

**SPECIAL INSPECTIONS:**  
**GUIDELINES FOR OWNERS, ARCHITECTS, ENGINEERS,  
CONSTRUCTORS, CODE OFFICIALS AND INSPECTORS**

IN ACCORDANCE WITH THE KENTUCKY BUILDING CODE  
REQUIREMENTS, 2007 EDITION

PREPARED BY



Structural Engineer Association  
of Kentucky

**STRUCTURAL ENGINEERS ASSOCIATION OF KENTUCKY**  
**SPECIAL INSPECTIONS COMMITTEE**

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## FORWARD

This Guideline document is prepared by the Structural Engineers Association of Kentucky (SEAOK) in cooperation with the Office of Housing, Buildings, and Construction (HBC) of The Commonwealth of Kentucky to supplement the information and requirements of the Kentucky Building Code (KBC).

This document is intended to provide owners, architects, engineers, constructors, code officials and inspectors with information to assist them in completing their roles in satisfying the specific code requirements as related to special inspections.

The forms included in this publication were created originally by the Building Official & Code Administrators International, Inc., Council of American Structural Engineers (CASE) and the Department of Buildings and Inspections of City of Cincinnati, and they are modified and reproduced here to conform to the Kentucky Building Code 2007 Edition.

This guide is based on the “Guide to Special Inspections and Quality Assurance”, 3<sup>rd</sup> Edition, prepared by the CASE Special Inspections Subcommittee of the CASE National Guidelines Committee. Their efforts are gratefully acknowledged. Please note that the first two editions of the CASE documents were entitled “National Practice Guidelines for Special Inspections”.

**This Third Edition of the SEAoK Special Inspection Guidebook has been updated to correspond to the implementation of the 2007 Kentucky Building Code, modeled after the 2006 International Building Code.**



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## STRUCTURAL ENGINEERS ASSOCIATION OF KENTUCKY

### SPECIAL INSPECTIONS

#### 1. THE ORIGIN:

To find answers to numerous structural failures in the United States that had taken several lives and cost billions of dollars in property damages, U.S. House of Representatives Subcommittee on Investigations and Oversight, chaired by Albert Gore, Jr., held investigative hearings during August 1982, to examine the causes of structural failures. Based on these hearings, The Committee on Science and Technology's report titled Structural Failures in Public Facilities, House Report 98-621, was presented to the 98<sup>th</sup> U.S. Congress in March 1984. The two most critical factors identified by the Subcommittee are:

- a.) Need for improved organization of construction projects and better communication between the participants.
- b.) Need for construction inspection by the Structural Engineer of Record (SER) during the construction of principal structural elements.

The Subcommittee noted that "For a variety of reasons, the structural engineer of record or his designee is often not present on the job site during the construction of principal structural components. The absence of structural engineer has permitted flaws and changes on site to go unnoticed and uncorrected." In addition, the Subcommittee recommended that "Professional organizations, such as Building Officials and Code Administrators International, the International Conference of Building Officials, and the Southern Building Code Conference International, should make every effort to ensure that provisions are written into building codes and adopted in public forum which make the on-site presence of the structural engineer mandatory during the construction of structural components on public facilities."

Special Inspection and the role of the SER have been topics of controversy and confusion in recent years as many in the design and construction industry are not aware of the root cause for the introduction of Special Inspection Provisions in the Building Codes. Many organizations, including the Coalition of American Structural Engineers (CASE) and Structural Engineers Association of Kentucky (SEAOK), a Charter Member of the National Council of Structural Engineers Associations, agree with the Subcommittee's recommendations and believe strongly that the SER should serve as the Special Inspector whenever possible and practical. As a means to increase awareness and understanding of the Special Inspection Process, CASE compiled the answers shown in Appendix 'E' to common questions raised by Owners, Architects, Code Officials, Lending Institutions and others.

#### 2. GENERAL:

**Although this document focuses on the Kentucky Building Code mandated Structural Special Inspections and Testing, there are also Code mandated inspections for non-structural items, such as architectural, mechanical, electrical, plumbing and fire protection. The intent of this document is to highlight those non-structural issues while providing detailed review of the Structural Special Inspections and Testing requirements.**

**In order to ensure that building construction will be performed in accordance with the design and the building code, the construction documents (specifications and design drawings) are the means employed to guide the contractor in producing the desired end product. It is essential that construction documents be correlated so that conflicts and misunderstandings of the requirements may be avoided.**

In general, construction plans delineate the extent and nature of the work to be done, while specifications tell how it is to be accomplished. Specifications should go into as much detail as necessary, qualitatively and quantitatively. Being written instructions that complement the plans by clarifying and defining technical requirements of the work, specifications include statements setting forth the type and quality of workmanship desired by the owner. They serve as a standard and a guide for the contractor.

**It has become common practice to build according to minimum standards. Earthquake-resistant construction, for economic reasons, tends to apply similar minimum standards for coping with hazards of great uncertainty. For this reason, it is essential that the data and criteria used in the design phases be satisfied during the construction phase. This is ensured through Special Inspections. Special Inspections involve monitoring of materials and construction critical to the structural integrity of buildings during seismic loading conditions. The need to develop adequacy of earthquake-resistant construction hinges on Special Inspections and minimizing mistakes in the final construction. Therefore, Special Inspections provide greater confidence that the completed work complies with the contract documents resulting in enhanced quality and safety of the structure.**

The Special Inspection Process (SPIN) assures the Owner that the structural design by the Structural Engineer of Record (SER) is implemented in place to the satisfaction of the SER. IT IS NOT A PEER REVIEW PROCESS. EVERYONE INVOLVED IN THE SPIN IS A QUALITY ASSURANCE TEAM MEMBER. Hence, retention of SER by the Owner as the Special Inspector of Record (SIR) does not constitute a Conflict of Interest situation.

Special Inspections are mandatory as per the Kentucky Building Code (KBC) for all construction, except for structures of minor importance (defined in the Code), and its vigor varies with building type (category) and earthquake risk category. The KBC requires a formalized Special Inspection process involving aspects of testing and inspection for most types of buildings.

### **3. SPECIAL INSPECTION VS. TESTING:**

**Special Inspection involves the evaluation of materials, workmanship, interpretation of contract documents, understanding of load paths and structural mechanics, detail understanding of various structural systems, primary and secondary systems, load transfer mechanisms, understanding of structural behavior, stress concentrations, and critical failure paths. The Special Inspector makes professional judgment as to the quality and acceptability of the construction in-place based on his/her knowledge and experience.**

**Testing involves the analysis of materials in accordance with approved standards to determine compliance with contract documents.**

**“Special Inspections” as defined by the Kentucky Building Code actually involve aspects of testing and inspection.**

**4. SPECIAL INSPECTOR:**

The Special Inspector of Record (SIR), ideally, shall be the Structural Engineer of Record (SER) who designed the buildings structural system(s). If not the SER, then another structural engineer licensed in the Commonwealth of Kentucky, as approved by the SER and Code Official, may be contracted as the SIR. Licensed structural or civil engineers with at least five years of licensed experience in designing structural systems for buildings and other structures may be acceptable as a Special Inspector, again as approved by the SER and Code Official. The Special Inspector shall demonstrate specific knowledge and experience in the type of construction of structural elements anticipated under this project.

Some special inspection tasks require skills normally furnished by qualified testing laboratories and may be Agents of the SIR. However, SEAOK maintains that the SER is the most appropriate party to implement and coordinate the Special Inspections program. Conditions related to retaining the services of a Special Inspector are outlined in the Special Inspector Evaluation Checklist in Appendix G. Special Inspector’s qualifications should be determined based on review of the Special Inspector Evaluation Checklist.

**5. AGENTS OF THE SPECIAL INSPECTOR:**

The Agents of the Special Inspector of Record (Agents) retained for inspecting the work of a particular trade or an element of a structural system should be responsible for conducting all aspects of inspection as outlined and as required by the Kentucky Building Code. The Agents who are responsible for conducting day-to-day inspections shall be identified in the *Statement of Special Inspections* that is submitted to the Building Official. The SIR should submit the qualifications of various Agents to the SER for their review and the SIR should contract with the Agents for their services unless they contract directly with the Owner. Regardless, whether the Agents are contracted by the Owner or not, they are directly responsible to the Special Inspector.

**6. SPECIAL INSPECTOR vs. AGENTS:**

Special Inspector of Record (SIR) is responsible for the followings:

- a. Periodically reviewing, managing and coordinating the efforts of the various Agents.
- b. Should organize the process and establish procedures for the Agents including, if necessary, meetings with affected subcontractors.
- c. Responsible for establishing proper lines of communication so as to facilitate timely and effective inspection of various constructions.
- d. Should be responsible for obtaining reports from all Agents, for transmitting those reports, and for confirming action taken to correct noted deficiencies.
- e. Should conduct periodic visits to the site to oversee the quality of inspection and its compliance with established procedures.
- f. Should provide periodic interim reports at a frequency acceptable to the SER and file a *Final Report of Special Inspections* at the completion of the project.

- g. Should inform all pertinent parties, including the SER, of any deviations from compliance with the Contract Documents. Directions for corrections to construction defects should be initiated by the SER or Prime Design Professional (PDP), and be delivered through the normal process.
- h. Should not authorize any deviations from the Contract Documents. The role of the SIR should be to document that the work complies with the Construction Documents and to identify any deficiencies in the work.

The Agents are responsible for the followings:

- a. Verify procedures and schedules with the SIR, the Contractor, and the affected subcontractors.
- b. Perform the defined inspections in a timely manner and promptly submit the reports of inspection to the SIR.
- c. Should not authorize any deviations from the approved Construction Documents.

The Special Inspector Evaluation Checklist shall form a portion of the Special Inspection Contract. Refer to Appendix G for a sample form.

