



# Special Inspection Manual

**City of Richmond  
Bureau of Permits and Inspections  
From 2009 IBC**

**Adopted by Virginia Uniform Statewide Building Code  
900 East Broad Street Room 110  
Richmond, VA 23219  
(804) 646-6955**

The purpose of this document is to familiarize the Owner, Engineer, Architect, Testing/Inspection Laboratory, and Contractor of the Special Inspections required by Chapter 17 of 2009 International Building Code, as adopted by the State of Virginia Uniform Statewide Building Code.

Chapter 17 of the 2009 International Building Code (IBC) has specific requirements for Structural Tests and Special Inspections. These tests and inspections are in addition to the inspections required by VUSBC section 113. The special inspection does not waive the requirement for inspections by the building inspector. The contractor is responsible for scheduling all inspections required by VUSBC, with the Bureau of Permits and Inspections. These tests and inspections are to be made by an agency, inspector, testing lab, and fabricator shop approved by the Commissioner of Buildings.

The approved agency, inspector, testing lab, and fabricator shop must be employed by the owner or the registered design professional in responsible charge acting as the owner's agent.

This handout outlines the mandatory requirements and responsibilities of all parties involved with special inspection and construction. However, recognizing that there are many ways to evaluate construction quality and inspection, this handout is NOT intended to be a step-by-step procedural specification sufficient for all projects. Adjustments may be needed to satisfy a project's particular conditions.

It is hoped that by becoming more familiar with items which will be examined by the special inspector, all parties to the construction process can better prepare to foster quality control in the constructed project.

When special inspection required by IBC 2009 edition, the registered design professional in responsible charge shall prepare a Statement of Special Inspections, for submittal by the permit applicant (see attached exhibit 2). This statement shall include the following:

1. The materials, systems, components, and work required to have special inspection
2. The type and extent of each inspection
3. The type and extent of each test

4. Identification as to whether it will be a continuous or periodic special inspection

This agreement applies to special inspections covered in Chapter 17 of the IBC. It does not waive any other inspections that do not fall under chapter 17. It is the permit holder's responsibility to call for all required inspections prior to concealment and prior to proceeding on with the work.

## **PRECONSTRUCTION MEETING**

Prior to the issuance of a building permit, a preconstruction meeting shall be held at the building of Bureau of Permits and Inspections. The City of Richmond Plan Examiner Engineer II shall contact the Register Design Professional in responsible charge of the project, owner or owner agent to schedule the meeting time and location. The following are required to attend this meeting.

1. The Building Official, Plans Examiner, and Building Inspector
2. Owner or designated agent
3. The Registered Design Professional in Responsible Charge or representative.
4. Architect of Record or representative.
5. Structural Engineer of record or representative
6. Geotechnical Engineer of Record or representative
7. The General Contractor or representative.
8. Special Inspections Engineer of Record or representative
9. The Approved Agency or representative.

## **I DEFINITIONS AND PURPOSE**

### **A. Approval of Special Inspection Agencies, Special Inspectors, Fabricator Shop and/or Testing labs:**

Special Inspections Agencies, Special Inspectors, Fabricator Shop, and Testing Labs shall disclose any possible conflicts of interest. The Registered Design Professional in responsible charge shall pre-qualify the designated Special Inspection Agencies, Special Inspectors, Fabricator Shop, and Testing Labs, and submit their qualifications as part of the Statement of Special Inspections. The City of Richmond Bureau of Permits and

Inspections shall approve the designated Special Inspection Agencies, Special Inspectors, Fabricator Shops, and Testing Labs, prior to any work being performed.

### **B. Duties and Responsibilities of the Project Owner:**

#### **1. Agree and sign the Special Inspection and Testing Agreement**

**2. Employ and Fund Special Inspections and Testing Services:**

The project Owner is responsible for employing and funding the Special Inspection and Testing services. The Special Inspection Agencies, Special Inspectors and Testing Labs, shall not be in the employ of the contractor, a subcontractor or material supplier. In the case of an Owner who is also acting as the contractor; Special Inspection Agencies, Special Inspectors, and Testing Labs shall be employed as specified and approved by the Commissioner of Buildings, and Bureau of Permits and Inspections.

