## Town of Leland- Statement of Special Inspections

Project:	Permit No.:	
Project location/ Address:		
Project Primary Contact:		
Phone No.:	Email:	

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the 2024 North Carolina State Building Code. It includes a Schedule of Special Inspection Services applicable to this project, the name of the Special Inspector, the identity of other approved agencies retained for conducting Special Inspections, and the required inspector qualifications. This Statement of Special Inspections was prepared by the following Designers of Record:

Structural	Name:	Signature:	Date:
Architectural	Name:	Signature:	Date:
Mechanical	Name:	Signature:	Date:
Mechanica	Name.		Dute.
Other	Name:	Signature:	Date:

The Special Inspector shall keep records of all special inspections and tests and shall furnish reports to the Town of Leland and the Designers of Record. Reports shall indicate if the work inspected or tested was or was not completed in conformance with the approved construction documents. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Town of Leland and the Designers of Record. The Special Inspections program does not relieve the Contractor of his or her responsibilities, nor the requirement of municipal inspections.

Interim reports shall be submitted to the Town of Leland, Owner, and the Designers of Record. Upload a copy of reports to your permit monthly, or upon discovery of any discrepancies and the following repairs. These will be reviewed by the Chief Building Official for approval.

Interim Report Frequency: Monthly

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing, and correction of any discrepancies shall be submitted prior to issuance of a Certificate of Use and Occupancy. Final Reports will be reviewed by the Chief Building Official

Job Site safety and means and methods of construction are solely the responsibility of the Contractor.

Owner's Authorization

Signature

#### Schedule of Special Inspection Services a

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- □ Structural Steel & High Strength Bolting
- □ Welding of Structural Steel
- $\Box$  Cold-Formed Steel Deck
- □ Open-Web Steel Joists & Joist Girders
- □ Cold-Formed Steel Framing
- $\Box$  Concrete Construction
- □ Masonry Construction <sub>b</sub>
- $\Box$  Wood Construction
- $\Box$  Soils
- Driven Deep Foundations
- □ Cast-in-Place Deep Foundations

- □ Helical Pile Foundations
- □ Rammed Aggregate Piers & Stone Columns
- $\square$  Sprayed Fire-Resistant Material
- □ Mastic & Intumescent Fire-Resistant Coatings
- $\Box$  Exterior Insulation & Finish System
- □ Fire-Resistant Penetrations & Joints
- 🗆 Smoke Control
- □ Site Retaining Wall & Systems
- $\Box$  Special Inspections for Wind Resistance
- □ Special Inspections for Seismic Resistance
- $\square$  No Special inspections Required per Section 1705
- a. The inspection frequency indicated on the following inspection tables are "C" continuous, "P" periodic, & "O" random on a daily basis.

b. Level A is the minimum inspection program for empirically / prescriptively designed masonry in Risk Category I, II or III structures.

Level B is the minimum inspection program for empirically / prescriptively designed masonry in Risk Category IV structures <u>and</u> engineered masonry in Risk Category I, II or III structures.

Level C is the minimum inspection program for engineered masonry in Risk Category IV structures. Engineered masonry structures are designed in accordance with portions of the TMS 402-13 / ACI 530-13/ASCE 5-13 other than Part 4 or Appendix A.

Inspection Agents	Firm Name & Point of Contact	Address / Phone / E-mail
1. Special Inspector (SI-1)		
2. Testing Agency (TA-1)		
3. Testing Agency (TA-2)		
4. Geotechnical Engineer (GE-1)		
5. Other (O-1)		

Note: The inspection and testing agent(s) shall be engaged by the Owner or the Registered Design Professional of Record acting as the Owner's agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Town of Leland, prior to commencing work.