#### **7. SPECIAL INSPECTIONS PROCUREMENT:**

**The 2007 KBC states that the owner or the architect/engineer of record acting as the owner's agent must employ all Special Inspections. Thus, the contractor is no longer allowed to provide the Special Inspections directly as a part of their construction contract.** Special Inspection Services are distinct and different from the traditional structural engineering scope of services and should be under a separate contract with the owner, or owner's representative, if the SER is retained as the Special Inspector. The owner shall provide and fund Special Inspection services, either directly through the SER or through an approved Inspection Agency. *SEAOK maintains that direct appointment of the responsibility for Special Inspection services by the Owner to the SER is the most effective quality assurance means and is overall the most cost effective method of funding Special Inspections.*

#### **8. ROLE OF PRIME PROFESSIONAL (ARCHITECT OR ENGINEER OF RECORD)**

The Prime Design Professional (PDP) should be responsible for informing the Owner of the need to provide for Special Inspections and for assisting the Owner as may be needed to retain the services of an SIR. The prime professional should also facilitate the exchange of information regarding Special Inspection requirements between the owner and SER. The PDP should be responsible for identifying the specific non-structural Special Inspections to be performed for the project, and should work with the SER to ensure they are included in the Statement of Special Inspections. The PDP shall supply the SIR with the necessary copies of current appropriate Contract Documents, including those revisions, addenda and change orders affecting work to be inspected and tested.

## 9. ROLE OF CONTRACTOR

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan (Statement of Special Inspections) shall submit a written **Contractors Statement of Responsibility**.

The contractor is responsible for means and methods of construction as well as for construction site safety. The contractor is responsible for scheduling inspections and tests. Sufficient notice and lead time must be allowed for the inspection and testing to be performed without impeding the construction operations.

The contractor must cooperate with the inspection and testing agencies. Safe access must be provided to allow inspections and tests to be performed. This may require the contractor to provide scaffolding, ladders, lifts or other.

The contractor shall post the Schedule of Special Inspection Services (SSIS) at the job site and provide adequate notification to those parties performing Special Inspections and Testing so they may properly prepare for and schedule the services. Copies of the SSIS are provided to the owner, PDP, EOR, contractor, building official and special inspectors.

## 10. DELIVERY METHODS

**Special Inspection (SPIN) services may be delivered and funded through various channels. A few of the means for procuring for the Special Inspection services are outlined herein along with their advantages and disadvantages. As previously noted, the 2007 KBC no longer allows the Contractor to provide the Special Inspection services; they are to be provided directly by the Owner or the architect/engineer serving as the Owner's representative. In the following options, reference to "Owner" infers either the Owner or the architect/engineer of record serving as the Owner's representative.**

- a. **Owner retains SER to provide SPIN and SER performs all SPIN tasks in-house:** Since the SER is very much familiar with the design of the structure and critical elements and details, the SER will naturally focus attention during the construction phase; *SEAOK recommends this as the correct means for getting the SPIN accomplished.* The SER assumes the ultimate responsibility for the integrity of the completed structure and has a vested interest in seeing that the project is built according to his/her design and to their satisfaction. Since a third party is not involved, there is little room for miscommunication, misinterpretation and misunderstanding. Numerous meeting hours between the SER, Special Inspector and Agents are eliminated, thereby yielding a much more economical SPIN program. Conflicts between the structural, architectural and mechanical plans are resolved expeditiously and with minimum number of participants. Third party overhead and meeting time is eliminated resulting in considerable savings to the Owner. The SER assumes **FULL** responsibility for the design as well as the constructed structural element in place. The project and the SER are linked with the **VERY FIRST** link.

- b. **Owner retains SER to provide SPIN and SER farms out selected tasks to Outside Firms (Agents) and performs the rest of the tasks in-house:** This Delivery Method is adopted when SPIN is required for non-structural elements and in-house expertise of the SER is limited to perform such inspections. The SER may also elect to subcontract certain inspection tasks for lack of available manpower during a particular phase of construction and retain the inspection of critical elements for in-house personnel. Coordination effort between various Agents performing inspections increases with this method of delivery.
- c. **Owner retains a Third Party Structural Engineer (TPSE) and they perform all SPIN tasks:** This delivery method is the second best alternative to hiring the SER. The third party Structural Engineer though may not be familiar with the design intent but, through his/her training, will have a better understanding of the structural systems and can get up to speed within a short period after the start of construction. If an out-of-state Structural Engineer designs the project, which is located within Kentucky, this method may be ideal. The time spent in learning the structural design philosophy, identifying load paths, recognizing vital lateral force resisting elements, coordinating with the SER and resolving conflicts through the SER has the potential for increasing the cost of SPIN. While the SER is responsible for only the design, the responsibility for the constructed element falls on the side of the TPSE. The project and the SER are linked with a SECOND link.
- d. **Owner retains a Third Party Structural Engineer (TPSE) to do SPIN and TPSE farm out selective tasks to outside Firms (Agents) and performs rest of the task in-house:** This Delivery Method is adopted by TPSE when SPIN is required for non-structural elements and in-house expertise of a TPSE is limited to perform such inspections. TPSE may also elect to farm out certain inspection tasks for lack of available manpower during a particular phase of construction and retain the inspection of critical elements for in-house personnel. Coordination between various Agents performing inspections and the SER has increased considerably with this method of delivery.
- e. **Owner retains a Testing Agency and they perform all SPIN tasks under the leadership of a Licensed Structural Engineer (LSE):** LSE may be in-house or an outside consulting firm. The time spent by LSE in learning the structural design philosophy, identifying load paths, recognizing vital lateral force resisting elements, coordinating with the SER and resolving conflicts through the SER has potential for increasing the cost of SPIN further for the same level of inspection. This method isolates the SER farther from the project with a potential **THIRD** link.

**11. SPECIAL INSPECTION DETAILS:**

**A. Section 1704 of the KBC states that Special inspections are required for all buildings and structures that require the services of a registered design professional per Section 106, Section 122 and Table 122.1. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent, shall employ one or more special inspectors, as defined in 1702, to provide inspections during construction on the types of work listed under Section 1704. These inspections are in addition to the inspections specified in section 109. Special Inspection items consist of:**

- a. Construction utilizing structural steel, concrete, wood, pre-cast concrete, timber, cold-formed steel or masonry (clay brick, stone or CMU); or structures requiring field connections; or field assembly of pre-fabricated structural elements (i.e. pre-engineered metal building systems and metal-plate connected wood trusses).
- b. Construction conditions, such as:
  - Quality of the product depends on fabrication/installation procedures for conditions requiring observation during the process.
  - Particular designs requiring procedural techniques outside normal practices of the construction industry as determined by the SER.
  - Unusual handling or installation instructions for manufacturers, which, if not followed, could lead to failure.
  - Products requiring "certified" or "manufacturer licensed" installers.
- c. Systems or elements designated by the SER as requiring special inspections (designated seismic systems).

**B. Special Inspections are not required when:**

- a. Special inspections are not required for work for which a design professional is not required by Section 122.1.

Special inspections may not be required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official (and registered design professional if involved with the project). Structures exceeding 2 stories or 25 feet from the grade plane to the average height of the highest roof surface, or with a gross area exceeding 5,000 square feet, shall not be considered work of a minor nature.

Structures assigned to Category III or IV per Table 1604.5, regardless of height or square footage, shall not be considered work of a minor nature.

- b. Special inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects.

- c. Unless otherwise required by the building official, special inspections are not required for occupancies in Group R-3 as applicable in Section 101.2 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.
- d. Unless otherwise required by the building official, special inspections are not required for buildings assigned to Category I per Table 1604.5.

**C. Special Inspections are always required for fabricated assemblies (including timber) and special cases (as designated by the registered design professional in responsible charge).**

**D. Detailed requirements for Special Inspections:**

- a. The Statement of Special Inspections and the Quality Assurance Plans shall be prepared by the Prime Design Professional in responsible charge, during construction document preparation. These documents include the following (refer to the Appendices for sample forms):
  - Definition of the lateral-force-resisting system and designated seismic systems.
  - Schedule of Special Inspection Services.
  - Contractor's Statement of Responsibility Letter.
- b. The Statement of Special Inspections and the Quality Assurance Plans shall be submitted with the Contract Documents to the Code Official at the time of building permit application.
- c. Special Inspectors shall document and keep records of all inspections (refer to Appendix G for sample forms).
- d. The interim reports (daily/weekly) shall be submitted periodically to the SER and code official at a frequency agreed upon by the owner and code official before the start of the work.
- e. A final report of special inspections documenting completion of all required special inspections and correction of any discrepancies noted in the inspection shall be submitted by the Prime Design Professional to the code official **prior to the issuance of a Certificate of Occupancy** (refer to Appendix B for sample form).

**E. SPECIAL INSPECTIONS - GENERAL (KBC SECTION 1704):**

At the discretion of the structural engineer of record, inspection of items and systems in addition to those listed below may be required. All inspection requirements shall be included in the Statement of Special Inspections and the Quality Assurance Plans.

KBC Section 1704 pertains to the following *General Special Inspection* areas. Additional inspection requirements are covered in KBC Sections 1705–*Statement of Special Inspections*, 1706–*Contractors Responsibility*, 1707–*Special Inspections for Seismic Resistance*, 1708–

*Structural Testing* and 1709–*Structural Observations*, and are addressed in other sections of this document.

**Fabricated items (1704.2 of KBC):**

- a. Review the fabricator’s quality control procedures.
- b. Items requiring further inspections shall be determined as a result of the fabricator’s quality control procedures, shop drawings and the Code. Items that may require inspection include, but are not limited to:
  - Metal-plate connected wood trusses.
  - Steel bar joists.
  - Steel fabricated beams (rigid frames of metal building systems).
  - Pre-cast/pre-stressed concrete.
  - Engineered wood products (I beam and Laminated veneer lumber)

**Steel construction (1704.3 and 1707.2 of KBC):**

- a. Inspect materials used for structural steel; bolts, nuts and washers; and weld filler.
- b. Inspect operations of fabricator’s plant for presence and implementation of documentation procedures, bolts installation, welding steel, and framing details.
- c. Inspect the steel frame to verify compliance with the details shown on the approved construction documents, such as bracing, stiffening, member locations and proper application of joint details at each connection.
- a. Field welding operations.

**Concrete construction (1704.4 of KBC):**

- a. Inspect materials used for concrete and reinforcing steel.
- b. Inspect installation of formwork.
- c. Inspect installation of reinforcing and prestressing steel.
- d. Inspect during concrete operations:
  - Evaluation of concrete strength.
  - Inspections for use of proper mix proportions and proper mix techniques.
  - Inspection during concrete placement, for proper application techniques.
  - Inspection for maintenance of specified curing, temperatures and techniques.
- e. Exceptions:
  - Concrete footings of buildings three stories or less in height (including basement), which are fully supported on earth or rock, unless required by the registered design professional.
  - Nonstructural concrete slabs supported directly on the ground, including prestressed slab on grade, where the effective prestress in the concrete is less than 150 psi.
  - Plain Concrete foundation walls with minimum thickness of 8 in.
  - Concrete patios, driveways and sidewalks, on grade.

