Ontario Association
of Architects

2006 Building Code (BC)
Project Code Review - General

Summary

Project code review early in a project's development will reduce the possibility of delays and the revisions to design to incorporate code requirements. Once the early project code reviews have been completed the systematic recording, reporting and updating of the code requirements will provide a framework for the continued development of the project.

The OAA in conjunction with industry partners has developed code checklists to assist practices in reviewing and recording the specific code requirements applicable to their projects.

Background

A systematic process for project code review can assist in the review and documentation of code matters and in the demonstration of the personal supervision and direction of a member (architect) of the design in its entirety. Furthermore, integrating project code review in the early phases of a project's development will also reduce the possibility of later delays and revisions to contract documents.

The process for code review is one aspect of an overall quality assurance program that should be integrated into the project's development. Comprehensive office procedures, best practice tips, and checklists can be of assistance in establishing and tracking project code requirements.

Code requirements which are recorded in a simple and standardized format should be available for review by all members of the project development team. Professional judgment will be required when developing the process for the recording and reviewing of code requirements for each project. Items such as the size and complexity of the project, the type of the construction proposed, the experience of the individuals involved in the design team and the location of the project should be considered when adapting office procedures for use on each project.

Building permits are issued or rejected based on the information contained in the permit application. To avoid delays in the processing of permit applications and to reduce the chance of applications being rejected due to incompleteness, practices should ensure that all relevant code related information is included on documents supporting the application for building permit. The Building Code Matrix Data lists information to be provided, as applicable, on the documents supporting the application for permit. The checklists developed by OAA, provide a list of additional code related requirements that are common to various building types and may be applicable to specific projects.

The checklists are intended to assist practices in the review of code related information to be included on documents supporting the application for building permit. Specific project conditions and requirements that may not be noted on the checklists should also be incorporated into the permit application.

Note: The OAA checklists linked to this Practice Tip contain reference numbers to the articles in the 1997 Ontario Building Code, which in some cases may be changed in the 2006 Building Code. The checklists will be reissued upon completion of the amendments to reference numbers to suit the 2006 Building Code.

Suggested Procedure

It is good practice for the architect(s) exercising personal supervision and direction of the preparation of designs to consider the:

- Establishment and implementation or the adherence to office policy on the use and updating of checklists for project code review. The "Project Code Review – Worksheet" (see references) is an example of a form that can be used to record code related information for use by the project team.

- Establishment of procedures to document and update code requirements for projects.

It is good practice for the architect assigned to each project to:

- Consider the manner in which he/she will direct staff, document code requirements and review work related to code requirements taking into account the size, scope and complexity of the project.

- Use an appropriate checklist for the specific project. The checklist may be based on the information contained in one or more of the following examples;

    OAA Part 9, Housing Checklist (PDF)

    OAA Part 9, Small Buildings Checklist (PDF)

    OAA Part 3, Buildings Checklist (PDF)

    OAA Part 3, Alteration of Occupancy Checklist (PDF)

    OAA Part 3, Portable Classroom Checklist (PDF)

    OAA Part 3, Public Pools Checklist (PDF)

Although the information contained herein specifically refers to Ontario's 1997 Building Code, similar procedures are applicable to projects governed by the National Building Code.

- Obtain a current copy of applicable municipal by-law(s) and application requirements for the building permit pertinent to the location of the project. Determine the extent of information that may be required on documents supporting the application for the building permit.

- Review referenced and other appropriate code sections to determine the scope of code related matters for the project and annotate the checklist to record the relevant information pertinent to the project.

The process, as outlined below does not address all aspects of code compliance for every building type. Instead the process is intended to act as a general guide to project code review. A detailed review of code requirements will be required and specific code requirements should be recorded and communicated as needed. A more detailed project code review may be appropriate early in the design process to take into account the specific requirements of some project types or the preferences of the project team.

1.0 Schematic Design Phase

Develop a general outline of items that affect building locations, physical layout and circulation patterns for the building(s) and site. Consider the following:

- Building(s) location and fire fighter access

- Building configuration and firewall requirements

- Exiting and washroom requirements

- Fire suppression systems

- Use of combustible construction materials, and

- Resource conservation

Record and communicate project code requirements with production team members. Establish a methodology to permit the continued updating, development and communication of project code review. Complete the sections on the code checklists appropriate for the project and the current level of development. Supplement the information with any additional project code details applicable to the project. Record information on occupancy(ies), building area, and construction systems and coordinate project code requirements with the siting of the building(s). Use occupant loads to establish approximate areas and locations of exits and washrooms. If appropriate use estimated areas and or occupant loads can be used at this phase. Calculate statistical information in more detail once the design is resolved. Review earlier assumptions and adapt designs when required.