Seismic Design Category:

Ultimate Design Wind Speed (V<sub>ult</sub>): \_\_\_\_\_

Wind Exposure Category:

🗆 B 🗆 C 🗆 D

Schedule of Special Inspection Services

Structural Steel and High-Strength Bolting

	Inspection Task	Task	Freq	Reference for Criteria		Agent
		Req'd		AISC 360	NCBC	
1.	Fabricator Certification / Verification of Quality Control Procedures					
	a. Verify fabricator qualifications		С		1704.2.5.1	
	b. Review material test reports & certifications		С	N5.2		
	c. Collect certificates of compliance from the steel fabricator at completion of fabrication		С		1704.5	
2.	Inspections Prior to High-Strength Bolting at Pretensioned and Slip-Critical Joints					
	<ul> <li>Collect manufacturer's certifications for fastener materials</li> </ul>		С	Table (Tbl) N5.6-1		
	b. Fasteners are marked per ASTM requirements		Р	Tbl N5.6-1		
	c. Ensure correct fasteners and bolting procedures are selected for joint details		Р	Tbl N5.6-1		
	d. Verify connecting elements, including the appropriate faying surface condition and hole preparation when specified, comply with the construction documents		Ρ	Tbl N5.6-1		
	e. Observe and document pre-installation verification testing by installation personal for fastener assemblies and methods		Р	Tbl N5.6-1		
	f. Verify proper storage provided for all fastener components		Р	Tbl N5.6-1		
3.	Inspections During High-Strength Bolting at Pretensioned and Slip-Critical Joints					
	<ul> <li>Ensure correct fastener assemblies placed in all holes and washers, when specified, are positioned as required</li> </ul>		Ρ	Tbl N5.6-2		
	b. Verify joint brought to snug-tight condition prior to pretensioning		Р	Tbl N5.6-2		
	c. Verify fastener components not turned by the wrench prevented from rotating		Р	Tbl N5.6-2		
	d. Ensure fasteners are pretensioned in accordance with RCSC, progressing from the most rigid point towards free edges		Р	Tbl N5.6-2		
4.	Document acceptance or rejection of bolted connections after high-strength bolting is complete		С	Tbl N5.6-3		
5.	Structural Details					

	a.	Verify diameter, grade, type and length of anchor rods and other embedded items supporting structural steel	Ρ	N5.7	
	b.	Inspection of fabricated assemblies & erected steel framing verifying compliance with the construction documents	Ρ	N5.7	
6.	Со	mposite Construction			
	a.	Verify placement & installation of steel deck	Р	Tbl N6.1	
	b.	Observe placement and installation of steel headed stud anchors		Tbl N6.1	
	C.	Document acceptance or rejection of composite construction elements	Р	Tbl N6.1	

Schedule of Special Inspection Services

### Welding of Structural Steel

	Inspection Task	Task	Freq	Code Reference		Agent
		Req'd		AISC 360	NCBC	
1.	Inspections Prior to Welding			N5.4		
	<ul> <li>a. Collect &amp; review welding procedure specification (WPS) and verify manufacturer certifications for welding consumables</li> </ul>		С	Table (Tbl) N5.4-1		
	b. Confirm weld material type & grade		Р	Tbl N5.4-1		
	c. Confirm method of welder identification		Р	Tbl N5.4-1		
	<ul> <li>Inspection of fit-up for groove &amp; fillet welds including access hole configuration &amp; finish</li> </ul>		Р	Tbl N5.4-1		
2.	Inspections During Welding			N5.4		
	a. Verify welder qualifications		Р	Tbl N5.4-2		
	b. Verify proper control and handling of welding consumables		Р	Tbl N5.4-2		
	c. Monitor environmental conditions		Р	Tbl N5.4-2		
	d. Monitor proper implementation of WPS		Р	Tbl N5.4-2		
	e. Inspection of welding techniques including no welding over cracked tack welds		Р	Tbl N5.4-2		
3.	Inspections After Welding			N5.4, N5.5		
	a. Verify welds have been cleaned		Р	Tbl N5.4-3		
	b. Confirm the installed size, length and location of welds matches the contract documents		С	Tbl N5.4-3		
	c. Verify welds meet visual acceptance criteria		С	Tbl N5.4-3		
	d. Confirm arc strikes comply with Part 5.28 of AWS D1.1		С	Tbl N5.4-3		
	<ul> <li>e. Visually observe web k-area for cracks within</li> <li>3" of welded doubler plates, continuity plates and stiffeners</li> </ul>		С	Tbl N5.4-3		
	f. Backing and weld tabs removed per contract documents		С	Tbl N5.4-3		
	g. Observe and inspect weld repair activities		С	Tbl N5.4-3		
	<ul> <li>For Risk Category III or IV structures, conduct ultrasonic testing (UT) of CJP groove welds in materials ≥ 5/16" at butt, T- and corner joints</li> </ul>		С	N.5.5b, N5.5e		