**Masonry construction (1704.5 of KBC):**

- b. Inspect materials used for masonry.
- c. Inspect during testing for masonry strength.
- d. Inspect operations:
  - Portioning mixing, consistency of mortar and grout.
  - Application of mortar grout and masonry units.
  - Condition, size, location, and spacing of reinforcement.
  - Protection of masonry during cold weather (below 40 degrees F.) or hot weather (above 90 degrees F.).
  - Anchorage.

**Wood construction (1704.6 and 1707.3 of KBC):**

- a. Special inspection is required for nailing, bolting, structural gluing or other fastening of the structural seismic-resisting system of buildings assigned to Seismic Performance Category C, D, E, or F.

This includes, but is not limited to, plywood/OSB shear walls, plywood/OSB diaphragms, diagonal bracing, engineered wood framing (roof/floor trusses, wood I-joists, engineered lumber), seismic ties, hold-downs and shear wall tension ties.

**Soils (1704.7 of KBC):**

- a. Site preparation: Before placement of the prepared fill, the special inspector shall determine that the site has been prepared in accordance with the subsurface investigation report.
- b. During fill placement: The special inspector shall determine that the material being used and the maximum lift thickness comply with the subsurface investigation report.
- c. Evaluation of in-place density: The special inspector shall determine, at the approved frequency, that the in-place dry density of the compacted fill complies with the subsurface investigation report.

**Pile foundations (1704.8 of KBC):**

- a. An approved, qualified inspector shall be present when pile foundations are being installed or during tests. The inspector shall make and submit to the code official detailed record of the installation of each pile and the results of load tests. The record shall include the cutoff and tip elevation of each pile relative to a permanent reference point or elevation.

**Pier foundations (1704.9 of KBC):**

- a. Special inspection is required for pier foundations of buildings assigned to Seismic Design Category C, D, E, or F.

**Sprayed fire-resistant materials (1704.10 of KBC):**

**Mastic and intumescent fire-resistant coatings (1704.11 of KBC):**

**Exterior insulation and finish systems (1704.12 of KBC):**

**Special cases (1704.13 of KBC):**

**Special inspection for smoke control (1704.14 of KBC):**

**F SPECIAL INSPECTIONS - FOR SEISMIC RESISTANCE (KBC SECTION 1707):**

In addition to the Special Inspections required for assuring the quality of general construction in Section 1704, the KBC also requires testing and inspections depending on the risk factors. Section 1707 of the KBC requires additional inspections to assure integrity and stability of the structure by closely monitoring the load paths. The following elements are subjected to these inspections, but additional inspection requirements are covered in KBC Sections 1704, 1705, 1706, 1708 and 1709.

**Seismic-force-resisting system (1707.1.1 of KBC):**

- a. **Seismic Design Category = C, D, E or F.**

**Designated seismic systems (1707.1.2 of KBC):**

- a. **Seismic Design Category = D, E or F.**

**Structural steel (1707.2 of KBC):**

**Structural wood (1707.3 of KBC):**

**Cold-Formed Steel Framing (1707.4 of KBC):**

**Pier Foundations (1707.5 of KBC):**

**Storage Racks and Access Floors (1707.6 of KBC):**

**Architectural Components (1707.7 of KBC):**

- a. **Seismic Design Category = C, D, E or F.**

**Mechanical and Electrical Components (1707.8 of KBC):**

- a. **Seismic Design Category = C, D, E or F.**

**Designated seismic system verification (1707.9 of KBC):**

**Seismic Isolation Systems (1707.10 of KBC):**

**G STRUCTURAL TESTING (KBC SECTION 1708):**

In addition to the Special Inspections required for assuring the quality of general construction in Section 1704, the KBC also requires testing and inspections depending on the risk factors. Section 1708 of the KBC requires additional testing on various building materials used in a particular structure to resist seismic forces. Additional inspection requirements are covered in KBC Sections 1704, 1705, 1706, 1707 and 1709.

**Masonry: Empirically designed – Occupancy Category I, II, or III (1708.1.1 of KBC):**

**Masonry: Empirically designed – Occupancy Category IV (1708.1.2 of KBC):**

**Masonry: Engineered – Occupancy Category I, II, or III (1708.1.3 of KBC):**

**Masonry: Engineered – Occupancy Category IV (1708.1.4 of KBC):**

**Testing for seismic resistance (1708.2 of KBC):**

**Reinforcing and prestressing steel (1708.3 of KBC)**

**Structural steel (1708.4 of KBC):**

**Seismic qualification of mechanical and electrical equipment (1708.5 of KBC):**

**Seismically isolated structures (1708.6 of KBC):**

**H STRUCTURAL OBSERVATIONS (KBC SECTION 1709):**

In addition to the Special Inspections required for assuring the quality of general construction in Section 1704, the KBC also requires testing and inspections depending on the risk factors. Section 1709 of the KBC also requires that structural observations shall be provided for those structures included in SDC D, E or F under certain conditions. Additional inspection requirements are covered in KBC Sections 1704, 1707 and 1709.

In accordance with Section 1709, the Owner shall employ a Structural Observer for the items listed as such in the Statement of Special Inspections. The Structural Observer shall be either the structural engineer of record (SER) or a licensed professional engineer approved by the SER and code official, and whose primary occupation is the design and/or analysis of structures of comparable difficulty and importance level.

Deficiencies shall be reported in writing to the SER and code official. A written statement from the Structural Observer shall be submitted to the code official at the conclusion of the work, stating that the required observations have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.

## **I SCHEDULE OF SPECIAL INSPECTION SERVICES:**

The Schedule of Special Inspections is a part of the Statement of Special Inspections generated by the Registered Design Professional in responsible charge and is intended to assist owners, designers, inspectors and contractors in preparing for special inspections and outlining their tasks, requirements and responsibilities. See Appendix A.

## **12. SPECIAL INSPECTION FORMS:**

Various Special Inspection forms are provided in the Appendices to assist owners, designers, code officials, contractors and special inspectors in planning and conducting the inspection program.



## **APPENDIX A**

### **Statement of Special Inspections**

Adapted from:  
Council of American Structural Engineers  
Form 101 – Statement of Special Inspections  
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# Statement of Special Inspections

Project:

Location:

Owner:

Design Professional in Responsible Charge:

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Kentucky Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

- Structural                       Mechanical/Electrical/Plumbing  
 Architectural                       Other: \_\_\_\_\_

The seismic-force-resisting system(s) consists of the following:  
Additional designated seismic system(s) consists of the following:

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Registered Design Professional in Responsible Charge, at the frequency noted below, or as requested by the Registered Design Professional in Responsible Charge or Code Official.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: \_\_\_\_\_ or  per attached schedule.

Prepared by:

\_\_\_\_\_  
(type or print name)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



Owner's Authorization:

Building Official's Acceptance:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- |  |  |
|--|--|
| <input type="checkbox"/> Soils and Foundations     | <input type="checkbox"/> Spray Fire Resistant Material         |
| <input type="checkbox"/> Cast-in-Place Concrete    | <input type="checkbox"/> Wood Construction                     |
| <input type="checkbox"/> Precast Concrete          | <input type="checkbox"/> Exterior Insulation and Finish System |
| <input type="checkbox"/> Masonry                   | <input type="checkbox"/> Mechanical & Electrical Systems       |
| <input type="checkbox"/> Structural Steel          | <input type="checkbox"/> Architectural Systems                 |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Special Cases                         |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Special Inspection Coordinator		
2. Inspector		
3. Inspector		
4. Testing Agency		
5. Testing Agency		
6. Other		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, or by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official and the Owner or the Owner's Agent, prior to commencing work.

# Quality Assurance Plan

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## Quality Assurance for Seismic Resistance

Seismic Design Category

Quality Assurance Plan Required (Y/N)

Description of seismic force resisting system and designated seismic systems:

# Contractor's Statement of Responsibility

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## Contractor's Statement of Responsibility

In accordance with Kentucky Building Code Section 1705.3, each contractor responsible for the construction or fabrication of a system or component designated as part of the seismic force resisting system and/ or designated seismic systems (see Statement of Special Inspections) must submit a Statement of Responsibility.

**This document shall be signed and dated by the contractor responsible for the work. The Plan shall be submitted to the Registered Design Professional in Responsible Charge or the Special Inspector Coordinator and the general contractor / construction manager prior to the commencement of work.**

The Contractor's Statement of Responsibility shall contain the following:

1. Acknowledgement of the special requirements contained in the Quality Assurance and Special Inspection Program. Provide a brief written description of the designated building systems and components.
2. Acknowledgement that control will be exercised to obtain conformance with the construction documents approved by the building official.
3. Procedures for exercising control within the contractor's organization the method and frequency of reporting and the distribution of the reports.
4. Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.
5. Signature of an officer, partner or like person in the contractor's office, who has authority to accept this responsibility on behalf of the company.

# Qualifications of Inspectors and Testing Technicians

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The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Registered Design Professional. The credentials of all Inspectors and testing technicians shall be provided if requested.

## Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule. The RDP must determine what qualifications are appropriate for the particular project and confirm that the selected agency employs individuals with the specified qualifications.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures with a minimum of five years of licensed experience.
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations with a minimum of five years of licensed experience.
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination.

