

## Certification: Commercial Building Inspector

Exam ID: B2



### Scope:

A Commercial Building Inspector will be responsible for performing inspections of structures to determine compliance with the various Building Codes and Standards adopted by his / her jurisdiction. At this level of certification, the Inspector shall be able to inspect commercial structures of any size or occupancy.

- 80 multiple-choice questions
- 3-1/2-hour limit
- Open book

<b>01</b>	<b>General Administration</b>	<b>6%</b>
0101	<u>Project Administration</u> Verify that project information is provided and is adequate. Verify that the project is designed by approved persons when required, and has required approvals. Verify that products not detailed in the building code are approved by the building official and installed according to their listing. Verify that the required approved plans and specifications are available when required and retained by the building official for the period required.	1%
0102	<u>Public Information and Legal</u> For new and existing structures, answer questions about the need for permits and inspections, including special inspections and structural observations, general code compliance of designs, procedures, and materials. Communicate, issue, and maintain inspection reports, correction notices, stop work orders, and data for the issuance of the certificate of occupancy.	1%
0103	<u>Plan Reading</u> Read plans to verify the project conforms with the code, approved plans, and construction documents.	4%
<b>02</b>	<b>Building Planning</b>	<b>20%</b>
0201	<u>Fire Resistance-Rated Construction</u> Inspect fire resistance-rated construction for compliance with the code and tested assembly requirements.	5%
0202	<u>Building Location</u> Inspect the construction site to see that the building or structure location is in compliance with the requirements of the local ordinances, fire separation regulations, fire access, and the approved site plan. Verify that final grade will provide the required slope away from the footing or foundation wall. Verify finish floor elevation in flood-hazard areas for compliance with local and federal requirements.	2%
0203	<u>Interior Environment</u> Verify that the actual and allowable floor area calculations are correct. Inspect for compliance of minimum room dimensions and openings. Verify compliance of lighting and ventilation systems.	1%

0204	<u>Occupancy Classification and Type of Construction</u> Verify or determine the occupancy classification, provisions for special uses, and type of construction requirements, including individual elements or components.	5%
0205	<u>Safeguards During Construction</u> Assure that the precautions are taken for the safety and sanitation at the construction site.	1%
0206	<u>Accessibility</u> Inspect buildings to assure elements are accessible and usable by individuals with physical disabilities as specified by the code, approved plans, and construction documents.	2%
0207	<u>Material Quality</u> Inspect that materials are in compliance with the markings, standards, and the materials' characteristics.	2%
0208	<u>Interior Coverings</u> Verify that floor, wall, and ceiling coverings are correct types and thicknesses and are correctly supported and fastened.	2%
<b>03</b>	<b>Footings and Foundations</b>	<b>8%</b>
0301	<u>Footings</u> Verify that the building site's soil load-bearing capacity and stability complies with approved plans or reports. Verify that footings are laid out with correct depth, size, and setbacks, and that footings extend below the frost line. Inspect below-grade work for compliance with the code.	3%
0302	<u>Stepped Footings and Special Foundations</u> Verify that stepped footings and specialized foundations are constructed per the approved plans or code.	1%
0303	<u>Piles and Piers</u> Verify that piles and piers are correctly supported and anchored, and that wood members are protected against insects and decay.	1%
0304	<u>Foundation Walls</u> Verify that foundation stem walls are correctly sized and have sufficient height above grade. Verify that foundation wall reinforcement, anchor bolts, and fasteners are correct type, size, and grade and are placed per approved plans. Verify that foundation dampproofing and waterproofing is installed where required. Verify maximum unbalanced fill height. Verify that foundation walls are properly braced prior to back fill.	3%