**C. Duties and Responsibilities of the Engineer of Record**

The engineer or architect of record has many duties and responsibilities related to special inspection and structural observation activities. These include the following:

**1. Agree and sign the Special Inspection and Testing Agreement:**

The Engineer or Architect of record shall complete the Special Inspection and Testing Agreement and submit with the Building Permit Application.

**2. Identify the need for special inspections and structural observation services:**

The project plans and-or specifications which are submitted to the building official shall clearly indicate the design parameters and material selection. The engineer or architect of record is the development team member who analyzes the critical elements of the design and determines where special inspection and structural observation is required in accordance with 2009 IBC sections 1704, 1707, 1708, 1709. See exhibit (3), Special Inspection and Structural Observation Requirements. The engineer is responsible for submitting the special inspection and structural observation requirements form into the structural plan sets. Also one separate copy shall be submitted to the Bureau of Permits and Inspections Plan Examiner for office record.

**3. Respond to field discrepancies**

Material and design discrepancies which are not resolved in a timely manner or are about to be incorporated in the work must be brought to the attention of the engineer or architect of record and the office of the Commissioner of Buildings. Uncorrected field deficiencies observed by the special inspector must also be brought to their attention. The engineer or architect of record is instrumental in effecting the remedial process of deficiency correction. The engineer or architect of record is responsible for any design changes in addition to acknowledgment and approval of shop drawings which may detail structural information, and for submission of such changes to the Bureau of Permits and Inspections for approval.

**4. Submit final completion report**

The engineer of record shall submit an overall final completion report to The Bureau of Permits and Inspections stating that all items requiring special inspection and structural observation were performed in

accordance with the approved plans, specifications, and applicable workmanship provisions of the VUSBC. See Exhibit (5), Special Inspection Final Compliance Report and Exhibit (6), Structural Observation Final Compliance Report

#### **D. Duties and responsibilities of the engineer responsible for the structural observation program**

The owner shall employ the engineer or architect responsible for structural design, or another engineer or architect designated by the engineer or architect responsible for structural design, to perform structural observation as defined in IBC. Observed deficiencies shall be reported in writing to the owner's representative, special inspector, contractor, and the City of Richmond Bureau of Permits and Inspections. The structural observer shall submit to the Commissioner of Buildings a written statement declaring that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved. See exhibits 5 and 6 structural observation final compliance report.

#### **E. Duties and Responsibilities of the Special Inspector**

##### **1. Agree and sign the Special Inspection and Testing Agreement.**

##### **2. Special Inspector :**

The special inspectors are individuals with highly developed, specialized skills who observe those critical building or structural features which they are qualified to inspect. Duties of special inspectors and/or inspection agencies include the following:

##### **3. Observe and inspect all work for which they are responsible:**

Special inspector shall inspect all work for conformance with the Bureau of Permits and Inspections approved plans and specifications and applicable of the code. The special inspector shall be on site at all times to observe construction operations that require continuous or periodic inspections as per tables 1704.3, 1704.4, 1704.5.1, 1704.5.3, 1704.7, 1704.8 and 1704.9 of IBC 2009 edition. Work shall be inspected according to the approved construction documents, listed standards and nationally recognized testing methods.

##### **4. Provide Timely Progress Report:**

The special inspector should complete written inspection reports for each inspection visit and provide the report in a timely manner. The special inspector or inspection agency shall furnish these reports directly to the building official, engineer or architect of record and the general contractor. Special inspectors shall bring all non-conforming items to the immediate attention of the contractor. If any such item is not resolved in a timely manner or is about to be incorporated in the work, the engineer or architect of record and the building official shall be notified immediately. See exhibits 4 and 5. A copy of exhibit 4 shall be attached to every report done by the special inspector.

Special inspections reports are due within 48 hours of the inspection. The reports can be emailed or faxed to the Bureau of Permits and Inspections office.