### American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

### American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

### American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.
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### International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

### National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

### Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector
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### Other

Item	Agency # (Qualif.)	Scope
1. Shallow Foundations	PE/GE	<p><i>Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.</i></p> <p><i>Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill</i></p>
2. Controlled Structural Fill	PE/GE	<p><i>Perform sieve tests (ASTM D422 &amp; D1140) and modified Proctor tests (ASTM D1557) of each source of fill material.</i></p> <p><i>Inspect placement, lift thickness and compaction of controlled fill.</i></p> <p><i>Test density of each lift of fill by nuclear methods (ASTM D2922)</i></p> <p><i>Verify extent and slope of fill placement.</i></p>
3. Deep Foundations	PE/GE	<p><i>Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria.</i></p> <p><i>Inspect piles for damage from driving and plumbness.</i></p> <p><i>Verify pile size, length and accessories.</i></p> <p><i>Inspect installation of drilled pier foundations. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata.</i></p>
4. Load Testing		
4. Other:		

Item	Agency # (Qualif.)	Scope
1. Mix Design	ACI-CCI ICC-RCSI	<i>Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.</i>
2. Material Certification		
3. Reinforcement Installation	ACI-CCI ICC-RCSI	<i>Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters</i>
4. Post-Tensioning Operations	ICC-PCSI	<i>Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations.</i>
5. Welding of Reinforcing	AWS-CWI	<i>Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.</i>
6. Anchor Rods		<i>Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.</i>
7. Concrete Placement	ACI-CCI ICC-RCSI	<i>Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.</i>
8. Sampling and Testing of Concrete	ACI-CFTT ACI-STT	<i>Test concrete compressive strength (ASTM C31 &amp; C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).</i>
9. Curing and Protection	ACI-CCI ICC-RCSI	<i>Inspect curing, cold weather protection and hot weather protection procedures.</i>
10. Other:		

Item	Agency # (Qualif.)	Scope
1. Plant Certification / Quality Control Procedures <input type="checkbox"/> Fabricator Exempt	ACI-CCI ICC-RCSI	<i>Review plant operations and quality control procedures.</i>
2. Mix Design	ACI-CCI ICC-RCSI	<i>Inspect concrete batching operations and verify compliance with approved mix design</i>
3. Material Certification		
4. Reinforcement Installation	ACI-CCI ICC-RCSI	<i>Inspect size, spacing, position and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials.</i>
5. Prestress Operations	ICC-PCSI	<i>Inspect placement, stressing, grouting and protection of prestressing tendons</i>
6. Connections / Embedded Items		
7. Formwork Geometry		
8. Concrete Placement	ACI-CCI ICC-RCSI	<i>Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.</i>
9. Sampling and Testing of Concrete	ACI-CFTT ACI-STT	<i>Test concrete compressive strength (ASTM C31 &amp; C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).</i>
10. Curing and Protection	ACI-CCI ICC-RCSI	<i>Inspect curing, cold weather protection and hot weather protection procedures.</i>
11. Erected Precast Elements	PE/SE	<i>Inspect erection of precast concrete including member configuration, connections, welding and grouting.</i>
12. Other:		

# Masonry

Required Inspection Level:  1  2

Page of

Item	Agency # (Qualif.)	Scope
1. Material Certification		
2. Mixing of Mortar and Grout	ICC-SMSI	<i>Inspect proportioning, mixing and retempering of mortar and grout.</i>
3. Installation of Masonry	ICC-SMSI	<i>Inspect size, layout, bonding and placement of masonry units.</i>
4. Mortar Joints	ICC-SMSI	<i>Inspect construction of mortar joints including tooling and filling of head joints.</i>
5. Reinforcement Installation	ICC-SMSI AWS-CWI	<i>Inspect placement, positioning and lapping of reinforcing steel. Inspect welding of reinforcing steel.</i>
6. Prestressed Masonry	ICC-SMSI	<i>Inspect placement, anchorage and stressing of prestressing bars.</i>
7. Grouting Operations	ICC-SMSI	<i>Inspect placement and consolidation of grout. Inspect masonry clean-outs for high-lift grouting.</i>
7. Weather Protection	ICC-SMSI	<i>Inspect cold weather protection and hot weather protection procedures. Verify that wall cavities are protected against precipitation.</i>
9. Evaluation of Masonry Strength	ICC-SMSI	<i>Test compressive strength of mortar and grout cube samples (ASTM C780). Test compressive strength of masonry prisms (ASTM C1314).</i>
10. Anchors and Ties	ICC-SMSI	<i>Inspect size, location, spacing and embedment of dowels, anchors and ties.</i>
11. Other:		

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt	AWS/AISC- SSI ICC-SWSI	<i>Review shop fabrication and quality control procedures.</i>
2. Material Certification	AWS/AISC- SSI ICC-SWSI	<i>Review certified mill test reports and identification markings on wide-flange shapes, high-strength bolts, nuts and welding electrodes</i>
3. Open Web Steel Joists		<i>Inspect installation, field welding and bridging of joists.</i>
4. Bolting	AWS/AISC- SSI ICC-SWSI	<i>Inspect installation and tightening of high-strength bolts. Verify that splines have separated from tension control bolts. Verify proper tightening sequence. Continuous inspection of bolts in slip-critical connections.</i>
5. Welding	AWS-CWI  ASNT	<i>Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. Verify size and length of fillet welds.</i>  <i>Ultrasonic testing of all full-penetration welds.</i>
6. Shear Connectors	AWS/AISC- SSI ICC-SWSI	<i>Inspect size, number, positioning and welding of shear connectors. Inspect suds for full 360 degree flash. Ring test all shear connectors with a 3 lb hammer. Bend test all questionable studs to 15 degrees.</i>
7. Structural Details	PE/SE	<i>Inspect steel frame for compliance with structural drawings, including bracing, member configuration and connection details.</i>
8. Metal Deck	AWS-CWI	<i>Inspect welding and side-lap fastening of metal roof and floor deck.</i>
9. Other:		

# Cold-Formed Steel Framing

Item	Agency # (Qualif.)	Scope
1. Member Sizes		
2. Material Thickness		
3. Material Properties		
4. Mechanical Connections		
5. Welding		
6. Framing Details		
7. Trusses		
8. Permanent Truss Bracing		
9. Other:		

Item	Agency # (Qualif.)	Scope
1. Material Specifications		
2. Laboratory Tested Fire Resistance Design	ICC-SFSI	<i>Review UL fire resistive design for each rated beam, column, or assembly.</i>
3. Schedule of Thickness	ICC-SFSI	<i>Review approved thickness schedule.</i>
4. Surface Preparation	ICC-SFSI	<i>Inspect surface preparation of steel prior to application of fireproofing</i>
5. Application	ICC-SFSI	<i>Inspect application of fireproofing.</i>
6. Curing and Ambient Condition	ICC-SFSI	<i>Verify ambient air temperature and ventilation is suitable for application and curing of fireproofing.</i>
7. Thickness	ICC-SFSI	<i>Test thickness of fireproofing (ASTM E605). Perform a set of thickness measurements for every 1,000 SF of floor and roof assemblies and on not less than 25% of rated beams and columns.</i>
8. Density	ICC-SFSI	<i>Test the density of fireproofing material (ASTM E605).</i>
9. Bond Strength	ICC-SFSI	<i>Test the cohesive/adhesive bond strength of fireproofing ASTM E736). Perform not less than one test for each 10,000 SF.</i>
10. Other:		

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt		<i>Inspect shop fabrication and quality control procedures for wood truss plant.</i>
2. Material Grading		
3. Connections		
4. Framing and Details		
5. Diaphragms and Shearwalls		<i>Inspect size, configuration, blocking and fastening of shearwalls and diaphragms. Verify panel grade and thickness.</i>
6. Prefabricated Wood Trusses		<i>Inspect the fabrication of wood trusses.</i>
7. Permanent Truss Bracing		
8. Other:		

**Exterior Insulation & Finish Systems (EIFS)**

Item	Agency # (Qualif.)	Scope
1. Material Submittals		
2. Condition of Substrate		
3. Application of Foam Plastic Board		
4. Application of Coatings		
5. Application of Mesh		
6. Ambient Condition and Curing		
7. Flashing and Joint Details		
8. Sealants/Caulks		
9. Other:		

# Mechanical & Electrical Systems

Item	Agency # (Qualif.)	Scope
1. Smoke Control		
2. Mechanical, HVAC & Piping		
3. Electrical System		
4. Other:		

# Architectural Systems

Item	Agency # (Qualif.)	Scope
1. Wall Panels & Veneers		
2. Suspended Ceilings		
3. Access Floors		
4. Other:		

**Special Cases**

Item	Agency # (Qualif.)	Scope

# Instructions – Preparation of the Statement of Special Inspections

## 1. Who Prepares the Form:

The program of inspection and testing for a project should be prepared by the Registered Design Professional (RDP) that is in responsible charge of the building system requiring inspections and testing. The Structural Engineer of Record (SER) should prepare the sections required for the structural elements such as foundations, concrete, structural steel, etc. The Architect and MEP Engineer of Record should prepare the corresponding sections of the SSI for the building systems that they are responsible for.

## 2. The Front Page:

- 2-1. At the top of the page indicate the project name and location as they appear on the Contract Documents, provide the Owner's name (individual, private company, municipality, government agency, etc.), and indicate the Design Professional In Responsible Charge. This should be the RDP in responsible charge of the building systems for which this Statement of Special Inspections is being prepared. See explanation in item 1 above.
- 2-2. Next, read the first paragraph and check the box below indicating the discipline(s) that this SSI will encompass (Structural, Architectural, Mechanical/Electrical/Plumbing, or Other).
- 2-3. After reading the remaining paragraphs, the RDP must indicate the frequency of "Interim Reports" required from the Special Inspection Coordinator for the project. This can be indicated directly on the page, i.e. "weekly", or the adjacent box can be checked to attach a more specific schedule.
- 2-4. Near the bottom of the page, the RDP must print, sign, and date the form, and stamp the form with their professional seal in the box provided.
- 2-5. The Owner or Owner's agent must sign and date the front page after the SSI has been completed by the RDP.
- 2-6. The Building Official must sign and date the form upon acceptance.

## 3. Page 2 – Schedule of Inspection and Testing Agencies:

- 3-1. The top of the page lists all of the categories of building systems with a box next to each. The RDP must check the boxes for only the building systems that are going to be covered in this SSI. A completed inspection program page must be attached for each building system that is checked off. (See instruction #5 below.)
- 3-2. The chart below is where the members of the Special Inspection Program are listed. Their names, addresses, telephone numbers, and emails should be filled out in the appropriate boxes. If the Inspectors and Testing Agencies have not been determined yet, the RDP can fill in the boxes with "To Be Determined".

## 4. Page 3 – Quality Assurance Plan:

- 4-1. The RDP must review sections 1705 and 1706 in Chapter 17 of the Kentucky Building Code to determine if the project requires a Quality Assurance Plan for the seismic force resisting systems and components.
- 4-2. The RDP must indicate whether or not a Quality Assurance Plan is required by filling in the information requested on the page. It is only necessary to provide descriptions of the seismic resisting systems if it is determined that a Quality Assurance Plan is required.

