



# Development Services Department

300 Richards Boulevard 3rd Floor Sacramento, CA 95811

Help Line: (916) 808-5656

www.cityofsacramento.org/dsd



## SPECIAL INSPECTION FORM

2007 CBC Adopted Codes

Effective January 1<sup>st</sup>, 2008

*Prior to issuance of a permit, the applicant shall complete Part I of this form. Part II and Part III shall be completed by the project registered design professional and the Development Services Department as a part of the plan review process. Before permit issuance, all parties must sign this agreement. Please note that failure to comply with special inspection requirements could be expensive in terms of retrofit design and construction as well as delays in the project.*

### PART I - STATEMENT OF SPECIAL INSPECTION

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

Permit Number: \_\_\_\_\_

#### TESTING / INSPECTION FIRMS(S)

Firm 1: \_\_\_\_\_ Phone Number: \_\_\_\_\_

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

Firm 2: \_\_\_\_\_ Phone Number: \_\_\_\_\_

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

### PART II - SPECIAL INSPECTION AND TESTING AGREEMENT

*When special inspection is required by Section 1701, the registered design professional shall prepare an inspection program, which shall be submitted, to the Building Official for approval prior to issuance of the building permit. The special inspector shall be employed by the owner (other than owner-builder/developer), the registered design professional, or an agent of the owner, BUT NOT the contractor, or any other person responsible for the work (such as an owner-builder/developer).*

*The special inspection firm(s) named above have been authorized to perform the special inspection and testing services designated in this agreement, and in accordance with the California Building Code (CBC) requirements, and to report all activities to the Building Official, and other parties as listed. It is understood that special inspections are required in addition to the normal inspections performed by the Building Inspector.*

*The undersigned hereby affirm, under penalty of law that the special inspection program is in accordance with the requirements of the CBC and the City of Sacramento. The undersigned has used all reasonable diligence in completing this form and to the best of his/her knowledge the information contained herein is true and complete. The undersigned hereby certifies under the penalty of perjury under the laws of the State of California that the foregoing is true and correct.*

This plan has been developed with the understanding that the Building Official will:

- Review and approve the qualifications of the Special Inspectors who will perform the inspections.
- Monitor special inspection activities on the job site to assure that the Special Inspectors are qualified and are performing their duties as called for in this Statement of Special Inspection.
- Review submitted inspection reports.
- Perform inspections as required by the local building code.

**Prepared by:**

\_\_\_\_\_  
Registered Design Professional In Responsible Charge  
(print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number

**Owner's Authorization:**

\_\_\_\_\_  
Owner or Owner Representative (print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number

**Building Official's Acceptance:**

\_\_\_\_\_  
Plan Check Engineer

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Seismic Requirements (Section 1705.3.1)**

Description of seismic-force-resisting system and designated seismic systems subject to special inspections as per Section 1705.3. Describe the Seismic resisting system in the longitudinal and transverse directions.

The extent of the seismic-force-resisting system is defined in more detail in the construction documents.

**PART III - SCHEDULE OF SPECIAL INSPECTION**

Notation Used in Table:

Column headers:

- C Indicates continuous inspection is required.
- P Indicates periodic inspections are required. The notes and or contract documents should clarify.
- I Required Inspection to be performed under this permit per the registered design professional.

Box entries:

- X Is placed in the appropriate column to denote either “C” continuous or “P” periodic inspections.
- R Review and approve document.
- G In accordance with the Geotechnical report or document approved by the Building Official.

Additional detail regarding inspections and tests are provided in the project specifications or notes on the drawings. Items marked as continuous inspection may be approved for periodic inspection upon documentation submittal from a nationally recognized laboratory or ICC report that allows periodic inspection and approved by the Building Official.