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	subject to transversely applied tension loading			
i.	For Risk Category II structures, conduct ultrasonic testing (UT) of CJP groove welds in materials ≥ 5/16" at butt, T- and corner joints subject to transversely applied tension loading	Р	N.5.5b, N5.5f	
j.	Conduct magnetic particle testing (MT) or liquid penetrant testing (PT) at thermally cut surfaces of access holes for rolled section with tf > 2" and built-up shape with tw > 2"	С	N5.5c	
k.	Radiographic or ultrasonic inspection at joints subject to fatigue	С	N5.5d, Tbl A-3.1	
Ι.	Document acceptance / rejection of welded joints and members	С	Tbl N5.4-3, N5.5g	

#### Schedule of Special Inspection Services Cold-Formed Steel Deck

	Inspection Task	Task	Freq	Reference for Criteria		Agent
		Req'd		SDI QA/QC	I QA/QC NCBC	
1.	Prior to deck placement, verify deck and deck		С	Table (Tbl)		
	accessories comply with the construction			1.1		
	documents					
2.	Inspection Tasks After Deck Placement					
	a. Verify the installation of deck & deck		С	Tbl 1.2		
	accessories complies with the construction documents					
	b. Verify that deck materials' mill certifications		С	Tbl 1.2		
	comply with the construction documents		C	1011.2		
3.	Inspection Tasks Prior to Deck Welding					
	a. Collect welding procedure specification		Р	Tbl 1.3		
	(WPS)					
	b. Collect manufacturer certifications for		Р	Tbl 1.3		
	welding consumables					
	c. Verify material type and grade		Р	Tbl 1.3		
	d. Check welding equipment		Р	Tbl 1.3		
4.	Inspection Tasks During Deck Welding					
	a. Verify welder qualifications		Р	Tbl 1.4		
	b. Verify proper control and handling of welding		Р	Tbl 1.4		
	consumables					
	c. Monitor environmental conditions		P	Tbl 1.4		
_	d. Monitor proper implementation of WPS		Р	Tbl 1.4		
5.	Inspection Tasks After Welding					
	a. Verify size and location of welds, including		С	Tbl 1.5		
	<ul><li>support, sidelap and perimeter welds</li><li>b. Verify welds meet visual acceptance criteria</li></ul>		С	Tbl 1.5		
	c. Observe weld repair activities		C	Tbl 1.5		
6.	Inspection Tasks Prior to Mechanical Fastening		C	1011.5		
0.	a. Verify manufacturer installation instructions		Р	Tbl 1.6		
	available for mechanical fasteners		Г	1011.0		
	b. Proper tools available for fastener installation		Р	Tbl 1.6		
	c. Verify proper storage of mechanical fasteners		Р	Tbl 1.6		
7.	Inspection Tasks During Mechanical Fastening					
	a. Observe fastener spacing and position		Р	Tbl 1.7		
	b. Verify fasteners are installed in accordance		P	Tbl 1.7		
	with manufacturer's instructions					
8.	Inspection Tasks After Mechanical Fastening					
	a. Check spacing, type and installation of		С	Tbl 1.8		
	support fasteners					
	b. Check spacing, type, and installation of		С	Tbl 1.8		
<u> </u>	sidelap fasteners		_			
	c. Check spacing, type, and installation of		С	Tbl 1.8		
	perimeter fasteners					

	d. Verify repair activities	С	Tbl 1.8	
9.	Document acceptance or rejection of deck &	С	Tbls 1.1	
	deck accessories for all phases of construction		thru 1.8	