5. Inspection Program Pages for Each Building System:
  - 5-1. There is a page attached for each building system where the RDP identifies the inspection requirements of each system. Fill out the pages for only the building systems included in this SSI. Do not include blank pages for building systems not covered under this SSI.
  - 5-2. Indicate the inspection or testing firm (Agency #) that will perform each inspection task. The Agency # is the number listed next to the Inspector or Testing Laboratory on the chart on page 2 of the SSI.
  - 5-3. Indicate the required qualifications of the Inspector for each inspection. A list of qualifications of Inspectors and testing technicians is provided on page 4 of the SSI for reference. The RDP may require additional qualifications beyond the ones listed if they feel it is appropriate. Suggested qualifications have been included for consideration. The RDP must determine what qualifications are appropriate for the particular project and confirm that the selected agency employs individuals with the specified qualifications.
  - 5-4. The scope of each inspection must be filled in by the RDP. The editable text provided in italics reflects the code mandated minimum inspection requirements designated in section 1704 of KBC Chapter 17. *The editable text does not include the inspections requirements for seismic systems listed in sections 1705 through 1708. The RDP must determine if the project falls under the requirements of sections 1705 to 1708 and add the required inspections to the building systems. The final scope of the inspections required for the project must be determined by the RDP.*
  - 5-5. Descriptions of all inspections must include the required frequency of each inspection or test.



## **APPENDIX B**

### **Final Report of Special Inspections**

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Council of American Structural Engineers  
Form 102 – Statement of Special Inspections  
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# Final Report of Special Inspections

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## Special Inspector's Final Report

Project:

Location:

Owner:

Owner's Address:

Architect of Record:

Structural Engineer of Record:

Special Inspection Coordinator:

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

*(Attach continuation sheets if required to complete the description of corrections.)*

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,  
Special Inspector

\_\_\_\_\_  
(Type or print name)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*Licensed Professional Seal*

# Final Report of Special Inspections

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## Agent's Final Report

Project:

Agent:

Special Inspector:

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments:

*(Attach continuation sheets if required to complete the description of corrections.)*

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,  
Agent of the Special Inspector

\_\_\_\_\_  
(Type or print name)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*Licensed Professional Seal or  
Certification*



## **APPENDIX C**

### **Contractor's Statement of Responsibility**

Adapted from:  
Council of American Structural Engineers  
Form 103 – Contractor's Statement of Responsibility  
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# Contractor's Statement of Responsibility

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In accordance with the Kentucky Building Code, Section 1706, each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a **Statement of Responsibility**.

Project: \_\_\_\_\_

Contractor's Name: \_\_\_\_\_

Contractor's Trade: \_\_\_\_\_

Address: \_\_\_\_\_

Phone / Fax / email: \_\_\_\_\_

License No., if applicable: \_\_\_\_\_

Description of designated building systems and components included in the Statement of Responsibility:

## Contractor's Acknowledgment of Special Requirements

I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.

I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports are attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.

Attachments



## **APPENDIX D**

### **Fabricator's Certificate of Compliance**

Adapted from:  
Council of American Structural Engineers  
Form 104 – Fabricator's Certificate of Compliance  
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# Fabricator's Certificate of Compliance

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Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per section 1704.2 of the Kentucky Building Code must submit a **Fabricator's Certificate of Compliance** at the completion of fabrication.

Project Name & Location: \_\_\_\_\_

Fabricator's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone / Fax / email: \_\_\_\_\_

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 the approved construction documents.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

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



## **APPENDIX E**

### **Answers to Common Questions**

## APPENDIX E

### ANSWERS TO COMMON QUESTIONS REGARDING STRUCTURAL SPECIAL INSPECTIONS

- **WHAT ARE SPECIAL INSPECTIONS?**

Special Inspections involve monitoring of materials and workmanship critical to the structural integrity of buildings. The Special Inspection process provides greater confidence that the completed work complies with the contract documents resulting in enhanced quality and safety of the structure.

- **ARE SPECIAL INSPECTIONS MANDATORY?**

Yes, the *2007 Kentucky Building Code (KBC)* requires a formalized Special Inspection process for most types of buildings. Limited exceptions are specifically outlined in the *KBC*.

- **WHO PAYS FOR SPECIAL INSPECTIONS?**

The *2007 KBC* states that the owner or the architect/engineer of record acting as the owner's agent must employ all Special Inspections. This is a change from the *2002 KBC* in which the Code was modified to allow the contractor to employ Special Inspectors as well.

- **WHAT DIFFERENTIATES SPECIAL INSPECTIONS FROM TESTING?**

Special Inspection involves the evaluation of materials and workmanship based on the application of structural engineering judgment.

Testing involves the analysis of materials in accordance with approved standards to determine compliance with the contract documents.

“Special Inspections” defined by *Code* actually involve aspects of testing and inspection.

- **WHAT ARE THE DUTIES OF THE SPECIAL INSPECTOR?**

The Special Inspector implements and coordinates the Special Inspections program, performs special inspections for items where he/she is qualified, and assists the owner in procuring inspection/testing agents for remaining items. Although the term “Special Inspector” is singular, several qualified employees of the Special Inspector firm may actually take part on a project.

During construction, the Special Inspector observes the work assigned for compliance with approved contract documents and brings discrepancies to the immediate attention of the contractor for correction, then, if uncorrected, to the SER and code official. Interim Special Inspector reports are submitted as requested by the SER and code official. The Special Inspector reviews and takes appropriate action with the reports of other inspection/testing agents, maintains a complete file of the reports, and submits copies to the owner, code official, architect, and SER.

At the completion of the work, the Special Inspector submits a final report stating that the work requiring Special Inspections was, to the best of his/her knowledge, completed in conformance with the approved contract documents and applicable workmanship provisions of the *Code*.

- **WHO IS BEST QUALIFIED TO SERVE AS THE SPECIAL INSPECTOR?**

The Structural Engineer of Record (SER) is the party with the expertise and intimate knowledge of a particular building's structural system. Therefore, the SER is best qualified to recognize and respond to site conditions that require the application of structural engineering judgment. Some special inspection tasks require skills normally furnished by qualified testing laboratories. However, the SER is the appropriate party to implement and coordinate the Special Inspections program.

In recent years, owners, insurance carriers, and public officials have realized that extensive on-site presence of the SER is the best means to protect the public, control claims and losses, and improve quality of the completed project.

- **ARE SPECIAL INSPECTIONS INCLUDED WITH CODE OFFICIAL INSPECTIONS?**

No. The *Code* requires Special Inspections to be in addition to called inspections conducted by municipal code officials or their agents.

- **DO SPECIAL INSPECTIONS PERFORMED BY THE SER CREATE A CONFLICT OF INTEREST?**

No. Special Inspections are generally performed under a separate contract with the owner (or owner's representative), distinct from the traditional structural engineering scope of services. The stated purpose of Special Inspections is to provide greater confidence that work performed by the contractor complies with the contract documents prepared by the SER. The SER has an enormous professional and liability stake in the quality of the structure. Therefore, the SER is the party with the greatest desire to see that the design intent is carried out by the contractor.

- **ARE SPECIAL INSPECTIONS INCLUDED WITH CONSTRUCTION CONTRACT ADMINISTRATION SITE VISITS?**

No. Standard agreements typically provide for periodic site visits by the SER to become generally familiar with the progress and quality of work. The visits are not exhaustive or continuous in nature. *Special Inspections are in addition to the periodic site visits conducted by the SER and generally require continuous inspection during the construction of specific materials and components.*

- **DO SPECIAL INSPECTIONS INCREASE TRADITIONAL INSPECTION/TESTING COSTS?**

Yes. Although several tests and inspections now designated as "Special" have traditionally been provided during building construction, the *Code* has expanded these services. After the project scope and structural systems have been defined, usually after the design development phase, the SER can prepare a Special Inspection and testing fee estimate for budgeting. Special Inspection costs are usually insignificant compared to the project construction costs.

- **CAN SPECIAL INSPECTIONS REDUCE PROJECT CONSTRUCTION COSTS?**

Yes. Retaining the Structural Engineer of Record as the Special Inspector may actually reduce project construction costs.

- \* The SER on site provides a final opportunity to communicate required corrections or owner-directed changes before they are built into the structure, after which the cost to change increases significantly.
  - \* The SER on site can immediately respond to contractor's field questions and expedite corrective measures to address contractor errors, thus maintaining the construction schedule.
  - \* The SER on site helps build and maintain team communication and working relationships with the contractor. This results in fewer field information requests, more cooperation from the contractor, and ultimately, fewer cost extras to the owner.
  - \* Misinterpretations of design intent are less likely to occur when the SER performs Special Inspections. These misinterpretations could result in a structural failure with the associated costs of litigation.
- \* **WHAT ARE THE ROLES OF OTHER PARTIES INVOLVED IN THE SPECIAL INSPECTIONS PROCESS?**

#### Owner

The *2007 KBC* states that the owner or the architect/engineer of record acting as the owner's agent must employ all Special Inspections.

General Conditions prepared by the Engineer's Joint Contract Documents Committee (EJCDC) state that the owner shall employ and pay for testing and inspection services. General Conditions of AIA Document A201 require the contractor to provide tests and inspections through an independent testing laboratory acceptable to the owner. ***Therefore, General Conditions and other applicable portions of the contract documents should be carefully reviewed and edited to prevent conflicts related to providing and funding Special Inspections.***

#### Code Official

According to the *Model Program for Special Inspection*, prepared by ICBO, "Of all the team members in the development process, the building official is the only member who has the legal authority to see that all of the provisions of special inspection are carried out". During the plan approval process, the code official reviews the contract documents, Statement of Special Inspections, Schedule of Special Inspections, and the qualifications of the Special Inspector and testing agencies proposed for the project. During construction, the code official monitors the required inspection activities through the reporting process of the Special Inspector. The code official's final approval and issuance of a Certificate of Occupancy is based in part upon the Final Report of Special Inspections prepared by the Special Inspector.

#### Prime Professional (Architect or Engineer of Record)

The prime professional should facilitate the exchange of information regarding Special Inspection requirements between the owner and SER.