**5. Submit a Final Report.**

Special inspectors or inspection agencies shall submit a final report that is sealed, signed and dated by the registered engineer or architect who is responsible for the special inspection to the Bureau of Permits and Inspections office stating that all items requiring special inspection and testing were constructed, to the best of their knowledge, in conformance with the approved design plans, specifications, approved change order and the applicable provision of the building code. **See special inspection final report.**

**This report shall be submitted no later than 10 days prior to application for a Certificate of Occupancy.**

**F. Duties and Responsibilities of the Contractor:**

**1. Agree and sign the Special Inspection and Testing Agreement.**

**2. Notifying the Special Inspection Agency, Special Inspector, and Testing Lab.**

The contractor or the holder of the Building Permit is responsible for notifying the Special Inspector, special inspection agency and Testing Lab regarding special inspections required by the Bureau of permits and Inspections. Adequate notice shall be provided so that the special inspector has time to become familiar with the project. The permit holder is responsible for calling for all required inspections both from the building inspector and the special inspector.

**3. Provide access to approved Construction documents.**

The contractor is responsible for providing the special inspector with access to approved plans, construction documents, and approved shop drawings.

**4. Retain special inspection records at the job site:**

The contractor is responsible for retaining at the job site all special inspection records submitted by the special inspector and testing labs, and providing these records for review by the Bureau of Permits and Inspections inspector upon request.

**5. Obtain Bureau of Permits and Inspections approval prior to concealment:**

The Contractor shall contact the Bureau of Permits and Inspections for required inspections and obtain approval prior to concealing any work requiring Special Inspections.

**G. Duties and responsibilities of Bureau of the Permits and Inspections**

The specific duties and responsibilities of the Bureau of Permits and Inspections relating to Special Inspections include the following:

1. **Review and examine plans, specifications, structural observation, and contract documents for approval and compliance with the Code and Special Inspection Program Requirements:**

The Bureau of Permits and Inspections is responsible for reviewing all submitted construction plans, specifications, forms related to the Special Inspection Program, and any other submitted documents for compliance with Virginia Uniform Statewide Building Code. All items submitted must be reviewed and approved prior to issuance of the Building Permit. This includes the following:

- Check the qualifications of each Special Inspector, Special Inspection Agency, Testing Lab, and Fabricator Shop that is listed on the Statement of Special Inspections in accordance with The City of Richmond's **Qualification Standard for Special Inspections**.
- Check that all parties involved in the Special Inspection Program have completed their portion of the Special Inspection and Testing Agreement.
- Issue the Building Permit with the approved Statement of Special Inspections, Special Inspection and testing Agreement, and permit conditions attached to the approved plans that will be kept on the job site.
- Determine if pre-construction meeting is required to review the Special Inspection Program with all appropriate members of the construction team.

2. **Monitor Special Inspection and Testing Activities:**

The Bureau of Building Permits and Inspections will monitor work requiring Special Inspection and Testing Activities at the jobsite to assure that the designated qualified Special Inspectors are performing their duties when work requiring Special Inspection is in progress.

3. **Review Special Inspection Progress Reports:**

The Bureau of Permits and Inspections will review the submitted Special Inspection progress reports and perform field inspections to verify conformance to the approved plans, construction documents, and specifications prior to concealing any work related to the Special Inspections

4. **Perform Final Inspection and Issue Certificate of Occupancy:**

The Bureau of Permits and Inspections will approve all site inspections as partial inspection, and will not perform a final inspection nor approve the final inspection until the final Special Inspection Report has been reviewed and approved by the office of the Commissioner of Buildings.

# ACKNOWLEDGMENTS

## Exhibit (1)

I have read and agree to comply with the terms, conditions, and my responsibilities as they are outlined in the Special Inspection and Testing Agreement:

**Owner:**

Print Name	Provide Signature	Date
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**Register Design Professional in Responsible Charge (Project Engineer or Architect of Record):**

Print Name/Company	Provide Signature	Date
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**Register Design Professional Structural Engineer:**

Print Name/Company	Provide Signature	Date
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**Contractor:**

Print Name/Company	Provide Signature	Date
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**Special Inspections, Testing Agencies/Laboratories, and Independent Special Inspectors:**

