

## **GUIDELINES FOR SPECIAL INSPECTIONS AND TESTING**

**PURPOSE:** To provide a method for complying with requirements of the International Building Code (IBC) 2006 Section 1704 – Special Inspections.

**BEFORE PERMIT ISSUANCE:** The architect or engineer of record shall prepare and submit a Special Structural Testing and Inspection Program to the building official. The Program may be included in the contract documents or as a separate submittal document. The completed Program Summary Schedule should include the following:

1. A specific listing of the items requiring special inspection (observation and testing).
2. The associated technical scope sections, which define the applicable standard to judge conformance of construction work and describe the duties of special inspectors.
3. The type of special inspector required for each item.
4. The frequency of reporting, i.e., weekly, monthly, per test/inspection, per floor, etc.
5. The parties responsible for performing the special inspections.
6. Acknowledgements by each designated party.

**REQUIREMENTS:** “Special Inspection” includes inspection (work requiring observation and engineering judgment) and testing (work analyzing materials in accordance with approved standards). Special Inspection shall meet the minimum requirements of the *Minnesota State Building Code*, which includes IBC Section 1704, and the approved drawings and specifications. Special Inspectors shall be employed by the owner or engineer/architect of record, but not the contractor. Special Inspection shall not relieve the contractor of responsibility to complete the work in accordance with the approved drawings and specifications.

**GUIDELINE PROGRAM:** To assist with standardization of Special Inspections and Testing, the Council of American Structural Engineers/Minnesota chapter (CASE/MN) developed a *Guideline Program for Special Structural Testing and Inspection, 4<sup>th</sup> Edition*. The document is intended to identify items critical to the structural integrity of buildings and clearly outline the responsibilities of parties involved in design, construction, testing, and inspection. An excerpt regarding responsibilities is included in the following paragraph. Copies of this **voluntary use** document can be obtained through the American Council of engineering Companies/Minnesota (ACEC/MN) office at (952) 593-5533.

## **1.05 Responsibilities**

### **A. Special Structural Testing and Inspection**

1. Special Inspectors:
  - a. Sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencement of construction.
  - b. If requested, attend a pre-construction meeting to review the scope of special structural testing and inspection.
  - c. Test and/or inspect the work assigned for conformance with the building department approved design drawings, specifications and applicable material and workmanship provisions of the Code. Perform testing and inspection in a timely manner to avoid delay of work.
  - d. Bring discrepancies to the immediate attention of the contractor for correction, then, if uncorrected after a reasonable period of time, to the attention of the Structural Engineer of Record, the Building Official, and to the Architect.
  - e. Submit test and/or inspection reports to the Building Official, Contractor, the Structural Engineer of Record, and other designated persons in accordance with the Special Structural Testing and Inspection Summary Schedule.
  - f. Submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans, specifications and the applicable workmanship provisions of the Code.
2. Architect of Record (or other prime consultant):
  - a. Complete and sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencement of construction. Provide a completed copy of the schedule to all signed parties including Building Official.
  - b. If appropriate, arrange and attend a pre-construction meeting to review the scope of special structural testing and inspection. Include Contractor, Building Official, SER, Testing Agency and other parties concerned.
  - c. Coordinate the flow of reports and related information to expedite resolution of construction issues.

3. Structural Engineer of Record (SER):
  - a. Identify items requiring special structural testing and inspection including special cases.
  - b. Define "type" of special inspector required for "description" of work indicated on the special structural testing and inspection schedule.
  - c. Complete and sign the Special Structural Testing and Inspection Summary Schedule prior to commencement of construction.
  - d. If requested, attend a pre-construction meeting to review the scope of special structural testing and inspection.
  - e. Review reports submitted by special inspectors.
  - f. If engaged as a special inspector, provide special structural testing and inspection services as previously described.
4. Testing Agency:
  - a. Sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencement of construction.
  - b. If requested, attend a pre-construction meeting to review the scope of special structural testing and inspection.
  - c. When engaged as a special inspector, provide special structural testing and inspection services as previously described.
5. Contractor:
  - a. Sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencement of construction.
  - b. If requested, attend a pre-construction meeting to review the scope of special structural testing and inspection.
  - c. Post or make available the Special Structural Testing and Inspection Summary Schedule within its office at the job site. Also, provide adequate notification to those parties designated on the schedule so they may properly prepare for and schedule their work.
  - d. Provide the special inspectors access to the approved drawings and specifications at the job site.

- e. Review reports submitted by special inspectors.
  - f. Retain at the job site all reports submitted by the special inspectors for review by the building official upon request.
  - g. Correct in a timely manner, deficiencies identified in inspection and/or testing reports.
  - h. Provide the special inspector safe access to the work requiring inspection and/or testing.
  - i. Provide labor and facilities to provide access to the work and to obtain, handle and deliver samples, to facilitate testing and inspection and for storage and curing of test samples.
  - j. Verification of conformance of the work within specified construction tolerances is solely the Contractor's responsibility.
6. Fabricator:
- a. Sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencing construction.
  - b. Submit a Certificate of Compliance to the Building Official, Special Inspector, and Structural Engineer of Record that the work was performed in accordance with the approved plans and specifications.
7. Building Official (Typical responsibilities noted for information only):
- a. Determine work which, in the Building Officials opinion, involves unusual hazards or conditions in accordance with the International Building Code (IBC).
  - b. Review special inspector qualifications.
  - c. Accept and sign the completed Special Structural Testing and Inspection Summary Schedule.
  - d. Review all fabricators who perform work in their shop, which requires special inspection.
  - e. Review reports and recommendations submitted by the special inspectors.
  - f. Review the "final signed reports" submitted by the special inspector(s). These documents should be accepted and approved by the building department prior to issuance of a Certificate of Occupancy.

8. Owner:

- a. Establish direct funding to provide for cost of special structural testing and inspection services.
- b. Provide special inspector with approved design drawings, specifications and approved shop drawings.
- c. Sign the Special Structural Testing and Inspection Summary Schedule in conjunction with other responsible parties prior to commencement of construction.