#### Structural Engineer of Record (SER)

During the preparation of contract documents the SER identifies specific components or elements within the construction that require Special Inspections. The requirements are outlined in the respective specification sections. Other references may be made in quality

assurance/quality control portions of Division 1 in the specifications. The *KBC* requires a statement of special inspections as a condition of permit issuance.

Based on Special Inspection requirements, the SER completes the Statement of Special Inspections and Schedule of Special Inspection Services for use in obtaining the building permit.

#### Testing Agency

The testing agency tests the materials assigned for conformance with approved contract documents and submits reports for the test results to the Special Inspector and others as required. Discrepancies are brought to the immediate attention of the contractor for correction, then, if uncorrected, to the Special Inspector, SER, and code official.

At the completion of the respective tests, the testing agency submits a final report stating the required tests have been completed.

#### Contractor

The contractor posts the Schedule of Special Inspections at the job site office and provides adequate notification to those parties performing Special Inspections and testing so they may properly prepare for and schedule their services.

The contractor provides access to the approved contract documents at the job site and provides safe access to the work requiring inspection or testing.

The contractor is required to correct in a timely manner any deficiencies identified in the inspection or testing reports and notify the Special Inspector upon completion.

The performance of Special Inspections does not relieve the contractor from any duty or responsibility in accordance with the project contract requirements.



## **APPENDIX F**

### **Sample Specifications**

SECTION 01 45 35

SPECIAL INSPECTIONS

04/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ACI INTERNATIONAL (ACI)

- |               |   |
|---------------|---|
| ACI 318       | (2005) Building Code Requirements for Structural Concrete and Commentary  |
| ACI 318M      | (2005) Metric Building Code Requirements for Structural Concrete and Commentary                                     |
| ACI 530/530.1 | (2002) Building Code Requirements for Masonry Structures and Specifications for Masonry Structures and Commentaries |

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

- |          |  |
|----------|--|
| AISC 341 | (2005) Seismic Provisions for Structural Steel Buildings                                     |
| AISC 350 | (1999) Load and Resistance Factor Design (LRFD) Specification for Structural Steel Buildings |

ASTM INTERNATIONAL (ASTM)

- |                   |  |
|-------------------|--|
| ASTM A 435/A 435M | (1990; R 2001) Straight-Beam Ultrasonic Examination of Steel Plates                                |
| ASTM A 615/A 615M | (2006a) Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement |
| ASTM A 898/A 898M | (1991; R 2001) Straight Beam Ultrasonic Examination of Rolled Steel Structural Shapes              |

KENTUCKY OFFICE OF HOUSING BUILDINGS AND CONSTRUCTION

- |           |                                   |
|-----------|-----------------------------------|
| KOHBC KBC | (2007) The Kentucky Building Code |
|-----------|-----------------------------------|

1.2 SUBMITTALS

Owner approval is required for submittals with a "O" designation; submittals not having a "O" designation are for [Quality Control approval.][information only.] When used, a designation following the "O" designation identifies the party that will review the submittal for the Owner. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

#### SD-07 Certificates

Special Inspector; O, [\_\_\_\_\_]

Certification attesting that the Special Inspector is qualified by knowledge and experience to perform the specified Special Inspections. Information, which provides evidence of the knowledge and experience necessary to qualify a person as a Special Inspector for the category of work being certified, will accompany the qualification.

Quality Assurance Plan; O, [\_\_\_\_\_]

A copy of the Quality Assurance Plan covered by a certificate indicating that the plan meets the content specified in this section.

### 1.3 SPECIAL INSPECTOR

A Special Inspector shall be used to perform Special Inspections required by this section. The Special Inspector is a person employed by the [Owner][\_\_\_\_\_ and approved by the Owner] as being qualified by knowledge and experience to perform the Special Inspection for the category of work being constructed. Special Inspectors shall perform their duties independent from the construction quality control staff employed by the Contractor. More than one Special Inspector may be required to provide the varied knowledge and experience necessary to adequately inspect all of the categories of work requiring Special Inspection.

### 1.4 QUALITY ASSURANCE PLAN

A quality assurance plan shall be developed containing the following:

- a. A list of all items that require quality assurance Special Inspection and testing, including the type, frequency, extent, and duration of the special inspection for each item on this list.
- b. A list of all items that require quality assurance testing, including the type and frequency of testing for each item on this list.
- c. The content, distribution, and frequency of special inspection reports.
- d. The content, distribution, and frequency of testing reports.
- e. The procedures, controls, and people used within the [\_\_\_\_\_]'s organization to develop, sign, and distribute Special Inspection and Testing reports along with the position title and pertinent qualifications of all Special Inspections personnel involved.

## 1.5 SPECIAL INSPECTION

The Special Inspection shall be done as specified. Special Inspector personnel shall be in addition to the quality control inspections and inspectors required elsewhere in this section.

### 1.5.1 Continuous Special Inspection

Continuous special inspection is the full time observation of the work by the Special Inspector present in the work area whenever work is being performed. Continuous special inspection shall be performed where specified for items as shown on the drawings.

### 1.5.2 Periodic Special Inspection

Periodic special inspection is the intermittent observation of the work by a Special Inspector present in the work area while work is being performed. The intermittent observation periods shall be at times of significant work, shall be recurrent over the complete work period, and shall total at least 25 percent of the total work time. Periodic special inspection shall be performed where specified for items as shown on the drawings.

## PART 2 PRODUCTS

Not Used

## PART 3 EXECUTION

### 3.1 PERFORMANCE OF INSPECTIONS

Special Inspections shall be performed for the following where designated on the drawings:

#### 3.1.1 [Piers] [Piles] [Caissons]

- a. Continuous special inspection during [driving of piles] [and] [placement of concrete in [piers] [piles] [caissons]].
- b. Periodic special inspection during construction of [drilled piles] [piers] [caissons] including the placement of reinforcing steel.

#### 3.1.2 Reinforcing Steel

- a. Periodic special inspection during and upon completion of the placement of reinforcing steel in [intermediate moment frames] [special moment frames] [shear walls].
- b. Continuous special inspection during the welding of reinforcing steel resisting flexural and axial forces [in intermediate moment frames] [in special moment frames] [in boundary members of concrete shear walls] [and during welding of shear reinforcement].

#### 3.1.3 Structural Concrete

Periodic special inspection during and on completion of the placement of concrete in [intermediate moment frames] [special moment frames] [boundary members of shear walls].

#### 3.1.4 Prestressed Concrete

Periodic special inspection during the placement and after completion of placement of prestressing steel. Continuous special inspection during all stressing and grouting operations and during the placement of concrete.

#### 3.1.5 Structural Masonry

a. Periodic special inspection during the preparation of mortar, the laying of masonry units, and placement of reinforcement and prior to placement of grout.

b. Continuous special inspection during the welding of reinforcement, grouting, consolidation and reconsolidation [and] [placement of bent-bar anchors].

#### 3.1.6 Structural Steel

a. Continuous special inspection for all structural welding, except that periodic special inspection is permitted for single-pass or resistance welds [and] [welds loaded to less than 50 percent of their design strength] provided the qualifications of the welder and the welding electrodes are inspected at the beginning of the work and all welds are inspected for compliance with the approved construction documents at the completion of welding.

b. Periodic special inspection in accordance with AISC 350 for the installation of bolts in [intermediate moment frames] [special moment frames] [special truss moment frames] [special concentrically braced frames] [eccentrically braced frames] except that bolts not required to be fully tensioned need not be inspected for bolt tension, other than to ensure that the plies of the connected elements have been brought into snug contact

#### 3.1.7 Structural Wood

a. Continuous special inspection during all field gluing operations of elements of the seismic-force-resisting system.

b. Periodic special inspections for nailing, bolting, anchoring, and other fastening of components within the seismic-force-resisting system including drag struts braces, and tie-downs.

#### 3.1.8 Cold-Formed Steel Framing

a. Periodic special inspections during all welding operations of elements of the seismic-force-resisting system.

b. Periodic special inspections for screw attachment, bolting, anchoring, and other fastening of components within the seismic-force-resisting system, including struts, braces, and hold-downs.

#### 3.1.9 Architectural Components

Special inspection of the architectural components shall assure that the methods of anchoring and fastening indicated on the drawings are being

complied with at the onset of construction of the components, and that the specified or shown number, spacing, and types of fasteners were actually installed. Special inspection for architectural components shall be as follows:

a. Periodic special inspection during the erection and fastening of [exterior cladding] [interior nonloadbearing partition walls] [exterior nonloadbearing walls] [masonry veneer].

b. Periodic special inspection during the anchorage of [access floors] [suspended ceilings] [storage racks 8 feet or greater in height].

#### 3.1.10 Mechanical and Electrical Components

Special inspection of the mechanical and electrical components shall assure that the methods of anchoring and fastening indicated on the drawings are being complied with at the onset of construction of the component, and that the specified or shown number, spacing, and types of fasteners were actually installed. Special inspection for mechanical and electrical components shall be as follows:

a. Periodic special inspection during the anchorage of electrical equipment for emergency or standby power systems.

b. Periodic special inspection during the installation of anchorage of all other electrical equipment.

c. Periodic special inspection during installation for flammable, combustible, or highly toxic piping systems and their associated mechanical units.

d. Periodic special inspection during the installation of HVAC ductwork that will contain hazardous materials.

#### 3.1.11 Seismic Isolation System

Periodic special inspection during the fabrication and installation of isolator units.

#### 3.1.12 Energy Dissipation System

Periodic special inspection during the fabrication and installation of energy dissipation devices.

### 3.2 TESTING

The special inspector shall be responsible for verifying that the testing requirements are performed by an approved testing agency for compliance with the following, where shown on the drawings:

a. Reinforcing and Prestressing Steel: Special testing of reinforcing and prestressing steel shall be as follows:

(1) Examine certified mill test reports for each shipment of reinforcing steel used in reinforced concrete [intermediate frames] [special moment frames] [boundary members of reinforced concrete shear walls] [reinforced masonry shear walls]. The special inspector shall

determine conformance with the construction documents.