Schedule of Special Inspection Services

## Open-Web Steel Joists and Joist Girders

	Inspection Task	Task	Freq	Reference	Reference for Criteria	
		Req'd		Standard	NCBC	
1.	Fabricator Certification / Verification of Quality Control Procedures					
	a. Verify fabricator qualifications		С		1704.2.5.1	
	<ul> <li>b. Collect certificate of compliance from steel joist producer at completion of manufacture</li> </ul>		С		1704.5, 2207.5	
2.	Observe bolted and welded joist end connections		Ρ	SJI-K 5.3, 5.6, SJI- LH/DLH 104.4, 104.7, SJI- JG 1004.4, 1004.6, SJI-CJ 104.4, 104.7	Table (Tbl) 1705.2.3	
3.	Verify size, spacing and connection of standard horizontal and diagonal bridging		Ρ	SJI-K 5.4, SJI-LH/DLH 104.5, SJI- JG 1004.5, 1004.9, SJI-CJ 104.5	Tbl 1705.2.3	
4.	Verify size, spacing and connection of bridging that differs from the SJI specifications listed by Part 2207.1 of the NCBC		Ρ		Tbl 1705.2.3	

# Schedule of Special Inspection Services Cold-Formed Steel Framing

	Inspection Task	Task	Freq	Reference for Criteria		Agent
		Req'd		Standard	NCBC	
1.	Fabricator Certification / Verification of Quality					
	Control Procedures					
	a. Verify fabricator qualifications		С		1704.2.5.1	
	b. Collect certificates of compliance from the		С		1704.5	
	steel fabricator at completion of fabrication					
2.	For trusses clear spanning 60 feet or more, verify		Р		1705.2.4	
	that both temporary and permanent restraints					
	and braces are installed in accordance with the					
	approved truss submittal package.					

# Schedule of Special Inspection Services Concrete Construction

	Inspection Task	Task	Freq	Reference f	or Criteria	Agent
		Req'd		Standarda	NCBC	
1.	Inspect reinforcement, including prestressing tendons, and verify placement		Р	ACI Ch.20, 25.2, 25.3, 26.6.1- 26.6.3	1908.4	
2.	Reinforcing Bar Welding:			AWS D1.4		
	e. Verify weldability of reinforcing bars other than ASTM A706 and collect reports		Р	ACI 26.6.4	1704.5	
	f. Inspect single-pass fillet welds $\leq 5/16''$		Р	ACI 26.6.4		
	g. Inspect all welds other than single-pass fillet welds $\leq 5/16''$		С	ACI 26.6.4		
3.	Concrete Anchors:					
	a. Inspect anchors cast in concrete		Р	ACI 17.8.2		
	<ul> <li>Inspect adhesive anchors installed in hardened concrete with horizontally or upwardly inclined orientations that resist sustained tension loads</li> </ul>		С	ACI 17.8.2.4		
	c. Inspect adhesive anchors installed in hardened concrete with orientations different from Item 3.b		Р	ACI 17.8.2		
	d. Inspect mechanical anchors installed in hardened concrete		Р	ACI 17.8.2		
4.	Collect mix designs and verify the correct mix used during installation		Р	ACI Ch19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	
5.	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete		С	ASTM C172, ASTM C31, ACI 26.4, 26.12	1908.10	
6.	Inspect concrete and shotcrete placement for proper application techniques		С	ACI 26.5	1908.6, 1908.7, 1908.8	
7.	Collect reports of preconstruction tests for shotcrete when preconstruction tests are required by NCBC Section 1908.4		С		1704.5 <i>,</i> 1908.5	
8.	Verify maintenance of specified curing temperature and techniques		Р	ACI 26.5.3- 26.5.5	1908.9	
9.						
	a. Observe application of prestressing force		С	ACI 26.10		
	<ul> <li>Inspect grouting of bonded prestressing tendons</li> </ul>		С	ACI 26.10		
	Verify concrete strength prior to stressing of PT tendons and prior to removal of shores and forms from PT & mild beams and structural slabs		Р	ACI 26.11.2		
11.	Inspect erection of precast members		Р	ACI 26.8		

12. Inspect formwork for shape, location and dimensions of the concrete member being formed	Ρ	ACI 26.11.1.2(b)		
13. Collect mill test reports for ASTM A615 rebar used by SFRS special moment frames, special structural walls or coupling beams	С	ACI 20.2.2.5	1704.5	

a. References to "ACI" in this table are to the ACI 318-14.

