

CAREERS IN CODE ENFORCEMENT

Why Code Enforcement?

Code officials play a major role in ensuring that all commercial, residential, public assembly and other buildings within a governmental jurisdiction are constructed in accordance with the provisions of the governing building code. Building code provisions address structural stability, fire safety, adequate means of egress (exits), sanitation, safe wiring and more. It is the code official's responsibility to protect the public health, safety and welfare in relationship to the built environment through effective code enforcement.

Code Enforcement Process

The code enforcement process is normally initiated with an application for a permit to construct or remodel a building. The code official is responsible for processing the applications and issuing permits for construction or modification of buildings in accordance with the code. This begins with a review of the construction plans for compliance with the building code. Once construction has begun, the code official makes inspections as necessary to determine compliance with the code. If a deficiency exists or if the building or a component does not comply with the code, it is the responsibility of the code official to issue orders to correct the illegal or unsafe condition.

The code official ensures that official records are kept pertaining to permit applications, permits, fees collected, inspections, notices and orders issued. The documentation provides a valuable resource of information if questions arise during and after the construction process. Because construction may occur in steps or phases, the code official may need to conduct multiple inspections; therefore, an exact number of inspections will vary with the particular building design and construction sequence.

In addition to these requirements, the code official also assists designers and builders by interpreting the code's application to a particular construction situation; by explaining minimum requirements and answering questions; and by investigating and resolving complaints involving existing buildings and sites.

Duties of Code Officials

The executive official in charge of the Building Department is known as the code official. The term "code official" is a catch-all name for a variety of duties. In small communities and rural areas, a single code official may be responsible for building inspections, plumbing inspections, fire prevention inspections, mechanical and electrical inspections, building and zoning administration, and the like. In larger metropolitan areas, each of these tasks may be performed by different specialized staff members.

Types of Inspectors

Today's technology dictates that, to be effective, building inspectors must be familiar with the principles of construction, not merely the specifics. Inspectors usually specialize in one type of construction work. They may be building inspectors, public works inspectors, electrical inspectors, mechanical inspectors, plumbing inspectors, housing inspectors or fire prevention inspectors. Federal, state and local governments employ various types of inspectors to make sure projects conform to government codes as well as to building specifications and model building codes. Architectural and engineering firms also hire inspectors to make sure workers complete the projects in accordance with codes and specifications. Inspectors may also work for small companies or large corporations.

No matter where they work, inspectors have similar tasks. They apply the principles and methods of construction to judge the work and decide whether it meets the applicable standards or codes. They make preliminary inspections during the first stages of the project. They also examine the supplies to be sure these materials meet the specifications, standards or codes called for. Follow-up inspections are performed throughout construction to ensure compliance with regulations. In regions prone to floods, earthquakes or tornadoes, they may make frequent inspections to ensure that equipment, materials and installation meet special safety requirements. For some projects, various inspectors work together throughout the construction process to ensure that the project meets code requirements.

Building inspectors review drawings and specifications for planned repairs of existing buildings, construction of new building projects, and building sites being considered for development. Before work begins, building inspectors investigate the construction site — checking drainage, elevation and the placement of buildings on the plot. Inspectors examine and approve floor framing, wall framing, roofs and ceilings, chimneys, and all other items that are part of the building structure. As each building phase is complete, inspections are required before the work can progress. When projects are completed, a comprehensive inspection is performed and a certificate of occupancy is issued by the building inspector.

Government projects such as airports, highways, water and sewer systems, streets, bridges and dams are the responsibility of public works inspectors. They inspect digging and fill operations, and the placement of forms for concrete. They observe the concrete mixing and pouring, asphalt paving and grading operations and keep records of all work performed and the materials used. Public works inspectors may be specialists in one kind of operation such as reinforced concrete, dredging or ditches.

Electrical inspectors check the quality of materials, the installation work, and the safeguards in electrical systems. They make sure electrical systems meet city, state or national codes, and electrical codes and standards. Electrical inspectors look closely at new wiring and fixtures in businesses, public buildings, and in homes.

Mechanical inspectors focus on heating, ventilating and air-conditioning (HVAC) concerns. This includes inspection of: mechanical appliances and equipment; air distribution systems; kitchen exhaust equipment; boilers and water heaters; hydronic piping; gas piping systems; flammable and combustible liquid storage and piping systems; fireplaces, chimneys and vents; refrigeration systems; incinerators and crematories. The mechanical inspector also checks for air quality and energy conservation measures.

Plumbing inspectors check for proper design and installation of plumbing systems, including sanitary and storm drainage systems, sanitary facilities, water supplies, and storm water and sewage disposal in buildings.

