

CITY OF FAIRFAX STATEMENT OF SPECIAL INSPECTIONS

PROJECT

PERMIT APPLICANT

PRIMARY RDP OF RECORD

STRUCTURAL ENGINEER OF RECORD

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the International Building Code (IBC) as stated in the Virginia Uniform Statewide Building Code (USBC). It includes a Schedule of Special Inspections applicable to this project as well as the name of the Special Inspector and the identity of other testing laboratories or agencies intended to be retained for conducting these inspections or tests.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, appropriate RDP(s), Owner and Contractor. All discrepancies shall be brought to the attention of the Building Official and appropriate RDP(s). Interim reports shall be submitted to the Building Official, Owner, Contractor and the appropriate RDP(s) according to the *City of Fairfax's Special Inspection Guidelines and Procedures*.

Jobsite safety is solely the responsibility of the Contractor. Materials and activities to be inspected are not to include the Contractor's equipment and methods used to erect or install the materials listed. **All fees/costs related to the performance of Special Inspections shall be the responsibility of the Owner. Additionally, the undersigned (RDP or SER) are only acknowledging that the items enumerated on the Schedule of Special Inspections are consistent with the required design elements, the applicable sections of the Uniform Statewide Building Code and their area of expertise.**

REVIEW, AUTHORIZATION & ACCEPTANCE:

Permit Applicant (if not the Owner):

SCHEDULE OF SI PREPARED BY:

Signature/date:
Printed Name:

Owner's Authorization (If other than Applicant)

Signature/date:
Printed Name:

Primary RDP of Record: (Review and Acceptance of Schedule)

Virginia RDP Seal of SI Preparer

Signature/date:
Printed Name:

Printed Name of the Preparer of the Schedule

SER of Record: (Review and Acceptance of Schedule)

Signature/date:
Printed Name:

Special Inspector:

Signature/date:
Printed Name

Building Official's Acceptance:

SI Company Name:

Signature/date:
Printed Name:

Special Inspections Guidelines and Procedures for the City of Fairfax

SPECIAL INSPECTIONS:

Since the 1998 Supplement to the 1987 Edition of the BOCA National Codes, Special Inspections have been part of the Virginia Uniform Statewide Building Code (USBC). Special Inspection requirements address three specific areas in the construction process:

1. Adequacy of Materials
2. Adequacy of Fabrication
3. Adequacy of Installation Procedures

PURPOSE, GOAL AND OBJECTIVE:

The purpose and goal of the Special Inspections process is to enhance public safety through improved quality of construction.

The objective is to provide a valuable quality assurance plan, which benefits future building occupants and all parties involved in the construction project.

WHAT IS SPECIAL INSPECTION?

1. International Building Code (IBC) Definition:
“Inspection as herein required of the materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards.”
2. Working Definition (Taken from “A Guideline to Assist Building Officials in the Implementation of Special Inspection Programs” published by the International Conference of Building Officials):
*“Special Inspection is the monitoring of the materials and workmanship which **are critical to the integrity of the building structure and warrant special attention** as recommended by the engineer or architect of record and/or the Building Official.”*

WHAT ARE SPECIAL INSPECTIONS?

1. Special inspections involve observing the fabrication and installation of structural and life-safety components of buildings.
2. They are not a substitute for the required municipality inspections.
3. Third Party Inspections are also not the same as Special Inspections.
4. Special Inspections are not to be a substitute for the construction administration or application for payment inspections.

How is the Special Inspection process different from the normal, ordinary Municipal inspection requirement?

1. Special Inspections are generally focused on specific structural issues of life safety delineated by the VUSBC, not construction progress or administration.
2. The permit applicant shall submit a Statement of Special Inspections as a condition for permit issuance.
3. The Special Inspector shall keep records of all inspections and furnish reports to the code official, owner and SER.
4. A Final Report of Special Inspections documenting completion shall be submitted prior to the issuance of a Certificate of Occupancy.