<b>04</b>	<b>Floor Construction</b>	<b>8%</b>
0401	<u>Floor Systems</u> Inspect floor system spans, bearing, and connections for compliance with approved plans. Verify that the cutting, notching, and borings are within the limitations permitted by code, and that materials are protected against insects and decay where required. Verify that subflooring and decking has required thickness, span, and grade and meets installation specifications. Verify compliance of floor design and fasteners. Verify that crawlspaces have required clearance, ventilation, insulation, screening, and access openings.	5%
0402	<u>Concrete Slabs</u> Inspect concrete slabs placement for compliance with standards and material characteristics, and that proper precautions are used in adverse weather conditions.	3%
<b>05</b>	<b>Wall Construction and Coverings</b>	<b>21%</b>
0501	<u>Wood Wall Systems</u> Inspect wall systems for proper spans, spacing, bearing, and connections. Verify that pre-engineered wall systems are in accordance with the approved drawings and manufacturer's specifications. Verify that the cutting, notching, and borings are within the limitations permitted by code, and that wood members are protected against insects and decay where required.	5%
0502	<u>Steel Framing Systems</u> Inspect wall systems for proper spans, spacing, bearing, and connections. Verify that pre-engineered wall systems are in accordance with the approved drawings and manufacturer's specifications. Inspect steel framing for compliance with markings, standards, and the material	3%
0503	<u>Masonry Wall Systems</u> Inspect grouting, bonding, mortar type, mortar joint thickness, height, size, lintels, and distance between lateral supports for masonry walls. Verify that weather conditions are suitable for masonry construction and that proper precautions are used for adverse weather conditions.	5%
0504	<u>Concrete Wall Systems</u> Inspect height, size, attachments, bracing, and distance between lateral supports. Verify that weather conditions are suitable for construction and that proper precautions are used for adverse weather conditions.	3%
0505	<u>Wall Reinforcement</u> Inspect reinforcement for size, length of lap splices, clearances, alignment, cleanouts, and presence of loose rust, oil, or millscale.	2%
0506	<u>Exterior Sheathing and Weather-Resistant Coverings</u> Verify that exterior sheathing and weather-resistant siding materials are correctly sized, identified, and installed; protected against insects and decay; and have appropriate clearances to finish grade. Verify that exterior veneers and weather-resistive siding have correct anchorage, support, and backing. Verify that a weather-resistant barrier is correctly installed for all walls and around all wall openings. Verify that plaster, stucco, and metal lath have correct thickness and fasteners, and are correctly installed.	3%

<b>06</b>	<b>Roof/Ceiling Construction</b>	<b>6%</b>
0601	<u>Roof/Ceiling Assemblies</u> Inspects roof/ceiling construction for compliance with span, grade, type, connections, bearing, and quality requirements. Verifies that trusses are in accordance with the drawings and properly spaced, braced, and supported. Verify roof access and rooftop structures where required. Verify that insulation is of permitted materials, is provided where required, and is correctly installed. Verify that vapor and moisture barriers are correctly installed. Verify that attic and ceiling area construction has proper ventilation, screens, and access.	5%
0602	<u>Roof Sheathing and Coverings</u> Verify correct classification of roof coverings, roof slope, installation, flashings, and details, and method of roof drainage. Inspects roof sheathing for proper thickness, grade, support, and fastening. Verify re-roofing complies with code, design, and installation standards.	1%
<b>07</b>	<b>Public Safety and Special Construction</b>	<b>31%</b>
0701	<u>Means of Egress</u> Verify general means of egress requirements, exit access, exits, and exit discharge. Verify any miscellaneous means of egress and special occupancy requirements. Verify emergency escape and rescue requirements.	10%
0702	<u>Fire Protection Systems</u> Inspects both manual and automatic fire protection, fire alarms, and detection and standpipe systems for proper installation, power supply, and locations.	4%
0703	<u>Smoke and Fire Venting Control</u> Inspect for smoke control and fire venting as required by the code, approved plans, and construction documents.	4%
0704	<u>Interior Finishes and Insulation</u> Verify that interior floor, wall and ceiling finishes, insulation, and foam plastics comply with flame spread and smoke-developed index density requirements. Verify floor finishes comply with the critical flux rating required by the code, approved plans, and construction documents.	4%
0705	<u>Safety Glazing and Glass</u> Verify that safety glazing is correctly installed and labeled where required.	4%
0706	<u>Opening Protectives, Penetrations, and Joint Systems</u> Inspects opening protectives, penetrations, and joint systems in fire-rated assemblies to assure compliance with the code, approved plans, and construction documents. Verify that fire blocking and draft stopping are provided where required.	2%
0707	<u>Miscellaneous Construction</u> Verify that exterior stairs, ramps, porches, decks, and balconies which are open to the weather are constructed to support designed loads; are of suitable materials; and have required slope and width, tread, riser, headroom, guardrails, and handrail dimensions.	1%

- 0708 Building Services and Special Construction 1%  
Inspect existing structures, membrane structures, temporary structures, pedestrian walkways, tunnels, awnings and canopies, marquees, signs, towers, antennas, elevators, and conveyance systems. Inspect building components for seismic restraint requirements.
- 0709 Fireplaces and Chimneys 1%  
Verify that fireplaces, flues, and chimneys are correctly designed and have required clearances from combustible construction.