The duties of a fire prevention inspector are usually performed by the local fire department or fire prevention bureau. Typically, fire inspectors check nonresidential buildings on an annual basis to ensure that appropriate fire safety practices are being followed.

Property maintenance or housing inspectors inspect existing buildings to check for health or safety violations and the condition of the exterior property.

The plan reviewer or examiner is usually the first person who begins the evaluation process which ensures that a building or structure conforms to the requirements of the local or specified code. The plan reviewer examines the construction documents used to describe a project, including architectural, structural, site plan, mechanical, plumbing, electrical and fire protection drawings as well as the corresponding specifications, structural design calculations and soil report. As these items are examined for code compliance against a checklist of the code's requirements, any deficiencies are cited along with the corresponding section number of the code. These deficiencies can then be resolved by revising the construction documents and a permit for the building construction to begin can be issued.

A plan reviewer must have a working knowledge of the code requirements used to evaluate the building or structure. The reviewer must be familiar with all construction documents produced by an architect/engineer to fully describe the project. Expertise is required in reading drawings and plans for basic construction techniques along with an understanding of engineering and architectural definitions and symbols. A background in architecture or engineering is beneficial but not necessary to conduct plan reviews.

Employment opportunities are available in both the private business sector and governmental agencies. Many states, county townships or local communities have fully staffed offices which conduct plan reviews for all buildings and structures intended to be erected in that jurisdiction.

Large architectural/engineering firms also retain plan review departments to evaluate a proposed project from the design/conceptual phase through the final ready-for-construction documents. Code-consulting businesses along with highly trained and expert staff at the International Code Council provide plan review services for organizations who do not have the necessary workforce to keep up with today's fast-paced construction rate and the on-going renovations of existing buildings.

Working Conditions and Hours

Inspectors work both indoors and outdoors. On construction sites, they may work out of a field office where they read blueprints, review correspondence, write reports or schedule inspections. The rest of their time is spent inspecting construction sites, which may be dirty and cluttered with tools, materials, vehicles or debris. They wear hard hats for safety. The basic work-week for inspectors is 40 hours, although hours can vary. Many, who travel back and forth daily to a construction site, put in more than 40 hours. Overtime may also be required seasonally, or to meet a deadline.

Compensation

Earnings in the construction industry are higher than those of most other industries. Like other job holders, construction workers in and around large cities usually get paid higher wages than workers in rural areas. Pay in the West is generally higher than pay in the East, especially the Southeast. The high cost of living, however, offsets higher wages in many states such as Alaska and Hawaii.

Inspectors — whether they work for the government or a private industry — earn a yearly salary. Salaries depend on experience, education, location and actual job requirements, and can range from \$25,850 to \$97,000. Fringe benefits often include paid vacations and holidays, sick leave, medical and life insurance and some form of retirement or pension program.

Education and Certification

At minimum, a high-school diploma or the equivalent is necessary. Many employers require inspectors to have worked in the construction trades, completed an apprenticeship program, have studied engineering or architecture for at least two years, or have an Associate's degree from a community college with courses in construction technology, blueprint reading, mathematics, building inspection or public administration.

Many jurisdictions now require a Bachelor's or Master's degree in addition to on-site experience. Bachelor's degrees are available in construction, fire protection management, engineering, architecture, and related fields. Additionally, many jurisdictions require certification and continuing education for their inspectors. Certification for plan review and inspection disciplines is available from the International Code Council. Certification as a building official (code agency department head) is also available from the International Code Council (ICC).

Code officials must possess strong leadership, management and interpersonal skills. Excellent communication skills (both oral and written) are necessary as code officials interact with both the public and the media. Oftentimes, a good driving record is needed as well.

Opportunities for Advancement

Certification enhances the chances for higher paying, more responsible jobs. From there, inspectors may progress to management work. Those entering this field with an Associate's or Bachelor's degree can advance by furthering their education in related fields such as public administration.

Employment Outlook

The trend toward professional standards for inspectors should open up good opportunities for experienced workers with some college education or those certified as inspectors. The employment of construction and building inspectors is expected to increase faster than the rate of growth for other occupations. Rising construction activity, concern about public safety and a call for quality construction should create an active demand for construction and building inspectors.

For More Information

This information was prepared to acquaint individuals with careers in code enforcement, to provide some stimulus for considering this activity as an occupation and to encourage proper preparations for pursuing such careers.

Individuals desiring to learn more about careers in code enforcement may wish to receive information regarding ICC Certification. Additional information is available through city, county, state or federal government agencies; state or federal Department of Labor; or libraries for more specific information on job opportunities and employment requirements in the code enforcement field. Reference sources available at most libraries for review include the Dictionary of Occupational Titles, Occupational Outlook Handbook, Encyclopedia of Careers and Vocational Guidance, American Almanac of Jobs and Salaries and Career Information Center.