<b>Verification and Inspection</b>	<b>C</b>	<b>P</b>	<b>I</b>
<b>1704.2.1</b> - Inspect fabricator’s fabrication and quality control procedures.	<b>R</b>		
<b>Table 1704.3 – Steel</b>			
1. Material verification of high-strength bolts, nuts, and washers.			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		<b>X</b>	
b. Manufacturer’s certificate of compliance required.		<b>X</b>	
2. Inspection of high-strength bolting:			
a. Bearing-type connections.		<b>X</b>	
b. Slip-critical connections.			
1) Turn of the nut or twist-off		<b>X</b>	
2) Calibrated wrench	<b>X</b>		
3. Inspection of high-strength bolting			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	<b>R</b>		
b. Manufacturer’s mill test reports	<b>R</b>		
4. Material verification of weld filler materials:			
a. Identification markings to conform to AWS designation listed in the WPS.	<b>R</b>		
b. Manufacturer’s certificate of compliance required.	<b>R</b>		
5. Inspection of welding( Shop or Field):			
Structural steel			
1) Complete and partial penetration groove welds.	<b>X</b>		
2) Multipass fillet welds.	<b>X</b>		
3) Single-pass fillet welds > 5/16”.	<b>X</b>		
4) Single-pass fillet welds ≤ 5/16”.		<b>X</b>	
5) Floor and roof deck welds.		<b>X</b>	
Reinforcing steel			
1) Verification of weldability of reinforcing steel other than ASTM A706.	<b>R</b>		
2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls, and shear reinforcement.	<b>X</b>		
3) Shear reinforcement.	<b>X</b>		
4) Other reinforcing steel		<b>X</b>	
6. Inspection of steel frame joint details for compliance with approved construction documents:			
a. Details such as bracing and stiffening.		<b>X</b>	
b. Member locations.		<b>X</b>	

c. Application of joint details at each connection.			
7. Post installed concrete anchors			
1) Mechanical anchor bolts	X		
2) Adhesive anchor bolts	X		

<b>Verification and Inspection</b>	<b>C</b>	<b>P</b>	<b>I</b>
<b>1704.3</b> - Welded studs when used for structural diaphragms.		<b>X</b>	
<b>1704.3</b> - Welding of cold-formed sheet steel framing members.		<b>X</b>	
<b>1704.3</b> - Welding of stairs and railing systems.		<b>X</b>	
<b>Table 1704.4 - Concrete</b>			
1. Inspection of reinforcing steel, including prestressing tendons and placement.		<b>X</b>	
2. Inspection of reinforcing steel welding in accordance with Table 1704.3 Item 5b.			
1) Complete and partial penetration groove welds.	<b>X</b>		
2) Multipass fillet welds.	<b>X</b>		
3) Single-pass fillet welds > 5/16".	<b>X</b>		
4) Single-pass fillet welds ≤ 5/16".		<b>X</b>	
3. Inspect bolts to be installed in concrete prior to and during placement of concrete here allowable loads have been increased.	<b>X</b>		
4. Verifying use of required design mix.		<b>R</b>	
5. At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.	<b>X</b>		
6. Inspection of concrete and shotcrete placement for proper application techniques.	<b>X</b>		
7. Inspection for maintenance of specified curing temperature and techniques.	<b>X</b>		
8. Inspection of prestressed concrete			
a. Application of prestressing forces.	<b>X</b>		
b. Grouting of bonded prestressing tendons in the seismic force-resisting system.		<b>X</b>	
9. Erection of precast concrete members.		<b>X</b>	
10. Verification of in-situ concrete strength, prior to stressing of tendons in postensioned concrete and prior to removal of shores and forms from beams and structural slabs.		<b>X</b>	
11. Inspect formwork for shape, location, and dimensions of the concrete member being formed.		<b>X</b>	