(2) Examine the reports for chemical tests, done in accordance with Sec. 3.5.2 of ACI 318, which were performed to determine the weldability of ASTM A 615/A 615M reinforcing steel.

b. Structural Concrete: Verify that samples of structural concrete obtained at the project site, along with all material components obtained at the batch plant, have been tested in accordance with the requirements of ACI 318 and comply with all acceptance provisions contained therein.

c. Structural Masonry: Verify that all quality assurance testing of structural masonry along with all material components is in accordance with the requirements of ACI 530/530.1 and complies with all acceptance provisions contained therein.

d. Structural Steel:

(1) Verify that all quality assurance testing needed to confirm required material properties [contained in Section 05 12 00 STRUCTURAL STEEL] [and] [given in the quality assurance plan] has been done in accordance with applicable provisions in AISC 341 and AISC 350 and that the test results comply with all acceptance provisions contained therein.

(2) When a flange or a plate of steel member with a base metal thickness greater than 1.5 inches, is joined by welding so that the flange or plate is subjected to through-thickness weld shrinkage strains, verify that the required ultrasonic testing for discontinuities behind and adjacent to such welds has been done after joint completion. Further verify that any material discontinuities rejected on the basis of the requirements contained in [Section 05 12 00 STRUCTURAL STEEL] [and] [ASTM A 435/A 435M or ASTM A 898/A 898M, (Level 1 Criteria)] were repaired and were retested after the repairs and found acceptable.

e. Seismically Isolated Structures: Verify that the required system and component tests for seismically isolated structures have been done in accordance with KOHBC KBC and comply with all acceptance provisions contained therein.

f. Energy Dissipation Systems: Verify that the required system and component tests for seismic energy dissipation systems have been done in accordance with KOHBC KBC and comply with all acceptance provisions contained therein.

### 3.3 REPORTING AND COMPLIANCE PROCEDURES

a. On the first day of each month, the [\_\_\_\_\_] shall furnish to the Owner five copies of the combined progress reports of the special inspector's observations. These progress reports shall list all special inspections of construction or reviews of testing performed during that month, note all uncorrected deficiencies, and describe the corrections made both to these deficiencies and to previously reported deficiencies. Each monthly report shall be signed by all special inspectors who performed special inspections of construction or reviewed testing during that month, regardless of whether they reported any deficiencies. Each monthly report shall be signed by the [\_\_\_\_\_].

- b. At completion of construction, each special inspector shall prepare and sign a final report attesting that all work they inspected and all testing and test reports they reviewed were completed in accordance with the approved construction documents and that deficiencies identified were satisfactorily corrected. The [\_\_\_\_\_] shall submit a combined final report containing the signed final reports of all the special inspectors. The [\_\_\_\_\_] shall sign the combined final report attesting that all final reports of special inspectors that performed work to comply with these construction documents are contained therein, and that the [\_\_\_\_\_] has reviewed and approved all of the individual inspector's final reports.

-- End of Section --



## **APPENDIX G**

### **Additional Special Inspection Forms**

# Special Inspector Evaluation Checklist

	<b>1.0 Competency:</b>					
	1.1 Conducted Interview					
	Comments/Notes:					
	1.2 Resume Submitted					
	SIMILAR PROJECTS (Provide specific knowledge and experience relevant to this project on attachments)			DESIGN	ADMIN	INSPECTION
	1.					
	2.					
	3.					
	4.					
	5.					
	1.3 LICENSES					
	STATE	LICENSE NUMBER	YEAR OF LICENSE	SE	PE CIVIL	Years of Experience
	1.					
	2.					
	3.					
	1.4 DEGREES					
	UNIVERSITY/COLLEGE		LOCATION	Year of Graduation	Degree	Discipline

Special Inspector Evaluation Checklist, continued				
<b>2.0 Objectivity:</b>				
2.1 Contractual Relationship with Owner or Contractor:				
		YES	NO	
				Early completion bonuses?
				Pay scale adjustments for contractor success?
				Fixed salary?
2.2 Inspector NOT a full time employee of the contractor:				
		YES	NO	
				Pension benefits?
				Medical/dental benefits?
2.3 Disclosure of financial/fiducial conflicts of interest:				
		YES	NO	
				Significant stock ownership?
				Family/marital relationship?
				Other?
<b>3.0 Procedures/equipment:</b>				
3.1 Procedures for inspections reviewed.				
3.2 Record keeping procedures reviewed.				
3.3 Equipment calibration procedures reviewed.				

# Evaluation Checklist for Agents

	<b>1.0 Competency:</b>
	1.1 Conducted Interview
	Comments/Notes:
	1.2 Resume Submitted
	Work Experience Qualifying the Agent of Special Inspector.
	1.
	2.
	3.
	4.
	5.
	1.3 Written Tests:
	Date: <span style="float: right;">Type of Examination:</span>
	1.4 Applicable Vocational Training or College Courses:
	Course Name(s):

Evaluation Checklist for Agents, continued				
<b>2.0 Objectivity:</b>				
2.1 Contractual Relationship with Owner or Contractor:				
		YES	NO	
				Early completion bonuses?
				Pay scale adjustments for contractor success?
				Fixed salary?
2.2 Agent NOT a full time employee of the contractor:				
		YES	NO	
				Pension benefits?
				Medical/dental benefits?
2.3 Disclosure of financial/fiducial conflicts of interest:				
		YES	NO	
				Significant stock ownership?
				Family/marital relationship?
				Other?
<b>3.0 Procedures/equipment:</b>				
3.1 Procedures for inspections reviewed.				
3.2 Record keeping procedures reviewed.				
3.3 Equipment calibration procedures reviewed.				

# Special Inspector Daily Report

Code Authority:	Date:			
Project Name/Address:	Inspection Type(s) Coverage:  <input type="checkbox"/> Continuous <input type="checkbox"/> Periodic			
Inspections Made/Report Reference:				
Tests Made:				
<b>List items requiring correction, corrections of previously listed items and previously listed corrected items:</b>				
<b>Item</b>	<b>Report Ref/Date</b>	<b>Correction</b>	<b>Complete</b>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
<b>List changes to approved plans authorized by architect and engineer:</b>				
<b>Item</b>	<b>Dwg. Ref.</b>	<b>Ref. No.</b>	<b>Approved by Architect/ Engineer</b>	<b>Comments</b>
			<input type="checkbox"/>	
			<input type="checkbox"/>	
Comments:				

To the best of knowledge, work inspected was in accordance with the building department approved design drawings, specifications and applicable standards except as noted above.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Print Full Name: \_\_\_\_\_

I.D. Number: \_\_\_\_\_

# Special Inspector Weekly Report

Code Authority:	Date:			
Project Name/Address:	Inspection Type(s) Coverage:  <input type="checkbox"/> Continuous <input type="checkbox"/> Periodic			
Inspections Made/Report Reference:				
Tests Made:				
<b>List items requiring correction, corrections of previously listed items and previously listed corrected items:</b>				
<b>Item</b>	<b>Report Ref/Date</b>	<b>Correction</b>	<b>Complete</b>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
<b>List changes to approved plans authorized by architect and engineer:</b>				
<b>Item</b>	<b>Dwg. Ref.</b>	<b>Ref. No.</b>	<b>Approved by Architect/ Engineer</b>	<b>Comments</b>
			<input type="checkbox"/>	
			<input type="checkbox"/>	
Comments:				

To the best of knowledge, work inspected was in accordance with the building department approved design drawings, specifications and applicable standards except as noted above.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Print Full Name: \_\_\_\_\_

I.D. Number: \_\_\_\_\_



# Steel Construction Inspection Record

Structural Steel Contractor's Name:		Project Name:	
Operation Inspected	Report Date	Jobsite Inspector	Comments





# Steel Materials Receiving Inspection Report

Date:	Part Number/Drawing Reference:	
Description:		
<b>1. ASTM Standard:</b>		
Specified:	Actual:	
<b>2. Markings in accordance with specification:</b>		
<input type="checkbox"/> Yes <input type="checkbox"/> No     If No, please explain:		
<b>3. Size of the part is as specified:</b>		
<input type="checkbox"/> Yes <input type="checkbox"/> No     If No, please explain:		
<b>4. Edge conditions:</b>		
	Specified:	Actual:
Left Edge:		
Right Edge:		
<b>5. Number of holes:</b>		
	Specified	Actual:
Left Edge:		
Right Edge:		

- continued on next page -

**6. Size of holes:**

		Specified:	Actual:
	Left Edge:		
	Right Edge:		

**7. Hole spacing/pattern is correct:**

- Yes
- No      If No, please explain:

**8. Holes drilled/machined correctly:**

- Yes
- No      If No, please explain:

**9. Detailing of structural members in accordance with drawings (e.g., bevel edges, flange removal, end coping, etc.):**

- Yes
- No      If No, please explain:



# Concrete Construction Inspection Record

Concrete Contractor's Name:				Project Name:			
Structural Element(s) Placed	☑			Test Specimens Taken		Proper Curing Techniques <sup>1</sup>	Comments
	Reinforcing Steel in Code Compliance	Concrete Quality	Concrete Placement <sup>2</sup>			Report Date	
	Spec. No.	Test Results					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

<sup>1</sup> Per ACI 318 Sec. 5-11 through 5-13.

<sup>2</sup> Per ACI 318 Chap. 4, Sec. 5.2, 5.3, 5.4, 5.8.

