Ten revisions to chapter 9 for venting which includes water closets being exempt from the trap to vent distance rule, fixture drain fall to trap distance, and vertical fixture drain component in combination drain and vent systems,
- Four revisions to chapter 10 for interceptors, separators, and automatic grease removal devices.

Chapters 33-42:

• Deleted – referred to the OBC and NFPA-70

Chapter 43:

• Revised and updated the referenced standards used in the RCO.