<b>Verification and Inspection</b>	<b>C</b>	<b>P</b>	<b>I</b>
<b>Table 1704.5.1 - Level 1 Masonry Inspections</b>			
1. At the start of masonry construction verify the following to ensure compliance:			
a. Proportions of site-prepared mortar.		X	
b. Construction of mortar joints.		X	
c. Location of reinforcement, connectors, prestressing tendons, and anchorages.		X	
d. Prestressing technique.		X	
e. Grade and size of prestressing tendons and anchorages.		X	
2. Verify:			
a. Size and location of structural elements.		X	
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X	
c. Specified size, grade, and type of reinforcement.		X	
d. Welding of reinforcing bars.	X		
e. Protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90degrees F)		X	
f. Application and measurement of prestressing force.		X	
3. Prior to grouting verify the following to verify compliance.			
a. Grout space is clean.		X	
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.		X	
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.		X	
d. Construction of mortar joints.		X	
4. Verify			
a. construction document provisions.		R	
b. grout placement to ensure compliance with code	X		
c. Observe grouting of prestressing bonded tendons.	X		
5. Observe preparation of required grout specimens, mortar specimens, and/or prisms.	X		
6. Verify compliance with required inspection provisions of the construction documents and the approved submittals.		R	
<b>Table 1704.5.3 - Level 2 Masonry Inspections</b>			
1. From the beginning of masonry construction the following shall be verified to ensure compliance:			
a. Proportions of site-prepared mortar, grout, and prestressing grout for bonded tendons.		X	
b. Placement of masonry units and construction of mortar joints.		X	
c. Placement of reinforcement, connectors and prestressing tendons and anchorages.	X		
d. Grout space prior to grouting.	X		
e. Placement of grout.	X		
f. Placement of prestressing grout.	X		
2. Verify:			
a. Size and location of structural elements.		X	
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames and other construction.	X		
c. Specified size, grade, and type of reinforcement.		X	
d. Welding of reinforcing bars.	X		
e. Protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).		X	
f. Application and measurement of prestressing force.	X		
3. Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X		
4. Compliance with required provisions of construction documents and the approved submittals shall be verified.		X	

<b>Verification and Inspection</b>	<b>C</b>	<b>P</b>	<b>I</b>
<b>1704.6.1 - Inspect high-load diaphragms:</b>			
1. Verify grade and thickness of sheathing.		X	
2. Verify nominal size of framing members at adjoining panel edges.		X	
3. Verify: <ul style="list-style-type: none"> <li>• Nail or staple diameter and length,</li> <li>• Number of fastener lines,</li> <li>• Spacing between fasteners in each line and at edge margins.</li> </ul>		X	
<b>Table 1704.7 - Inspection of Soils</b>			
1. Verify materials below footings are adequate to achieve the desired bearing capacity.		X	
2. Verify excavations are extended to proper depth and have reached proper material.		X	
3. Perform classification and testing of controlled fill materials.		X	
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.	X		
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.		X	
<b>Table 1704.8 - Pile Foundations</b>			
1. Verify pile materials, sizes and lengths comply with the requirements.	X		
2. Determine capacities of test piles and conduct additional load tests, as required.	X		
3. Observe driving operations and maintain complete and accurate records for each pile.	X		
4. Verify locations of piles and their plumbness. <ul style="list-style-type: none"> <li>a. Confirm type and size of hammer.</li> <li>b. Record number of blows per foot of penetration.</li> <li>c. Determine required penetrations to achieve design capacity.</li> <li>d. Record tip and butt elevations and record any pile damage.</li> </ul>		G	
5. For steel piles, perform additional inspections in accordance with Section 1704.3.		G	
6. For concrete piles and concrete-filled piles, perform additional inspection in accordance with Section 1704.4.		G	
7. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.		G	
8. For augered uncased piles and caisson piles, perform inspections in accordance with Section 1704.9.		G	
<b>Table 1704.9 - Pier Foundations</b>			
1. Observe drilling operations and maintain complete and accurate records for each pier.	X		
2. Verify locations of piers and their plumbness. Confirm: <ul style="list-style-type: none"> <li>• Pier diameters,</li> <li>• Bell diameters (if applicable),</li> <li>• Lengths, embedment into bedrock (if applicable),</li> <li>• Adequate end strata bearing capacity.</li> </ul>		X	
<b>1704.10 - Sprayed Fire-Resistant Materials</b>			
1. Inspect surface for accordance with the approved fire-resistance design		X	
2. Approved manufacturer's written instructions.		R	
3. Verify minimum ambient temperature before and after application.		X	
4. Verify ventilation of area during and after application.		X	
5. Measure average thickness per ASTM E605 and Section 1704.10.3.		X	
6. Verify density of material for conformance with the approved fire-resistant design and ASTM E605.		X	
7 Test cohesive/adhesive bond strength per Section 1704.10.5.		X	
<b>1704.11 - Mastic and Intumescent Fire-Resistant Coating</b>		X	
<b>1704.12 - Exterior Insulation and Finish Systems(EIFS)</b>		X	
<b>1704.14 - Smoke Control System</b>		X	

