

## Certification: Structural Steel and Bolting Special Inspector



### Exam ID: S1

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

#### Scope:

The Structural Steel and Bolting Special Inspector is responsible for enforcing the construction details contained in the approved plans and specifications for high-strength bolting of steel framing and structural steel elements of a building. The special inspector reviews the statement of special inspections and the approved plans and specifications, and verifies that high-strength bolting is installed as shown and as specified in the approved plans and specifications. The special inspector is responsible for material sampling and for performing required tests. The special inspector is responsible for writing and submitting required reports, including reports of items that do not comply with the plans, to the building official, contractor, and/or registered design professional.

<b>01</b>	<b>General Requirements</b>	<b>11%</b>
0101	<u>Duties and Responsibilities</u>	6%
	Review approved plans, specifications, and submittals for special inspection requirements. Comply with special inspection requirements of the enforcing jurisdiction in accordance with the applicable code, approved plans, and specifications.	
0102	<u>Notification of Discrepancies</u>	3%
	Notify the contractor of deviations from approved plans and specifications. If the deviations are uncorrected, notify the architect or engineer of record and the building official of deviations.	
0103	<u>Inspection and Test Reports</u>	2%
	Submit progress reports to the architect or engineer of record and the building official, describing tests which were performed and compliance of work. Submit final summary report stating whether work requiring special inspection was in conformance with the approved plans and applicable provisions of the building code.	
<b>02</b>	<b>Material Sampling, Testing, and Verification</b>	<b>22%</b>
0201	<u>Material Identification</u>	14%
	Verify that the steel shapes and bolts are of the type, size, grade, and condition specified on the approved plans and specifications.	
0202	<u>Material Sampling</u>	8%
	Verify the required type, quantity, location, and frequency of tests to be performed and witness preparation of properly identified test material samples on all materials. Provide or arrange for documentation and transportation of samples to the laboratory. Verify that required testing is performed on materials as required by applicable standards and specifications.	

<b>03</b>	<b>High-Strength Bolting</b>	<b>41%</b>
0301	<u>Bolts, Nuts, and Washers</u> Verify correct type, size, and location of bolts and bolt holes, nuts, and washers for type of connection specified on approved plans and specifications. Verify protected storage of bolts, nuts, and washers as required by applicable standards and specifications.	18%
0302	<u>Pre-installation Verification</u> Verify that faying surfaces at connections utilizing high-strength bolts are in compliance with applicable standards. Observe or conduct bolt tension verification tests on required high-strength bolt assemblies.	8%
0303	<u>Installation, Testing, and Inspection</u> Identify and verify joint type and installation of bolt assemblies per approved plans and specifications. Verify use of the approved method and sequence of bolt tightening.	15%
<b>04</b>	<b>Steel Framing Observation</b>	<b>26%</b>
0401	<u>Orientation and Frame Member Sizes</u> Verify that structural steel frame orientation, details, and frame member sizes are in accordance with approved plans and specifications.	18%
0402	<u>Base Plates</u> Verify that column base plates are the designed configuration, have correct size hole, and proper clearance for grouting. Verify grout placement and sampling. Verify that base plates are securely seated and fastened in accordance with applicable plans and specifications	8%