Print Name/Company	Provide Signature *	Date
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Print Name/company	Provide Signature *	Date
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Print Name Independent Special Inspector	Provide Signature	Date
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Print Name Independent Special Inspector	Provide Signature	Date
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\*This signature must be that of responsible professional Engineer within the Special Inspection Agency

**Accepted By the City of Richmond Bureau of Permits and Inspections**

Print Plan Reviewer Name	Provide signature	Date
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**City of Richmond**  
**Statement of Special Inspections**  
**Exhibit (2)**

**Project Address:** \_\_\_\_\_

**Permit Number:** \_\_\_\_\_ **Code Edition:** \_\_\_\_\_

**Permit Applicant:** \_\_\_\_\_

**Applicant Address:** \_\_\_\_\_

**Architect of Record:** \_\_\_\_\_

**Structural Engineer of Record:** \_\_\_\_\_

**Geotechnical Engineer of Record:** \_\_\_\_\_

**Special Inspector Engineer of Record:** \_\_\_\_\_

**General Contractor:** \_\_\_\_\_

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with Section 1704 of the **IBC 2009** as adopted by the Virginia Uniform Statewide Building Code. It includes a schedule of special inspections (Exhibit #xx) applicable to this project as well as the name of the Special Inspector, and any testing agencies retained for conducting inspections.

The Special Inspector shall keep records of all inspections and furnish all inspections reports to the code official and appropriate design professionals. Discrepancies found from the approved construction documents shall be brought to the immediate attention of the contractor for correction, the City of Richmond Code Official, as well as the appropriate design professional of record. Daily, weekly, and monthly reports shall be submitted to the Code Official as required unless otherwise agreed upon by the Building Official. A final report of special inspection shall be submitted to the City of Richmond prior to the building final inspection and issuance of certificate of occupancy.

**Prepared by:**

Type or print name	Signature	Date
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<b>Owner/ Representative Authorization</b>	<b>Building Official Acceptance</b>
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Name and signature	Name and signature	Date
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# Special Inspection Daily Report

City of Richmond Bureau of Permits and Inspections

Exhibit (4)

Permit No: \_\_\_\_\_

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

Project Name and Address: \_\_\_\_\_

Inspection Type:     Continuous         Periodic        Frequency: \_\_\_\_\_

Inspection Kind and Location: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Tests Performed: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspection Approved         Inspection Rejected

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To the best of my knowledge, work inspected was in accordance with the Bureau of Permits Inspections approved plans, specifications, and applicable workmanship provisions of IBC 2009 Edition Except as noted above

Signed: \_\_\_\_\_ Inspection Agency: \_\_\_\_\_

Print full name: \_\_\_\_\_ Time of Inspection: \_\_\_\_\_



# Structural Observation Final Completion Report

City of Richmond Bureau of Permits and Inspections

Exhibit (6)

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

Mr. Anthony G. Jones Sr.  
Special Inspection Engineer II  
900 East Broad Street  
Richmond, VA 23219

**Project Address:** \_\_\_\_\_ **Permit No:** \_\_\_\_\_

In accordance with Section 1702 Of International Building Code 2009 edition, I have provided structural observation for the following items:

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Based upon inspections performed and my substantiating reports, it is my professional judgment that the observed structural work was performed in accordance with the approved plans, specifications, and applicable workmanship provisions of the International Building Code 2009 edition.

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

\_\_\_\_\_  
**Type or Print Name**

Stamp of Engineer/Architect of Record  Performing structural observation
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## Schedule of Chapter 17 Inspections

Name of Firm: \_\_\_\_\_

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

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
<b>Site</b>							
Location of work per site plans	Field test and inspection				1704.7.1		
Soil compaction	Field test and inspection – density test				1704.7.3		
Foundation sub-grade & bearing capacity	Field test and inspection						
Fill Placement	Field test and inspection				1704.7.2		
<b>Pile Foundations</b>							
1. Verify pile materials, sizes and lengths comply with requirements and construction documents	Field inspection – per approved construction documents		X		1704.8		
2. Determine capacities of test piles and conduct additional load tests as required	Field inspection – per approved construction documents		X		1704.8		
3. Observe driving operations and maintain complete and accurate records for each pile	Field inspection – per approved construction documents		X		1704.8		
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any pile damage	Field inspection – per approved construction documents		X		1704.8		