<b>Verification and Inspection</b>	<b>C</b>	<b>P</b>	<b>I</b>
<b>1705.3 - Seismic Resistance</b>			
1705.3 - Suspended ceiling systems and their anchorage.		X	
<b>Special Inspections for Seismic Resistance</b>			
1707.2 - Special inspection for welding in accordance with AISC 341.	X		
<b>1707.3 - Structural Wood</b>			
1. Inspect field gluing operations of elements of the seismic-force-resisting system.	X		
2. Inspect nailing, bolting, anchoring, and other fastening of components within the seismic force-resisting system, including: <ul style="list-style-type: none"> <li>• wood shear walls,</li> <li>• wood diaphragms,</li> <li>• drag struts, braces,</li> <li>• shear panels,</li> <li>• hold-downs.</li> </ul>		X	
<b>1707.4 - Cold-Formed Steel Framing</b>			
1. Welding of elements of the seismic-force resisting system.		X	
2. Inspection of screw attachments, bolting, anchoring, and other fastening of components within the seismic-force-resisting system including struts, braces, and hold-downs.		X	
<b>1707.5 - Pier Foundations</b>			
1. Placement of reinforcing		X	
2. Placement of concrete	X		
1707.6 - Anchorage of storage racks and access floors 8 feet or greater in height.		X	
<b>1707.7 - Architectural Components</b>			
1. Inspect erection and fastening of exterior cladding weighing more than 5 psf.		X	
2. Inspect erection and fastening of interior and exterior non-bearing walls weighing more than 5 psf.		X	
3. Inspect erection and fastening of interior and exterior veneer weighing more than 5 psf.		X	
<b>1707.8 - Mechanical and Electrical Components</b>			
1. Inspect anchorage of electrical equipment for emergency or stand-by power systems.		X	
2. Inspect anchorage of non-emergency electrical equipment.		X	
3. Inspect installation of piping systems and associated mechanical units carrying flammable, combustible, or highly toxic contents.		X	
4. Inspect installation of HVAC ductwork that contains hazardous materials.		X	
5. Inspect installation of vibration isolation systems where required by Section 1707.8.	X		
1707.9 - Verify that the equipment label and anchorage or mounting conforms to the certificate of compliance when mechanical and electrical equipment must be seismically qualified.		R	
1707.10 - Seismic isolation system: Inspection of isolation system per ASCE 7 – Section 17.2.4.8		X	
<b>1708.1 - Masonry Testing for Seismic Resistance</b>			
1708.1.1 - Verify certificates of compliance prior to construction.		R	
1708.1.2 - Verification of $f_m$ and $f_{AAC}$ prior to construction.		R	
1708.1.2 - Verification of $f_m$ and $f_{AAC}$ every 5000 square feet during construction.		R	
1708.1.4 - Verification of proportions of materials in mortar and grout as delivered to the site.		R	
1708.3 - Obtain mill certificates for reinforcing steel, verify compliance with approved construction documents, and verify steel supplied corresponds to certificate.		R	
1708.4 - Structural Steel: Invoke the QAP Quality Assurance requirements in AISC 341.		R	
1708.5 - Obtain certificate that equipment has been tested per Section 1708.5.		R	
1708.6 - Obtain system tests as required by ASCE 7 Section 17.8.		R	

**Special Instructions:**

**INSTRUCTION TO THE SPECIAL INSPECTOR:**

1. Provide daily field reports to the building inspector on site as construction progress.
2. A copy of all special inspection test laboratory reports shall be sent to the plan check engineer identified above and the architect or engineer of record.
3. Upon completion of special inspections and testing work, provide the city's plan check engineer with a final special inspections test report, wet stamped and signed by the responsible professional engineer.