



SPECIAL INSPECTION INSTRUCTIONS

1. PURPOSE:

The purpose of this document is to inform special inspectors, inspection agencies, material testing labs and HERS raters hired for their services, of County requirements related to special inspection and testing of construction materials for building construction projects in the County of Kern. This document is only a guide, and is not all-inclusive of all special inspection requirements.

Note: Throughout this procedure, HERS (Home Energy Rating System) raters are to be considered special inspectors and the instructions outlined below apply to HERS raters as they apply to special inspectors unless noted otherwise.

2. APPROVAL:

The special inspector shall be approved and registered by the building official prior to performing any special inspections. To obtain approval, the individual shall complete and submit the Special Inspector - Registration Form and all information requested therein. The individual will be contacted and informed of their approval or rejection. Any replacement or substitute inspectors must also be approved and registered prior to performing any special inspections.

3. SCOPE OF AUTHORITY:

The special inspector's authority is limited to the extent of providing special inspections for the types of work in the category in which he/she is approved for:

The special inspector is not authorized to:

- A. Inspect or approve any work for which a building permit has not been issued.
- B. Infer/inform others that the special inspection is in lieu of County inspection and approval.
- C. Accept changes, revisions and substitutions to the approved permitted plans that have not been approved **in writing** by the Building Inspection Division.

4. DUTIES AND RESPONSIBILITIES:

A. The special inspector shall observe the work assigned for conformance to the approved permitted plans and specifications in accordance with the California Building Code, Chapter 17, and other standards that may be adopted by reference.

B. The special inspector shall verify compliance with the requirements of the California Building Code and other code related publications pertaining to special inspection. HERS raters shall verify compliance with the requirements of the California Energy Efficiency Standards.

C. The special inspector shall bring all discrepancies to the immediate attention of the contractor for correction, then if uncorrected, to the Building Inspection Division, the registered design professional in responsible charge and the owner. The written report may be submitted by fax or delivered in person.

D. The special inspector shall submit written inspection reports to the Building Inspection Division, to the registered design professional in responsible charge and to other designated person(s).

SPECIAL INSPECTION INSTRUCTIONS, Continued

E. Prior to “Final” inspection, the special inspector shall submit to the Building Inspection Division a final signed report stating that the work requiring special inspection is, to the best of his knowledge, in conformance to the approved plans and specifications and the applicable workmanship provisions of the California Building Code.

F. Prior to “Final” inspection, HERS raters shall submit the appropriate completed and signed “CERTIFICATE OF FIELD VERIFICATION AND DIAGNOSTIC TESTING” (CF forms) to the Building Inspection Division.

5. SPECIAL INSPECTION AND MATERIAL TEST REPORT

For writing and submitting special inspection reports and for construction materials testing reports, the following information must be included (not applicable to HERS raters): See “Special Inspection Report Form.”

A. The building permit number

B. Street Address

C. **Scope of work Performed.** The reports must **clearly** and **legibly** state the scope of work performed. The reports must also define the area of work inspected/tested by physical location and/or grid lines, stories, etc., and the type of special inspection/testing performed at each location.

D. **Statement of Compliance.** The report must clearly state work performed “was in compliance with the county approved permitted plans, details and specifications” or “was not in compliance with the county approved permitted plans, details and specifications”.

E. **Date & Time.** The reports must state the date of inspection and the time of arrival and departure from the job site. Also, the date the material was sampled and the date it was tested.

F. Reports must be consecutively numbered.

G. Name and signature with the certification number.

H. **Report Submittal Date.** The Building Inspection Division and the registered design professional in responsible charge must receive weekly inspection reports within (5) calendar days after the date when special inspection was performed.

The Building Inspection Division must receive material test reports within five (5) calendar days after the date when testing was performed. A copy of material test reports shall also be submitted to the architect/engineer of record.

I. **Deviations.** When the special inspector becomes aware of a deviation from the Building Code, the county approved permitted plans and specifications, or the standard construction practice, he/she shall bring this to the attention of the project superintendent and/or to the attention of the person responsible for doing the work immediately for corrective action. If no corrective action is taken, the special inspector must report such deviations or non-compliance to the Building Inspection Division **no later than** the next business day by calling and submitting a written report. The written report may be submitted by fax or delivered in person.

6. FIELD REPORT(S) – Field report(s) should include, but are not limited to, the following (not applicable to HERS raters):

A. **Concrete** – Rebar grade, mix design, location of placed concrete, yardage, quantity of samples, time spent in truck drum, slump, temperature of concrete, location of samples taken, pumped or tailgated, consolidated, embedded anchors, curing techniques, detail(s)/sheet numbers from approved set of plans, batch plant ticket number, concrete supplier, lap and clearances and general weather conditions.

B. **Epoxy** – Hole depth, diameter, evaluation report number, expiration and batch number, location, approximate air temperature, detail(s)/sheet numbers from approved set of plans.

C. **Welding** – Welders to be certified by name and qualified welding positions, verified welding procedure specification (WPS), amps, volts, electrode(s), type of welds, location, preheat, interpass, fit-up detail(s)/sheet numbers, mill certification(s); changes to procedure qualification record (PQR) may require re-qualification.