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
5. for steel piles, perform additional inspections in accordance with section 1704.3	Field inspection – per approved construction documents				1704.8		
6. For concrete piles and concrete filled piles, perform additional inspections in accordance with section 1704.4	Field inspection – per approved construction documents				1704.8		
7. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge	Field inspection – per approved construction documents				1704.8		
8. For augured uncased piles and caisson piles, perform inspections in accordance with section 1704.9	Field inspection – per approved construction documents				1704.8		
<b>Pier Foundations- concrete</b>							
Drilling	Observe drilling and placement				1704.9		
Placement	Verify placement, size, location, adequate bearing				1704.9		
Materials	Review product supplied, certifications of mix				1704.4.1	ACI 318	1904, 1905.2-1905.4, 1903.5,1907,1914.4
Location of footing	Field inspection of footing				1704.4		
Size of footing	Field inspection of footing				1704.4		
Strength of footing PSI	Laboratory testing				1704.4		
<b>Pier Foundations- masonry</b>							
Drilling	Observe drilling and placement				1704.9		

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
Placement	Verify placement, size, location, adequate bearing				1704.9		
Materials	Review products supplied versus material submitted				1704.5	ACI 530	Materials
Acceptance test					1704.5	ACI 530	Acceptance test
Strength	Testing & review of strength				1704.5	ACI 530	Strength
Reinforcing in walls	Field inspection – per approved construction documents				1704.5	ACI 530	
Placement of anchors	Field inspection – per approved construction documents				1704.5	ACI 530	
Mortar and grout placement	Field inspection – per approved construction documents				1704.5	ACI 530	
Mortar joints	Field inspection – per approved construction documents				1704.5	ACI 530	
Grout strength	Field inspection – per approved construction documents				1704.5	ACI 530	Grout strength
Mortar type	Field inspection – per approved construction documents				1704.5	ACI 530	Mortar type
Grade of reinforcing	Field inspection – per approved construction documents				1704.5	ACI 530	Grade of reinforcing
Protection	Field inspection – per approved construction documents				1704.5	ACI 530	Protection
<b>Footings/Concrete</b>							
Location of footing	Field inspection of footing – per approved plans?				1704.4		
Size of footing	Field inspection of footing– per approved plans?				1704.4		
Strength of footing PSI	Laboratory testing– per approved plans?				1704.4		
1. Reinforcing Steel	Filed inspection including proper size and placement			X	1704	ACI 318	1913.4

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
<b>Concrete</b>							
1. Reinforcing Steel(vertical/horizontal)	Filed inspection including proper size and placement			X	1704	ACI 318	1913.4
2. Reinforcing steel welding	Filed inspection for proper welding				1704.3	AWS D1.4; ACI 318	
3. Bolts	Field inspection prior to and during pouring		X		1704		1911.5
4. Design Mix	Verify required design mix was used			X	1704	ACI 318	1904.2.2, 1913.2, 1913.3
5. Samples	Take samples for strength, perform slump tests, air content tests, determine concrete temperature		X		1704	ASTM C 172; C31; ACI 318	1913.10
6. Placement- concrete & shotcrete	Field inspection		X		1704	ACI 318	1913.6, 1913.7, 1913.8
7. Curing	Inspect for maintenance and curing		X		1704	ACI 318	1913.9
8. Prestressed:							
a. application of prestress forces			X		1704	318	
b. Grouting and bonded prestressing tendons			X		1704	318	
9. Erection of precast members				X	1704	318	
10. Verification of in-situ concrete strength, prior to stressing tendons and prior to removal of shoring and forms				X	1704	318	
11. inspect formwork for shape, location, dimensions of concrete member being formed				X	1704	318	
<b>Precast Concrete</b>							
Quality controls in plant					1704.2		



Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
Erection and installation						ACI 318	
<b>Walls/Masonry</b>							
1. Masonry				X	1704.5	ACI 530	
a. Proportions of site prepared mortar	Field inspection – per approved construction documents			X	1704.5	ACI 530	
b. Construction of mortar joints	Field inspection – per approved construction documents			X	1704.5	ACI 530	
c. Location of reinforcement, connectors, prestressing tendons and anchorages	Field inspection – per approved construction documents			X	1704.5	ACI 530	
d. Prestressing technique	Field inspection – per approved construction documents			X	1704.5	ACI 530	
e. Grade and size of prestressing tendons and anchorages	Field inspection – per approved construction documents			X	1704.5	ACI 530	
2. Inspection shall verify:				X	1704.5	ACI 530	
a. Size and location of structural elements	Field inspection – per approved construction documents			X	1704.5	ACI 530	
b. Type, size and location of anchors, including details of anchorage of masonry to structural members, frames or other construction	Field inspection – per approved construction documents			X	1704.5	ACI 530	
c. Specified size, grade and type of reinforcement	Field inspection – per approved construction documents			X	1704.5	ACI 530	
d. Welding of reinforcing bars	Field inspection – per approved construction documents		X	X	1704.5	ACI 530	
e. Protection of masonry during cold weather <40 or hot weather >90.	Field inspection – per approved construction documents			X	1704.5	ACI 530	

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
f. Application and measurement of prestressing forces	Field inspection – per approved construction documents			X	1704.5	ACI 530	
3. Prior to grouting, verify:				X	1704.5	ACI 530	
a. Grout is clean	Field inspection – per approved construction documents			X	1704.5	ACI 530	
b. Placement of reinforcement and connectors and prestressing tendons and anchorages	Field inspection – per approved construction documents			X	1704.5	ACI 530	
c. Proportions of site prepared grout and prestressing grout for bonded tendons	Field inspection – per approved construction documents			X	1704.5	ACI 530	
d. Construction of mortar joints	Field inspection – per approved construction documents			X	1704.5	ACI 530	
4. Grout placement shall be verified to ensure compliance with code and construction documents	Field inspection – per approved construction documents		X		1704.5	ACI 530	
a. Grouting of prestressing bonded tendons	Field inspection – per approved construction documents		X		1704.5	ACI 530	
5. preparation of any required grout specimens, mortar specimens and/or prisms shall be observed	Field inspection – per approved construction documents		X		1704.5	ACI 530	
6. Compliance with required inspection provisions of the construction documents and approved submittals shall be verified	Field inspection – per approved construction documents			X	1704.5	ACI 530	
Materials	Review products supplied versus material submitted				1704.5	ACI 530	
Acceptance test					1704.5	ACI 530	
Strength	Testing & review of strength				1704.5	ACI 530	

<b>Work Type</b>	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
Size of Block	Field inspection – per approved construction documents				1704.5	ACI 530	
Wall height	Field inspection – per approved construction documents				1704.5	ACI 530	
Location of wall	Field inspection – per approved construction documents				1704.5	ACI 530	
Reinforcing in walls	Field inspection – per approved construction documents				1704.5	ACI 530	
Placement of anchors	Field inspection – per approved construction documents				1704.5	ACI 530	
Mortar and grout placement	Field inspection – per approved construction documents				1704.5	ACI 530	
Mortar joints	Field inspection – per approved construction documents				1704.5	ACI 530	
Wall bracing	Field inspection – per approved construction documents				1704.5	ACI 530	
Grout strength	Field inspection – per approved construction documents				1704.5	ACI 530	
Mortar type	Field inspection – per approved construction documents				1704.5	ACI 530	
Grade of reinforcing	Field inspection – per approved construction documents				1704.5	ACI 530	
Protection	Field inspection – per approved construction documents				1704.5	ACI 530	
<b>Slabs (ground or elevated)</b>							
Thickness	Field inspection – per approved construction documents				1704.4	ACI 318	1905.9,1905.10, 1914.6, 1914.7, 1914.8
Rebar sizes	Field inspection – per approved construction documents				1704.4	ACI 318	1903.5, 1907, 1914.4
Rebar spacing	Field inspection – per approved construction documents				1704.4	ACI 318	1903.5, 1907, 1914.4
Rebar location in slab	Field inspection – per approved construction documents				1704.4	ACI 318	1903.5, 1907, 1914.4
Floor penetrations	Field inspection – per approved construction documents				1704.4	ACI 318	1905.9,1905.10, 1914.6, 1914.7, 1914.8

