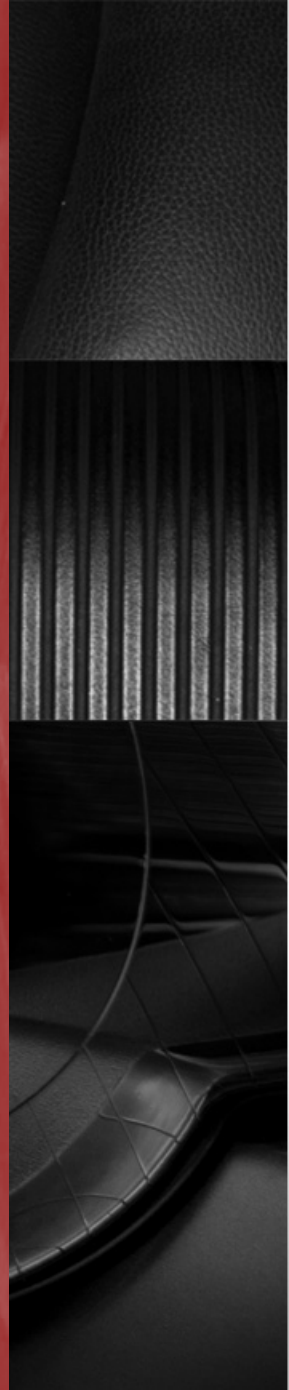


Special Inspections 101

By Ayman Baki

Tectonic Engineering





Who Is Tectonic

- Full service engineering firm
- Largest provider of SI services in NY
- Staff of over 500 professionals including more than 200 special inspectors
- Licensed by DOB and IAS accredited for all SI categories
- Two NYCDOB licensed labs
- Offer cost savings by combining CM services with Special Inspections
- Have provided services for every member of the NYIEC
- Also work for many large developers in NYC

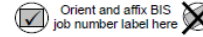


What are Special Inspections

- Code required inspections of foundation, structural, mechanical and life safety components of building construction
- Continuous vs. periodic inspections
- Primary function of a Special Inspector is to insure compliance with approved drawings and specifications
- Deviations from drawings/specifications can only be approved by designer
- NYS Code vs NYC Code
- TR forms



**TR1: Technical Report
Statement of Responsibility**
This form must be typewritten



1 Location Information *Required for all applications.*

House No(s) _____ Street Name _____
 Work on Floor(s) _____

2 Applicant Information *Required for all applications.*

Choose all that apply: Design Applicant 3A, 4A, 5 Special Inspections Applicant 3B-D, 6-9 Progress Inspections Applicant 4B-D, 6-9