Invite consultants to review stated code requirements and to state the schematic code requirements relevant to their discipline at this phase.

2.0 Design Development Phase

Review schematic design documents and verify that previously identified project code requirements remain applicable.

Confirm that the information contained in the project code review is appropriate for the level of design detail, the understanding of building systems and the selection of construction materials to date. Continue the development of detailed plans, preliminary building sections, outline specifications and the project code review. Consider the following:

- Building(s) location and fire fighter access
- Building configuration and firewall requirements (if applicable)
- Exit and washroom requirements
- Combustible construction materials
- Fire suppression system use
- Egress and accessibility requirements
- Compartmentalization and life safety requirements, and
- Resource conservation

Review the design and updated project code review with the client and municipal or other regulatory officials when appropriate.

When using the Code checklists, complete the sections identified as being appropriate for this stage of design development.

- Confirm occupancies, occupant loads, exit capacities and compartmentalization before verifying that travel distances and exit capacities are adequate.
- Confirm building classification, major occupancy separations, structural fire resistance ratings and exterior wall constraints prior to finalizing material and system selections
- Review and refine siting requirements
- Review and refine barrier free accessibility requirements for all floor areas
- Review and refine building services, life safety systems, detection system, and resource conservation requirements.

Minimize potential conflicts in the development of construction documents by preparing a comprehensive list of all code requirements at the completion of the design development phase.

3.0 Construction Document Phase

Review and verify that the design development documents prepared to date are in keeping with the project code review.

Establish a list of submissions that will be required from the contractor to demonstrate the adequacy of construction materials, contractor qualifications and any test procedures that must be submitted to chief building official. Summarize these requirements in the construction contract documents.

Include a summary of code requirements in the construction contract documents by entering the required information from the project code review into the BC Data Matrix (Refer to PT.03). Where appropriate, supplement the "OBC Data Matrix" with a more detailed summary of specific code requirements for each portion of the building. The expanded recording of code requirements and detailed calculations will assist the building officials when reviewing the application for building permit. Graphically demonstrate pertinent code features such as fire separations, travel distances, and exit capacity on plans, key plans and/or details. (see references.) The graphic information will assist the contractor, trades, and inspectors in the construction and review of the work.

It is recommended that a final review of the documents, the BC Data Matrix, and pertinent project records relative to BC matters take place prior to sealing and signing the documents supporting the application for building permit.

4.0 Contract Administration Phase

Review the roles and responsibilities of the client, contractor and architect as outlined in the BC and the *Architect's Act*. Review the Canadian Handbook of Practice (CHOP) and/or the OBOA – Field Inspection Guide for Housing for further guidance on general review.

It is also good practice to manage documents representing matters governed by the Code and which are generated subsequent to the issuance of the building permit (e.g. addenda, change orders, and site review reports which will be submitted to the chief building official) in a manner similar to that for the documents supporting an application for building permit.

References

Ontario *Building Code Act,*

Ontario Building Code,

OAA Code Checklists:

- Project Code Review - Worksheet (excel)
- Part 3, Public Pools Checklist (pdf)
- Part 3, Public Pools Checklist (word)
- Part 3, Portable Classroom Checklist (pdf)
- Part 3, Portable Classroom Checklist (word)
- Part 3, Alteration of Occupancy Checklist (pdf)
- Part 3, Alteration of Occupancy Checklist (word)
- Part 3, Buildings Checklist (pdf)
- Part 3, Buildings Checklist (word)
- Part 9, Small Buildings Checklist (pdf)
- Part 9, Small Buildings Checklist (word)
- Part 9, Housing Checklist (pdf)

- Part 9, Housing Checklist (word)

National Building Code,

Canadian Handbook of Practice (CHOP)

The OAA does not provide legal, insurance or accounting advice. Readers are advised to consult their own legal, accounting or insurance representatives to obtain suitable professional advice in those regards.