RESPONSIBILITIES:

The Building Official's Responsibility:

1. Reviewing the construction documents, the Statement and Schedule of Special Inspections, and accepting the qualifications of the Special Inspector and the Agents.
2. Approving the Construction Documents, the Statement and Schedule of Special Inspections, and the qualifications of the Special Inspector and the Agents.
3. The issuance of the Building Permit.
4. Reviewing field reports of Special Inspections.
5. Issuing Stop Work Orders if the approved special inspectors or laboratories are not performing required Special Inspections or if discrepancies were reported by the Special Inspector and not corrected.
6. Issuing the Certificate of Occupancy: the Building Official must have received and approved the Final Report of Special Inspections prior to issuance.

The General Contractor's Responsibility:

1. Construction in accordance with the approved Construction Documents and the VUSBC.
2. Submitting a written statement of responsibility to the Building Official and the Owner prior to commencement of work on the designated main wind force or seismic force resisting system.
3. Controlling the quality of construction.
4. Providing the Special Inspector and Agents safe access to the elements that require inspection or testing.
5. Coordinating construction schedule and timely notification of the need for Special Inspections.
6. Cooperating with the project's design professionals, including the Special Inspector and Agents.
7. Responding promptly when informed of non-conforming work.

The Owner's Responsibility:

1. Paying the fees and costs related to the performance of Special Inspection services.
2. The owner or the RDP in responsible charge acting as the Owner's authorized agent shall acknowledge the Statement of Special Inspections by their signature.

The Registered Design Professional in responsible charge shall be responsible for:

1. Informing the Owner of the need to provide Special Inspections.
2. Assisting the Owner as may be needed to retain the services of a Special Inspector.
3. Coordinating the work requiring Special Inspections on the construction documents prepared by the design team.
4. Preparing a statement of Special Inspections in accordance with IBC Section 1705. (Most often prepared by the Structural Engineer of Record, the **SER**).

The Responsibility of the Structural Engineer of Record (SER).

1. Identifying the Special Inspections to be performed for the project.
2. Preparing the Statement of Special Inspections in accordance with IBC Section 1705.
3. Responding to deviations and clarifications noted by the Special Inspector.

The Responsibility of the Special Inspector:

1. Performing, documenting, managing and coordinating the special inspections of the various Agents. Note that individual Agents may be retained by the Owner or by the Special Inspector, but that they are responsible to the Special Inspector.
2. Identifying the Agents in the Schedule of Special Inspections that is submitted to the Building Official.
3. Providing copies of inspection reports to the Registered Design Professional (RDP) of Record, Owner, General Contractor and Building Official.
4. Bringing all discrepancies to the attention of the General Contractor for correction at the construction site.
5. Reporting deviations from the approved Construction Documents to the General Contractor, appropriate RDP of Record, Building Official and Owner.
6. Reporting corrections of deviations.

The Responsibility of Agent #1 who is designated as the Special Inspector:

1. The General Contractor shall coordinate all Special Inspection functions through Agent #1, the Special Inspector.
2. All subsequent Agents will report to the Special Inspector (Agent #1)
3. All subsequent reports from other Agents (materials and laboratory testing, fire protection, EIFS, smoke control, etc.) will report to the Special Inspector (Agent #1).

Responsibilities of Subsequent Special Inspectors (Agents)

1. Subsequent Agents may include; smoke control, fireproofing, laboratory and field test of the earth and materials used in construction.
2. Bringing deviations to the attention of the General Contractor and Special Inspector for correction while at the construction site.
3. Reporting deviations from the approved Construction Documents to the Special Inspector and the appropriate RDP of Record.
4. Reporting uncorrected work to the Building Official and the appropriate RDP of Record.