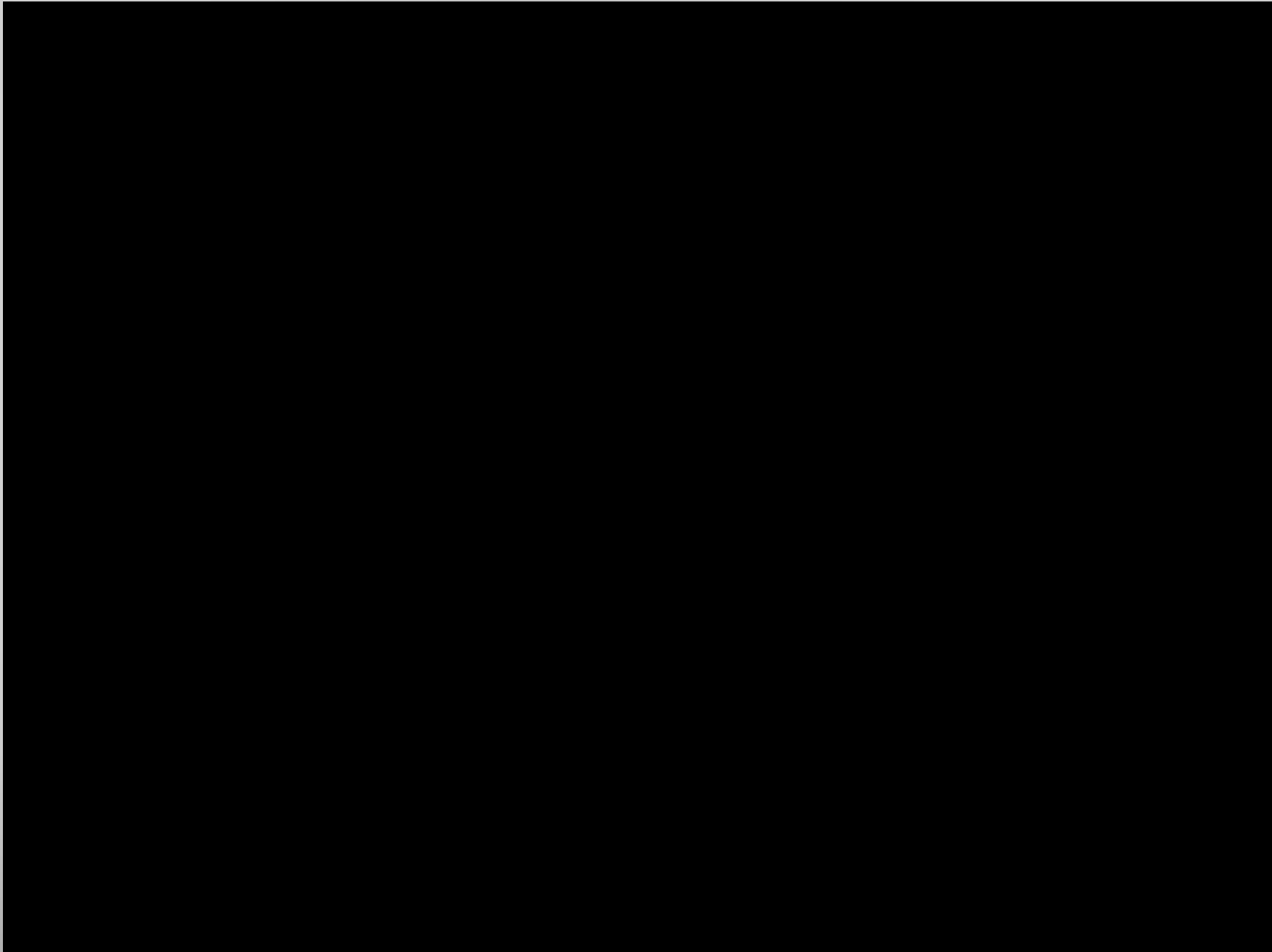
Last Name _____ First Name _____ Middle Initial _____
 Business Name _____ Business Telephone _____
 Business Address _____ Business Fax _____
 City _____ State _____ Zip _____ Mobile Telephone _____
 License Type choose one: P.E. R.A. Other: _____ License Number _____
 Special Inspection Agency Number _____