D. **Structural masonry** – Level 1 or level 2 inspection, location of C.M.U. wall, mortar and grout proportions, mortar joints, anchors, lift location, size of C.M.U., working stress design, reinforcing steel for size,

SPECIAL INSPECTION INSTRUCTIONS, Continued

grade, lap, clearance, location, cleanouts, consolidated and reconsolidate, location of samples - prisms, grout, mortar, grout supplied by ticket #, truck #, detail(s)/sheet numbers from approved set of plans.

E. **Pre-stressed/post-tension concrete** – See applicable requirements for reinforced concrete, concrete reached a compressive strength of ___ PSI prior to tensioning operations, gauge and ram number were used with a recent calibration date of _____, tendons stressed to a gauge pressure of ___ PSI corresponding to _____ % of the tendons' ultimate strength and anchored at _____ % of ultimate strength, individual tendon elongations, detail(s)/sheet numbers from approved set of plans, etc.

F. **Sprayed fire-resistant materials** – Verify thickness, density and adhesion/cohesion strength of the sprayed fire-resistive material (SFRM) in accordance with approved plans, specifications and applicable ASTM standards, where a fireproofing schedule is not included in the approved plans and specifications, prepare a schedule and submit it to the Building Division. Document the names of SFRM applicators. Applicators shall be approved by the manufacturers of the materials specified, unless specifically approved by the design professional of record. Verify that the SFRM is as specified. Verify that, if primer is required, it is of the type recommended by the SFRM manufacturer, detail(s)/sheet numbers from approved set of plans, etc.

G. **Fire-resistant penetrations and joints** – Verify penetration firestop systems are tested and listed in accordance with CBC Sections 714.3.1.2 and 714.4.1.2 and are in accordance with ASTM E 2174. Verify fire-resistant joint systems are tested and listed in accordance with CBC Sections 715.3 and 715.4 and are in accordance with ASTM E 2393. Verify all systems are installed in accordance with their listing.

H. **High strength bolting** – Verify type of joint specified (i.e. slip critical, non-slip critical) bolts, nuts and washers are in compliance with project specifications, installation procedures meet minimum bolt tensions required by code, faying surfaces are free from dirt. When applicable, verify bolt tensioning torque with a tensioning device such as the Skidmore-Wilhelm at least once a day, once a shift and each time a new batch is opened. Bolts other than the snap-off variety or the direct tension indicator (DTI) shall have tension/torque verified, details(s)/sheet numbers from approved set of plans, etc.

I. **High-Load Diaphragms** – Verify grade and thickness of panel sheathing, nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines and spacing between fasteners in each line and at edge margins.

J. **Structural Wood** – Provide continuous special inspection during field gluing operations of elements of the seismic force resisting system. Provide periodic inspection for nailing, bolting, anchoring and other fastening of components within the seismic force resisting, including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold-downs.

K. **Metal Plate Connected Wood Trusses** – For trusses with a clear span of 60 feet or greater, the special inspector shall verify, during construction, that the temporary installation restraint/bracing is installed in accordance with the approved truss submittal package.

L. **Storage Racks and Access Floors** – Periodic special inspection is required during the anchorage of access floors and storage racks 8 feet or greater in height.

M. **Architectural Components** – Periodic special inspection is required during the erection and fastening of exterior cladding, interior and exterior nonbearing walls, and interior and exterior veneer.

N. **Mechanical and Electrical Components** – Periodic special inspection is required during the anchorage of electrical equipment for emergency or standby power systems, during the installation of piping systems intended to carry flammable, combustible, or highly toxic contents and their associated mechanical units, during the installation of HVAC ductwork that will contain hazardous materials, and during the installation of vibration isolation systems where construction documents require a nominal clearance of 0.25 inches or less between the equipment support frame and restraint.

O. **Designated Seismic Systems** – The special inspector shall verify the label, anchorage or mounting conforms to the certificate of compliance.

P. **Seismic Isolation System** – Periodic special inspections are required during the fabrication and installation of isolator units and energy dissipation devices that are part of the seismic isolation system.

Q. **Mastic and intumescent fire-resistant coatings** - Verify coatings applied to elements and decks are in accordance with AWCI 12-B.

R. **Smoke control systems** – During erection of ductwork and prior to concealment for the purposes of leakage testing, and prior to occupancy and after sufficient completion for the purposes of pressure differential testing, flow measurements and detection and control verification.

SPECIAL INSPECTION INSTRUCTIONS, Continued

7. CONTINUOUS vs. PERIODIC SPECIAL INSPECTION:

Continuous Special Inspection:

Continuous special inspection means that the special inspector is **on site at all times observing** the work requiring special inspection.

Periodic Special Inspection:

Some inspections may be made on a periodic basis and satisfy the requirements of special inspection, provided the periodic scheduled inspection is performed as outlined in the project plans and specifications and approved by the building official.

Note:

- A. If there is no periodic inspection schedule outlined on the project permitted plans, special inspections are required to be performed on a continuous basis.
- B. Periodic special inspection will **only** be permitted to be performed for the types of work which are allowed by the California Building Code to be performed on a periodic basis in lieu of continuous basis.
- C. Periodic special inspections **must** include, at a minimum, an initial inspection, inspection of work in progress in accordance with the schedule outlined in the approved project plans and a final inspection.