Timing of Special Inspections:

1. During construction of the types of work listed in IBC Section 1704, as adopted and amended by the VUSBC.
Exceptions:
 - a. Special Inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the Building Official.
 - b. Special Inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by the laws of the Commonwealth and regulations governing the professional registration and certification of engineers and architects.
 - c. Unless otherwise required by the Building Official, Special Inspections are not required for occupancies in Groups R-3, R-4 or R-5 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in the IBC Section 312.1.
2. Must be determined prior to issuance of building permit. Must submit Statement and Schedule of Special Inspections with permit application and plans.
3. Required items enumerated on Schedule of Special Inspections.

INSPECTOR AND LAB QUALIFICATIONS

1. Special Inspections shall be performed by or under the direct supervision of a RDP in responsible charge.
 - a. Special Inspector: Organizing Body
 - b. Agents: Contingent on area of expertise
 - c. Single Special Inspector or a team (Agents)
2. Qualifications shall be in accordance with VUSBC:
 - a. RDP in Commonwealth of Virginia, or
 - b. ASTM E329; must be under the supervision of a Registered Design Professional (RDP).
3. Building Official may determine if an equivalency has been met.
4. All laboratory facilities shall operate under the direct supervision of a Registered Professional Engineer and shall meet the requirements of ASTM E329.

5. Written documentation of qualifications or certifications shall be provided to the Building Official and may include:
 - a. Resumes and certifications of inspectors, laboratory accreditations, etc.
 - b. Future plans may include acceptance of alternative certifications.
 - c. Qualifications will be reviewed and evaluated by the Building Official or the authority having jurisdiction (AHJ).
6. ASTM E329 Qualifications Apply to:
 - a. Facilities and Management.
 - b. Individuals.
 - c. Equipment.
 - d. Quality Systems. Testing and inspections methods, records, reports.
7. Accrediting and Certifying Agencies:

| | |
|--------|------------------------|
| ACI | ASNT |
| AASHTO | NICET |
| VDOT | NCMA |
| WACEL | Army Corp of Engineers |
| NIST | AWS |
| ICC | OTHERS |
| PCI | |
8. **Approved Agency.** An approved agency responsible for laboratory testing or special inspections, or both, must comply with the qualification, certification and experience requirements of ASTM E 329 or the alternatives listed in IBC/2006, Chapter 17.
9. **Independent.** An approved agency shall be objective and competent. The agency shall disclose possible conflicts of interest so that objectivity can be confirmed. The special inspector and their agents shall be independent from the person, persons or contractor responsible for the physical construction of the project requiring special inspections.
10. **Personnel.** An approved agency shall employ experienced personnel educated in conducting, supervising and evaluating tests or inspections, or both. Upon request by the building official, documentation shall be provided demonstrating the applicable agency's accreditation as noted in ASTM E 329 and individuals' resumes indicating pertinent training, certifications and other qualifications for special inspection personnel associated with the proposed construction requiring special inspections. The building official may prescribe the manner of qualification documentation and frequency of updating information regarding agency or individual inspector approval.

Firms providing special inspection services or individual inspectors seeking approval of alternative certifications or qualifications, or both, listed in ASTM E 329 may submit documentation demonstrating equivalency. This documentation may include evidence of meeting other recognized standards or alternative certifications to demonstrate that the minimum qualifications, certification and experience intended by ASTM E 329 have been met. The building official may, if satisfied that equivalency has been demonstrated, approve the credentials of the firm or individual.