3 Special Inspection Categories *Required for all applications, continued on page 2; ■ indicates report required.*

3A ← Identification of Requirement		3B Identification of Responsibilities	3C Certificate of Complete Inspections / Tests	3D Withdraw Responsibilities
Y	N	Initial & Date	Initial & Date	Initial & Date
<input type="checkbox"/>	<input type="checkbox"/> Structural Steel – Welding	BC 1704.3.1		
<input type="checkbox"/>	<input type="checkbox"/> Structural Steel – Details	BC 1704.3.2		
<input type="checkbox"/>	<input type="checkbox"/> Structural Steel – High Strength Bolting	BC 1704.3.3		
<input type="checkbox"/>	<input type="checkbox"/> Structural Cold-Formed Steel	BC 1704.3.4		
<input type="checkbox"/>	<input type="checkbox"/> Concrete – Cast-In-Place	BC 1704.4		
<input type="checkbox"/>	<input type="checkbox"/> Concrete – Precast	BC 1704.4		
<input type="checkbox"/>	<input type="checkbox"/> Concrete – Prestressed	BC 1704.4		
<input type="checkbox"/>	<input type="checkbox"/> Masonry	BC 1704.5		
<input type="checkbox"/>	<input type="checkbox"/> Wood – Installation of High-Load Diaphragms	BC 1704.6.1		
<input type="checkbox"/>	<input type="checkbox"/> Wood – Installation of Metal-Plate-Connected Trusses	BC 1704.6.2		
<input type="checkbox"/>	<input type="checkbox"/> Wood – Installation of Prefabricated I-Joists	BC 1704.6.3		
<input type="checkbox"/>	<input type="checkbox"/> Subgrade Inspection	BC 1704.7.1		
<input type="checkbox"/>	<input type="checkbox"/> Subsurface Conditions – Fill Placement & In-Place Density	BC 1704.7.2 BC 1704.7.3		
<input type="checkbox"/>	<input type="checkbox"/> Subsurface Investigations (Borings/Test Pits) ■ TR4	BC 1704.7.4		
<input type="checkbox"/>	<input type="checkbox"/> Deep Foundation Elements ■ TR5	BC 1704.8		
<input type="checkbox"/>	<input type="checkbox"/> Helical Piles (BB # 2014-020) ■ TR5H	BC 1704.8.5		
<input type="checkbox"/>	<input type="checkbox"/> Vertical Masonry Foundation Elements	BC 1704.9		
<input type="checkbox"/>	<input type="checkbox"/> Wall Panels, Curtain Walls, and Veneers ■	BC 1704.10		
<input type="checkbox"/>	<input type="checkbox"/> Sprayed fire-resistant materials	BC 1704.11		
<input type="checkbox"/>	<input type="checkbox"/> Mastic and Intumescent Fire-resistant Coatings	BC 1704.12		
<input type="checkbox"/>	<input type="checkbox"/> Exterior Insulation and Finish Systems (EIFS)	BC 1704.13		
<input type="checkbox"/>	<input type="checkbox"/> Alternative Materials - OTCR Buildings Bulletin # _____	BC 1704.14		
<input type="checkbox"/>	<input type="checkbox"/> Smoke Control Systems	BC 1704.15		



Consequences of Construction without Inspections





Registration Requirements for SI Agencies

- Three classes of SI Agencies
- Registration through DOB website
- Class 1 requires IAS accreditation
- Concrete lab requires separate license from DOB



Inspector Qualification Requirements

- Inspections can only be performed by individuals meeting qualification requirements
- Inspections by Primary, Supplemental I or II inspectors only
- Qualifications range between education requirements and certifications
- Concrete testing must be performed by licensed lab technicians
- Qualification requirements listed in Appendix A

APPENDIX A

Special Inspection Category	2014 Code Section	Qualifications ^{1,2}		
		Primary Inspector or Inspection Supervisor	Supplemental Inspector (Alternative 1) - under direct supervision of Inspection Supervisor	Supplemental Inspector (Alternative 2) - under direct supervision of Inspection Supervisor
1. General Building Construction				
Wall Panels, Curtain Walls, and Veneers	BC 1704.10	<ul style="list-style-type: none"> • RA or PE – Civil or Structural Engineering; and • 1 Year relevant experience 	<ul style="list-style-type: none"> • Bachelor's degree in Architecture or Civil Engineering or Structural Engineering; and • 2 years relevant experience 	<ul style="list-style-type: none"> • Technician with 3 years relevant experience
Exterior Insulation and Finish Systems (EIFS)	BC 1704.13	<ul style="list-style-type: none"> • PE or RA; and • 1 year relevant experience 	N/A	<ul style="list-style-type: none"> • Technician with 2 years relevant experience
Chimneys	BC 1704.26	<ul style="list-style-type: none"> • PE or RA; and • 1 year relevant experience 	<ul style="list-style-type: none"> • Bachelor's degree in Architecture or Engineering; and • 2 years relevant 	<ul style="list-style-type: none"> • Technician with ICC Certification as a Residential or Commercial Mechanical



Tectonic's Management Approach

- Dedicated Project Manager
- Provide project status routinely (FRS)
- Maintain NCL to track issues
- Look to facilitate project close out



Use of Technology for Improved Services

- Proprietary program custom designed for Tectonic
- Samples tracked via bar code
- Lab results automatically sent as tests are performed
- Scheduling of inspectors through software
- Electronic management of documents



Issues With Special Inspections

- You get what you pay for (QBS ideal)
- Confirm IAS accreditation
- Use of unqualified inspectors
- Capacity to handle multiple/large projects
- Concrete Cast-In-Place and concrete testing
- Firestopping pit Falls
- Scheduling of inspections
- Timely resolution of NCRs



Questions?