# Concrete Lift Inspection

Drawing Reference/Location of Lift:		Date:	
<b>Item</b>	<b>Findings</b>		
	<b>Acceptable</b> <input checked="" type="checkbox"/>	<b>NOT Acceptable</b> <input checked="" type="checkbox"/>	<b>Explanation</b>
<b>Formwork/Excavation/Embedded Items:</b>			
Forms are the correct size.	<input type="checkbox"/>	<input type="checkbox"/>	
Forms properly supported.	<input type="checkbox"/>	<input type="checkbox"/>	
Embedded pipe/conduit/ducts located in accordance with drawings.	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Reinforcing Steel:</b>			
Grade.	<input type="checkbox"/>	<input type="checkbox"/>	
Size.	<input type="checkbox"/>	<input type="checkbox"/>	
Location.	<input type="checkbox"/>	<input type="checkbox"/>	
Spacing.	<input type="checkbox"/>	<input type="checkbox"/>	
Condition of bar.	<input type="checkbox"/>	<input type="checkbox"/>	
Weld inspection (when required).	<input type="checkbox"/>	<input type="checkbox"/>	
Supports of rebar.	<input type="checkbox"/>	<input type="checkbox"/>	

- continued on next page -

<b>Concrete Lift Inspection, continued</b>			
<b>Item</b>	<b>Findings</b>		
	<b>Acceptable</b> <input checked="" type="checkbox"/>	<b>NOT Acceptable</b> <input checked="" type="checkbox"/>	<b>Explanation</b>
<b>Concrete Quality:</b>			
Required compressive strength:	<input type="checkbox"/>	<input type="checkbox"/>	
Proportions/mix design: <ul style="list-style-type: none"> <li>• Truck ticket, batch plant ticket ready mix (ASTM 84 or ASTM 685);</li> <li>• Job mix (ACI318).</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	
Water content.	<input type="checkbox"/>	<input type="checkbox"/>	
Aggregate size.	<input type="checkbox"/>	<input type="checkbox"/>	
Admixtures.	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Concrete Placement:</b>			
Preparation: Transport/mix equipment clean.	<input type="checkbox"/>	<input type="checkbox"/>	
Forms coated.	<input type="checkbox"/>	<input type="checkbox"/>	
Rebar is clean.	<input type="checkbox"/>	<input type="checkbox"/>	
Debris and ice removed.	<input type="checkbox"/>	<input type="checkbox"/>	
Forms/trenches dry.	<input type="checkbox"/>	<input type="checkbox"/>	
Placement: Samples have been taken (see Sample Log).	<input type="checkbox"/>	<input type="checkbox"/>	
Conveying (no separation).	<input type="checkbox"/>	<input type="checkbox"/>	
Water content (if water has been added).	<input type="checkbox"/>	<input type="checkbox"/>	
No ice in materials.	<input type="checkbox"/>	<input type="checkbox"/>	
Protection against cold weather (Concrete maintained above 50°).	<input type="checkbox"/>	<input type="checkbox"/>	

- continued on next page -

**Concrete Lift Inspection, continued**

Item	Findings		
	Acceptable <input checked="" type="checkbox"/>	NOT Acceptable <input checked="" type="checkbox"/>	Explanation
<b>Concrete Cure:</b>			
Concrete temperature maintained above 50° for 7 Days (3 days for high early strength).	<input type="checkbox"/>	<input type="checkbox"/>	
Concrete kept moist for 7 days (3 days for high early strength).	<input type="checkbox"/>	<input type="checkbox"/>	
Accelerated curing, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	

# Inspection Record Precast/Prestressed Concrete

Concrete Structural Elements to be Precast/Prestressed:	Fabricator of Precast/Prestressed Concrete:
	Erector of Precast/Prestressed Concrete:
	Project Name:

<b>Item Fabricated</b>	<b>Fabrication Inspection Report Number</b>	<b>Fabrication Inspector</b>	<b>Erection Inspection Report Number</b>	<b>Jobsite Inspector</b>

# Masonry Construction Inspection Record

Masonry Contractor's Name:			Project Name:			
Verification of Masonry Material: (ACI 530.1/ASCE 6, Sec. 2.2)			Verification of Masonry Strength:			
Structural Element(s)	<input checked="" type="checkbox"/>					Comments
	Mortar and Grout in Code Compliance	Masonry Units & Grout Quality	Masonry Units & Grout Placement <sup>3</sup>	Masonry Protected <sup>4</sup>	Anchorage Verified <sup>5</sup>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<sup>3</sup>ACI 530/ASCE 5 Chap. 8

<sup>4</sup>ACI 530.1 Sec. 2.3.2.2, 2.3.2.3

<sup>5</sup>ACI 530.1/ASCE 6, Sec. 4.2, 5.14

# Masonry Inspection

Materials Inspection			
Job Number:			Date:
Drawing Reference/ Location on Building:			
Materials	Specified	Supplied	Comments
Masonry Units			
Mortar			
Grout			
Reinforcing Steel			
Joint Reinforcement			
Wire Fabric			
Masonry Strength Test			
Method: Unit Strength:			Date:
Prism:			
Test Results:			Required:
Operations Inspections			
Operation	Findings		
	Acceptable <input checked="" type="checkbox"/>	NOT Acceptable <input checked="" type="checkbox"/>	Explanation
Mixing/Proportioning.	<input type="checkbox"/>	<input type="checkbox"/>	
Applications.	<input type="checkbox"/>	<input type="checkbox"/>	
Rebar installation.	<input type="checkbox"/>	<input type="checkbox"/>	
Protection for hot or cold weather.	<input type="checkbox"/>	<input type="checkbox"/>	
Anchorage.	<input type="checkbox"/>	<input type="checkbox"/>	

# Wood Construction Inspection Record

Wood Structural Element or Assembly to be Inspected:	Contractor Responsible for Construction of Wood Structural Assemblies on the Jobsite:
	Special Inspector or Third Party Quality Control Agency:
	Project Name:

Date of Inspection	Report Date	Items Inspected	Name of Inspector	Comments



# Pile Driving Record

Inspector:						Date:							
Site:						File Number:							
						Job Number:							
<b>Hammer Data</b>													
<b>Hammer Make and Model:</b>						<b>Driving Cap, Anvil, Helmet, etc.:</b>							
Stroke Rated:						Weight (lb.):							
Meas.: <sup>1</sup>						Remarks: <sup>2</sup>							
Weight of Ram (lb.):													
<b>Pike, Type<sup>3</sup></b>						<b>Mandrel (if used):</b>							
Tip Diameter (in.):			Butt Diameter (in.):			Description:							
Length (in.):			Weight <sup>4</sup> (lb.):			Length (ft.):				Weight <sup>4</sup> (lb.):			
<b>Follower (if used):</b>						<b>Penetration:</b>							
Description:						Elevation of Ground:							
Length (ft.):			Weight (lb.):			Elevation of Tip (after driving):							
<b>Start Driving</b>							<b>Finish Driving</b>						
A.M.				P.M.			A.M.				P.M.		
Driving (mins.):													
Ft.	No. of blows	Ft.	No. of blows	Ft.	No. of blows	Ft.	No. of blows	Ft.	No. of blows	Ft.	No. of blows	Ft.	No. of blows
0		8		16		24		32		40		48	
1		9		17		25		33		41		49	
2		10		18		26		34		42		50	
3		11		19		27		35		43		51	
4		12		20		28		36		44		52	
5		13		21		29		37		45		53	
6		14		22		30		38		46		54	
7		15		23		31		39		47		55	
Record number of blows required for each 6 inches of penetration. Note points at which stoppages occur with times of stopping and starting.													

<sup>1</sup>Note any falling off in rated speed and stroke during driving.

<sup>2</sup>Jetting, cause and duration of delays in driving, boulders, bark, conditions of cushions, plumbness, banding, damage, driving shoe, etc.

<sup>3</sup>If wood, state kind, seasoning and treatment; if concrete, state mix and age.

<sup>4</sup>For wood piles determine actual weight per cubic foot of the wood by weighing a butt section.



# Example of a Special Case

## EIFS System for Exterior Walls

<b>Special Inspection Items</b>	
<b>1. Condition of Substrate:</b>	<b>6. Application of Coatings:</b>
1.1 Flatness. 1.2 Cleanliness 1.3 Conditions of sheathing material, including gypsum boards. <ul style="list-style-type: none"> <li>• Dry.</li> <li>• Paper attached.</li> </ul> 1.4 Properly attached to building frame.	6.1 Mix proportions. 6.2 Ambient/surface temperatures of application. 6.3 Cure temperature/time. 6.4 Thickness of layer(s). <ul style="list-style-type: none"> <li>• Base coat.</li> <li>• Finish coat.</li> </ul>
<b>2. Adhesive:</b>	<b>7. Application of Mesh:</b>
2.1 Correct brand type. 2.2 Shelf life not to exceed one year. 2.3 Proper storage. 2.4 Correct ingredient mix.	7.1 Fully embedded in base material. 7.2 Fully covered in accordance with manufacturer's recommendations. 7.3 Material meets manufacturer's requirements.
<b>3. Application of Adhesive:</b>	<b>8. Flashing Details:</b>
3.1 Ambient temperature/substrate temperature. 3.2 Thickness of application. 3.3 Cure/dry time/temperature. 3.4 Application of attaching layer (insulation board): <ul style="list-style-type: none"> <li>• Within limit after adhesive application.</li> <li>• Full contact with substrate.</li> </ul> 3.5 Configuration of application:	8.1 Proper installation in accordance with manufacturer's instructions and drawings.
<b>4. Insulation Material:</b>	<b>9. Application of Sealants/Caulks:</b>
4.1 Labeled in accordance with code. 4.2 Manufacturer of the raw material in accordance with manufacturer's requirements and applicable research reports.	9.1 In accordance with manufacturer's specified configuration. 9.2 Sealants (caulks as specified). 9.3 Shelf life not exceeded. 9.4 Joint configuration in accordance with drawings and specifications. 9.5 Cure temperature/time. 9.6 Application of primer.
<b>5. Application of Insulation Boards:</b>	
5.1 Substantial contact of board to substrate. 5.2 Boards tightly abutted or proper gap for joint design.	

# Other Fabricated Items Inspection Record

Fabricator's Name:	Shop Location:
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Fabricated Items to be Inspected:
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Special Inspector Third Party Quality Control Agency:
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Date of Inspection	Report Date	Items Inspected	Name of Inspector	Comments

# Quality Control Procedures for Fabrication Shops

<input checked="" type="checkbox"/>	<b>1.0 Materials:</b>
<input type="checkbox"/>	Receiving Inspection
<input type="checkbox"/>	Storage
<input type="checkbox"/>	Inventory Control
<input type="checkbox"/>	Identification
<input checked="" type="checkbox"/>	<b>2.0 Documents:</b>
<input type="checkbox"/>	Drawing Control
<input type="checkbox"/>	Change Orders
<input type="checkbox"/>	Purchase Orders
<input type="checkbox"/>	Purchase Specifications
<input type="checkbox"/>	Test Reports
<input type="checkbox"/>	Inspection Reports
<input checked="" type="checkbox"/>	<b>3.0 Operations:</b>
<input type="checkbox"/>	(As required, depending upon process.)
<input checked="" type="checkbox"/>	<b>4.0 Personnel:</b>
<input type="checkbox"/>	Minimum Qualifications
<input type="checkbox"/>	Training and Indoctrination

# Record of Field Discrepancies

Description of Discrepancy	Reference Number	Date Discrepancy Reported to Engineer or Architect of Record	Date Discrepancy Reported to Responsible Contractor	Corrective Action Taken