SCHEDULE OF SPECIAL INSPECTIONS

| MATERIAL/ACTIVITY | TYPE OF INSPECTION | APPLICABLE TO THIS PROJECT | | | |
|--|--|----------------------------|---|-------|-----------|
| | | Y/N | EXTENT/REFERENCE | AGENT | COMPLETED |
| GENERAL | | | | | |
| Pre-construction conference | Meeting with parties listed in the FFxSIGP, to discuss Special Inspection procedures | | Scheduled by SI with the Contractor prior to commencement of work | | |
| EARTHWORK | | | | | |
| Site preparation (building) | Field testing and inspection | | Field Review: IBC 1704.7 | | |
| Fill placement (building) | Review submittals, field testing and inspection | | Field Review: IBC 1704.7 | | |
| Fill compaction (building) | In-place density tests | | Field Review: IBC 1704.7 | | |
| Foundation sub-grade | Field inspection of foundation subgrade prior to placement of concrete | | Field Review: IBC 1704.7 | | |
| PILE/DRILLED PIER FOUNDATIONS | | | | | |
| Materials | Review product, sizes, and lengths | | IBC 1704.8, Table 1704.8 | | |
| Test piles | Monitor driving of test piles | | IBC 1704.8, Table 1704.8 | | |
| Pile/drilled pier installation | Monitor drilling, placement, driving of piles, including cut off and tip elevation | | IBC 1704.8, Table 1704.8, Table 1704.9 | | |
| Pile load test | Monitor pile load test | | IBC 1704.8, Table 1704.8 | | |
| CONCRETE | | | | | |
| Materials | Review product supplied versus certificates of compliance and mix design | | Submittal & Field Review; IBC 1704.4.1; ACI 318, Chapter 4 & 5, IBC 1904.2.2, 1913.2, 1913.3 | | |
| Installation of reinforcing steel, including prestress tendons and anchor bolts as well as welding | Field inspection of placement | | Field Review; ACI 318:3.5, 3.5.2 & Ch.7; AWS D1.4; IBC 1704.4, 1911.5, 1913.4 | | |
| Formwork installation | Field inspection | | Field Review; ACI318: 6.1, 6.2; IBC 1704.4 | | |
| Concreting operations and placement | Field inspection of placement/sampling | | Field Review; ACI318: 5.6, 5.8, 5.9-10; ASTM C172, C31; IBC 1704.4, 1913.6, 1913.7, 1913.8, 1913.10 | | |
| Concrete curing | Field inspection of curing process | | Field Review; ACI 318: 5.11-13; IBC 1704.4, 1913.9 | | |
| Concrete strength | Evaluation of concrete strength | | Laboratory Testing; ACI 318: 6.2; IBC 1704.4 | | |
| Application of forces for prestressed concrete | Field inspection | | Field Review; ACI 318: 18.20 | | |
| Grouting of prestress tendons | Field inspection | | Field Review; ACI 318: 18.18.4 | | |
| PRECAST CONCRETE | | | | | |
| Quality control | In-plant review** | | IBC 1704.2 | | |
| Erection and installation | Field inspection of in-place precast | | ACI 318: Ch. 16 | | |