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
Vapor barrier and insulation							
Sand or gravel							
Strength of concrete	Field inspection – per approved construction documents				1704.4	ACI 318	1906.2, 1914.10
Grade of rebar or reinforcing	Field inspection – per approved construction documents				1704.4	ACI 318	1903.5, 1907, 1914.4
Anchorage							
<b>Structural Steel</b>							
Quality control	In plant inspection				1704.2		
1. Bolts, nuts, washers						AISC 360	
a. Marking	Markings meets ASTM standards			X	1704.3	AISC 335; LRFD	
b. certificate of compliance	Markings versus certificate of compliance			X	1704.3	AISC 335; LRFD	
2. High strength bolting					1704.3	AISC 360 M2.5	
a. bearing type connections	Field inspection			X	1704.3	AISC 360 M2.5	
b. slip critical connections	Field inspection		X	X	1704.3	AISC 360 M2.5	
3. Material verification	Material markings versus certifications				1704.3	ASTM A6, A568	
a. conforms to ASTM standards					1704.3	ASTM A6; A568	
b. certified mill test reports					1704.3	ASTM A6; A568	
4. verification of weld filler materials					1704.3		
a. markings conform to AWS specification in construction documents	Field inspection				1704.3	AISC 360	

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
b. manufacturer's certificate of compliance	Field inspection				1704.3		
5. Inspection of welding							
a. structural steel							
1. penetrations of welds			X		1704.3.1	AWS D1.1	
2. multipass fillet welds			X		1704.3.1	AWS D1.1	
3. Single pass welds >5/16"			X		1704.3.1	AWS D1.1	
4. Single pass welds <5/16				X	1704.3.1	AWS D1.1	
5. Floor & roof deck welds				X	1704.3.1	AWS D1.3	
b. Reinforcing Steel							
1. verification of weldability				X		AWS D1.4; ACI 318:3.5.2	
2. Flexural & axial forces						AWS D1.4; ACI 318:3.5.2	
3. shear reinforcement			X			AWS D1.4; ACI 318:3.5.2	
4. Other reinforcement				X		AWS D1.4; ACI 318:3.5.2	
6. Steel Frame Joint inspections							
a. bracing & stiffening				X	1704.3.2		
b. member locations				X			
c. joint details at connections				X			
Structural steel - installation	Field inspection – per approved construction documents				1704.3	ASTM A6, A568	

<b>Work Type</b>	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
Structural steel – size of each member	Field inspection – per approved construction documents				1704.3	ASTM A6, A568	
Location of members	Field inspection – per approved construction documents				1704.3	ASTM A6, A568	
Bearing of members	Field inspection – per approved construction documents				1704.3	ASTM A6, A568	
Bolts, nuts, washers - installation	In place inspections				1704.3	AISC 335; LRFD	
Torque of bolts	Field verify				1704.3	AISC 335; LRFD	
Connections	Field verify				1704.3	AISC 335; LRFD	
Structural details	Inspection in field				1704.3.2		
<b>Wood</b>							
Fabrication/quality control	Review submittals and installation				1704.6		
High load diaphragms	Inspection of sheathing, framing size, nail and staple size, number of fasteners, and spacing of fasteners				1704.6.1		
Structural wood					1704.5		
Fire resistive wood							
<b>Fire Resistance</b>							
Spray on materials	Review surface conditions, applications, thickness				1704.10		
Fire resistant coatings	Review surface conditions, applications, thickness				1704.11		

Work Type	Description	y/n	Continuous	Periodic	IBC Section	Other Standard	Non Chapter 17 sections
<b>Exterior Insulation and Finish</b>	Review applications				1704.12		
<b>Special Cases</b>	Review surface preparations and applications				1704.13		
<b>Smoke Control</b>							
Duct testing for leaks	Prior to concealment				1704.14		
Pressure and flow testing	Prior to completion				1704.14		

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