

SECTION 01 45 33
SPECIAL INSPECTION, OBSERVATION, AND TESTING

PART 1 GENERAL

1.01 SUMMARY

- A. This section covers requirements for Special Inspection, Observation, and Testing required in accordance with Chapter 17 of the 2021 IBC and is in addition to and supplements requirements included in Statement of Special Inspections shown in supplement located at end of Section 01 40 00, Quality Requirements.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Society of Civil Engineers (ASCE): 7, Minimum Design Loads for Buildings and Other Structures.
 - 2. International Code Council (ICC):
 - a. International Building Code (IBC).
 - b. Evaluation Service (ICC-ES) Reports and Legacy Reports.

1.03 DEFINITIONS

- A. Agencies and Personnel:
 - 1. Agency Having Jurisdiction (AHJ): Permitting building agency; may be a federal, state, local, or other regional department, or individual including building official, fire chief, fire marshal, chief of a fire prevention bureau, labor department, or health department, electrical inspector; or others having statutory authority. AHJ may be Owner when authorized to be self-permitting by governmental permitting agency or when no governmental agency has authority.
 - 2. Approved Agency: An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved.
 - 3. Registered Design Professional in Responsible Charge: An individual who is registered or licensed to practice their respective design profession as defined by statutory requirements of professional registration laws of state or jurisdiction in which Project is to be constructed.
 - 4. Special Inspector: Qualified person employed by Contractor who will demonstrate competence to the satisfaction of AHJ and Contracting Officer for inspection of a particular type of construction or operation

requiring Special Inspection. Must be an independent third party hired directly by the Contractor.

B. Nonstructural Components:

1. Architectural Component Supports: Structural members or assemblies of members which transmit loads and forces from architectural systems or components to structure, including braces, frames, struts, and attachments.
2. Electrical Component Supports: Structural members or assemblies which transmit loads and forces from electrical equipment to structure, including braces, frames, legs, pedestals, and tethers, as well as elements forged or cast as part of component for anchorage.
3. Mechanical and Plumbing Component Supports: Structural members or assemblies which transmit loads and forces from mechanical or plumbing equipment to structure, including braces, frames, skirts, legs, saddles, pedestals, snubbers, and tethers, as well as elements forged or cast as part of component for anchorage.

C. Professional Observation:

1. Does not include or waive responsibility for required Special Inspection or inspections by building official.
2. Requirements are indicated on Statement of Special Inspections provided in supplement located at the end of Section 01 40 00, Quality Requirements.
3. Geotechnical Observation: Visual observation of selected subgrade bearing surfaces and installation of deep foundation elements by a registered design professional for general conformance to Contract Documents.
4. Structural Observation: Visual observation of structural system(s) by a registered design professional for general conformance to Contract Documents.

D. Special Inspection:

1. Special Inspection: Inspection required of materials, installation, fabrication, erection, or placement of components and connections requiring special expertise to ensure compliance with approved Contract Documents and referenced standards.
2. Special Inspection, Continuous: Full-time observation of work requiring Special Inspection by an approved Special Inspector who is present in area where the Work is being performed.
3. Special Inspection, Periodic: Part-time or intermittent observation of the Work requiring Special Inspection by an approved Special Inspector

who is present in area where the Work has been or is being performed, and at completion of the Work.

- E. Statement of Special Inspections: Detailed written procedure contained in supplement located at end of Section 01 40 00, Quality Requirements, establishing systems and components subject to Special Inspection, Observation, and Testing during construction, type and frequency of testing, extent and duration of Special Inspection, and reports to be completed and distributed by Special Inspector.
- F. Structural Systems and Components:
 - 1. Diaphragm: Component of structural lateral load resisting system consisting of roof, floor, or other membrane or bracing system acting to transfer lateral forces to vertical resisting elements of structure.
 - 2. Drag Strut or Collector: Component of structural lateral load resisting system consisting of diaphragm or shear wall element that collects and transfers diaphragm shear forces to vertical force-resisting elements or distributes forces within diaphragm or shear wall.
 - 3. Seismic-Force-Resisting System: That part of structural lateral load resisting system that has been considered in the design to provide required resistance to seismic forces identified on the Drawings.
 - 4. Shear Wall: Component of structural lateral load resisting system consisting of a wall designed to resist lateral forces parallel to plane of the wall. Unless noted otherwise on the Drawings, load-bearing walls with direct in-plane connections to roof and floors shall be considered to be shear walls.
 - 5. Wind Force Resisting System: That part of the structural system that has been considered in the design to provide required resistance to wind forces identified on the Drawings.

1.04 SUBMITTALS

- A. Informational Submittals:
 - 1. Fabricator's Certificate of Compliance: Form shall be completed by entity responsible for shop fabrication of structural load-bearing members and assemblies. Refer to Article Supplements located at end of Section 01 40 00, Quality Requirements.

1.05 STATEMENT OF SPECIAL INSPECTIONS REQUIREMENTS

- A. Designated Systems for Inspection:
 - 1. None required.
 - 2. Wind-force-resisting systems designated under IBC Section 1705: None required.

3. Architectural, Plumbing, Mechanical, and Electrical Components subject to Special Inspection under IBC Sections 1707, 1705.13.5, and 1705.13.6 for Seismic Resistance: None required.