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| MATERIAL/ACTIVITY | TYPE OF INSPECTION | APPLICABLE TO THIS PROJECT | | | |
|---|--|----------------------------|--|-------|-----------|
| | | Y/N | EXTENT/REFERENCE | AGENT | COMPLETED |
| MASONRY | | | | | |
| Materials | Review of products supplied versus certificate of compliance and material submitted | | Submittal & Field Review; ACI 530.1; ASCE 6; TMS 602, IBC 1704.5 | | |
| Strength | Testing/review of strength | | Submittal & Field Review; ACI 530.1; ASCE 6; TMS 602, IBC 1704.5, 2105.2.2, 2105.3 | | |
| Mortar and Grout | Inspection of proportioning and mixing | | Field Review; IBC 1704.5; ACI 530.1; ASCE 6; TMS 602 | | |
| Reinforcement, prestress, tendons and connections | Inspect condition, size, location and spacing | | Field Review; IBC 1704.5; ACI 530.1; ASCE 5; ASCE 6; TMS 402, 602 | | |
| Protection | Inspect procedures for protection during cold and hot weather | | Field Review; IBC 1704.5, 2104.3, 2104.4; ACI 530.1 ASCE 6; TMS 602 | | |
| Anchorage | Inspection of anchorage | | Field Review; ACI 530.1; ASCE 5, ASCE 6; TMS 402; TMS 602; IBC 1704.5 | | |
| Masonry installation | Inspection of placement of masonry and joints | | Field Review; ACI 530.1; ASCE 6; TMS 602; IBC 1704.5 | | |
| STRUCTURAL STEEL | | | | | |
| Quality Control | In-plant inspection of quality control procedures** | | IBC 1704.2 | | |
| Bolts, nuts and washers - materials | Material identification markings Review of certificate of compliance | | Submittal & Field Review; IBC 1704.3; ASTM; AISC 360, Section A3.3 | | |
| Bolts, nuts and washers - installation | Inspection of in-place high-strength bolts, bearing type, and slip critical connections | | Submittal & Field Review; IBC 1704.3; AISC 360 Section M2.5 | | |
| Structural steel - materials | Material identification markings and review of Certificate of Compliance | | Submittal & Field Review; IBC 1704.3, ASTM A3.5 | | |
| Structural steel details - installation | Inspection of member locations, structural details for bracing, connections, stiffening | | Submittal & Field Review; IBC 1704.3.2 | | |
| Weld filler material and welder certification | Review of identification markings, certificate of compliance, and welder certification | | Submittal & Field Review; AISC 360 A3.5 | | |
| Welds | Inspection and testing of welds | | Field Review; IBC 1704.3.1; AWS D1.1, D1.3 | | |
| Reinforcing Steel | Inspection of materials and verification of placement | | Field Review; IBC 1907; ACI 318.3.5.2; AWS D1.4 | | |
| WOOD | | | | | |
| Verify fabrication/quality control procedures | Review submittal and as-built assemblies | | IBC 1704.2, 1704.6 | | |
| High-Load Diaphragms - Installation | Inspection of sheathing, framing size, nail and staple diameter and length, number of fastener lines, and fastener spacing | | IBC 1704.1, 1704.6.1 | | |
| SPRAYED CEMENTITIOUS AND MINERAL FIBER FIRE RESISTIVE MATERIAL | | | | | |
| Structural member surface conditions | Field Review of surface conditions prior to application | | AWCI 12-B; IBC 1704.11 | | |
| Application/thickness | Field Review of application operations and thickness | | AWCI 12-B; IBC 1704.11 | | |
| EXTERIOR INSULATION AND FINISH SYSTEMS | | | | | |
| Application | Field Review of application/installation | | IBC 1704.12 | | |

SCHEDULE OF SPECIAL INSPECTIONS

| MATERIAL/ACTIVITY | TYPE OF INSPECTION | APPLICABLE TO THIS PROJECT | | | |
|---|---|----------------------------|--|------------------|-----------|
| | | Y/N | EXTENT/REFERENCE | AGENT | COMPLETED |
| SPECIAL CASES | | | | | |
| Alternative Materials and Systems | As requested by the Building Official, review system and installation | | IBC 1704.13 | | |
| MAIN WIND FORCE RESISTING SYSTEM | | | | | |
| Wind requirements | Review of the system components and installation | | IBC 1609.1.2, 1705.4, 1705.4.1, 1705.4.2 | | |
| SEISMIC FORCE RESISTING SYSTEM | | | | | |
| Seismic requirements | Review of the designated seismic systems and seismic force resistance systems | | IBC 1613, 1705.3, 1705.3.1; ASCE 7 | | |
| SMOKE CONTROL | | | | | |
| Special Inspection of smoke control systems | Leakage testing and recording of device location, pressure difference testing, flow measurement and detection, and control verification | | IBC 1704.14, 1704.14.1, 1704.14.2 | | |
| INSPECTION AGENTS | FIRM | ADDRESS | | TELEPHONE | |
| 1. Special Inspector*: | | | | | |
| 2. Materials and Testing Laboratory*: | | | | | |
| 3. Special Inspector Smoke Control System: | | | | | |
| 4. (Additional Agents?) | | | | | |

Note: *The qualifications of the Special Inspector and Testing Laboratories are subject to the Approval of the Building Official.

** Inspection of quality control procedures required only if fabrication is not regularly inspected by an independent inspection agency.