B. Statement of Special Inspections:

1. As included in supplement located at the end of Section 01 40 00, Quality Requirements, and in support of building permit application, Project-specific requirements were prepared by Registered Design Professional in Responsible Charge. The following identifies elements of inspection, observation, and testing program to be followed in construction of the Work:
 - a. Special Inspection and testing required by IBC Section 1704 and Section 1708, and other applicable sections and referenced standards therein.
 - b. Type and frequency of Special Inspection required.
 - c. Type and frequency of testing required.
 - d. Required frequency and distribution of testing and Special Inspection reports to be distributed by Special Inspector to Contracting Officer.
 - e. Geotechnical Observation to be Performed: Required frequency and distribution of Geotechnical Observation reports by registered design professional to Contracting Officer.
 - f. Structural Observations to be Performed: Not required for this Project.

- C. Special Inspection and associated testing of shop fabrication and field construction will be performed by an approved accredited independent agency or by Authority Having Jurisdiction's (AHJ) approved, qualified inspection staff. Contractor will secure and pay for services of agency to perform Special Inspection and associated testing.

- D. Code required Special Inspection with associated testing and Professional Observation, as provided in Statement of Special Inspections in supplement located at the end of Section 01 40 00, Quality Requirements, and further provided in this section, is for benefit of Government and does not:

1. Relieve Contractor of responsibility for providing adequate quality control measures.
2. Relieve Contractor of responsibility for damage to or loss of material before acceptance.
3. Constitute or imply acceptance.
4. Affect continuing rights of Government after acceptance of completed Work.

- E. The presence or absence of code required Special Inspector and/or Professional Observer does not relieve Contractor from Contract requirements.
- F. Contractor is responsible for additional costs associated with Special Inspection and Testing and Observation when Work is not ready at time identified by Contractor and Special Inspectors and/or Professional Observer are onsite, but not able to provide contracted services.
- G. Contractor is responsible for associated costs for additional Special Inspection and Testing and Professional Observation by Special Inspectors and Professional Observers required because of rejection of materials of in place Work that cannot be made compliant to Contract Document without additional inspections and observation and testing.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Requirements of the Statement of Special Inspections are provided by the Contractor. All other testing and inspections, unless noted otherwise, are provided by Contractor.
- B. Provide access to shop or Site for Special Inspection and Testing and Professional Observation requirements.
- C. Notify Contracting Officer in advance of required Special Inspection and Professional Observation no later than 48 hours prior to date of Special Inspection and five business days for Professional Observation.
- D. Provide access for Special Inspector to construction documents.
- E. Retain special inspection records on-site to be readily available for review.
- F. Cooperate with Special Inspector and Contracting Officer and provide safe access to the Work to be inspected.
- G. Submit Fabricator's Certificates of Compliance for approved fabricators.
- H. Provide reasonable auxiliary services as requested by the Special Inspector. Auxiliary services required include, but not limited to:
 - 1. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests to assist the Special Inspector in performing test/inspections.

2. Providing storage space for the Special Inspector's exclusive use, such as for storing and curing concrete test samples and delivery of samples to testing laboratories.
 3. Providing the Special Inspector with access to all approved submittals.
 4. Providing security and protection of samples and test equipment at the Project Site.
 5. Provide samples of materials to be tested in required quantities.
- I. Materials and systems shall be inspected during placement where Continuous Special Inspection is required.
- J. Where Periodic Special Inspection is indicated in the Statement of Special Inspections:
1. Schedule inspections for either during or at completion of their placement or a combination of both.
 2. Schedule periodically inspected Work (either inspected during or after its placement) so that corrections can be completed and re-inspected before Work is inaccessible.
 3. Sampling a portion of the Work is not allowed. Schedules shall provide for inspection of all Work requiring periodic inspection.

3.02 SUPPLEMENTS

- A. The supplements listed below, following "End of Section," are a part of this specification:
1. Contractor's Statement of Responsibility.
 2. Fabricator's Certificate of Compliance.

END OF SECTION

CONTRACTOR'S STATEMENT OF RESPONSIBILITY

(Project)

(Name of Contracting Company)

(Business Address)

() _____
(Telephone)

() _____
(Fax)

I, (We) hereby certify that I am (we are) aware of the Special Inspection and Testing requirements contained in Contract Documents for this Project as listed in Statement of Special Inspections in supplement located at the end of this section, and that:

1. Control of this Work will be exercised to obtain conformance with Contract Documents approved by building official.
2. Procedures within the Contractor's organization to be used for exercising control of the Work, method and frequency of reporting, and distribution of reports required under Statement of Special Inspections for Project are attached to this statement.
3. I, (We) will provide 48-hour notification to Contracting Officer and approved inspection agency as required for structural tests and Special Inspection for Project.
4. The following person is hereby identified as exercising control over requirements of this section for the Work designated above:

Name: _____

Qualifications: _____

(Print name and official title of person signing this form)

Signed by: _____

Date: _____

Project Name: _____

FABRICATOR'S CERTIFICATE OF COMPLIANCE

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per Section 1704.2.5 of 2024 IBC must submit Fabricator's Certificate of Compliance at the completion of fabrication.

(Project)

(Fabricator's Name)

(Business Address)

(Certification or Approval Agency)

(Certification Number)

(Date of Last Audit or Approval)

Description of structural members and assemblies that have been fabricated:

I hereby certify that items described above were fabricated in strict accordance with approved construction documents.

(Name and Title) type or print

(Signature and Date)

Attach copies of fabricator's certification or building code evaluation service report and fabricator's quality control manual.