#### Schedule of Special Inspection Services Masonry – Level A

	Inspection Task	Task	Freq	Reference for Criteria		Agent
		Req'd		TMS 402 <sub>a</sub>	TMS 602 <sub>a</sub>	
1.	Prior to construction, verify certificates of		Р	Table 3.1.1	Art. 1.5	
	compliance used in masonry construction					

a. References to "TMS402" in this table are to the TMS402/ACI530/ASCE5-13. References to "TMS602" are to TMS602/ACI530.1/ASCE6-13.

#### Schedule of Special Inspection Services Masonry – Level B

	Inspection Task	Task	Freq	Reference	for Criteria	Agent
		Req'd		TMS 402 <sub>a</sub>	TMS 602 <sub>a</sub>	
1.	Test & verify slump flow & visual stability index as		С	Table (Tbl)	Art.	
	delivered to site for self-consolidating grout			3.1.2	1.5B.1.b.3	
2.	Test & verify f'm & f'AAC prior to construction		С	Tbl 3.1.2	Art. 1.4B	
3.	Verify compliance with the approved submittals		Р	Tbl 3.1.2	Art. 1.5	
4.	As masonry construction begins, verify that the					
	following are in compliance:					
	a. Proportions of site-prepared mortar		Р		Art. 2.1,	
					2.6A	
	b. Construction of mortar joints		Р		Art. 3.3B	
	c. Grade and size of prestressing tendons and		Р		Art. 2.4B,	
	anchorages				2.4H	
	d. Location of reinforcement, connectors and		Р		Art. 3.4,	
	prestressing tendons and anchorages		P		3.6A Art. 3.6B	
	e. Prestressing technique					
_	f. Properties of thin-bed mortar at AAC masonry		C / P <sub>a</sub>		Art. 2.1C	
5.	Prior to grouting, verify that the following comply:					
	a. Grout space is clean, and cleanouts provided		Р		Art. 3.2D,	
	when required		D	Sec. 6.1	3.2F	
	b. Grade, type & size of reinforcement & anchor bolts, & prestressing tendons & anchorage		Р	Sec. 6.1	Art. 2.4, 3.4	
	c. Placement of reinforcement, connectors, and		Р	Sec. 6.1,	Art.3.2E,	
	prestressing tendons and anchorage			6.2.1, 6.2.6,	3.4, 3.6A	
	L			6.2.7		
	d. Proportions of site-prepared grout and		Р		Art. 2.6B,	
	prestressing grout for bonded tendons				2.4G.1.b	
	e. Construction and size of mortar joints		Р		Art. 3.3B	
6.	Verify during construction:					
	a. Size and location of structural elements		Р		Art. 3.3F	
	b. Type, size, and location of anchors, including		Р	Sec.		
	other details of anchorage of masonry to			1.2.1(e),		
	structural members, frames, or other			6.1.4.3,		
	construction			6.2.1		
	c. Welding of reinforcement		С	Sec.		
				8.1.6.7.2,		
				9.3.3.4(c),		
	d Droporation construction and must stick (			11.3.3.4(b)	Art 1.00	
	d. Preparation, construction, and protection of		Р		Art. 1.8C,	
	masonry during cold weather (temperature < 40°F) or hot weather (temperature > 90°F)				1.8D	
	e. Application & measurement of prestress		С		Art. 3.6B	
	force				Art. 5.00	
	f. Verify placement of grout and prestressing		С		Art. 3.5,	
	grout for bonded tendons		-		3.6C	

g. Placement of AAC masonry units and construction of thin-bed mortar joints	C / P <sub>b</sub>	Art. 3.3B.9, 3.3F.1.b
		5.5F.1.D
7. Observe preparation of grout specimens, mortar	Р	Art.
specimens, and or prisms		1.4.B.2.a.3,
		1.4.B.2.b.3,
		1.4.B.2.c.3,
		1.4.B.3,
		1.4.B.4

a. References to "TMS402" in this table are to the TMS402/ACI530/ASCE5-13. References to "TMS602" are to TMS602/ACI530.1/ASCE6-13.

b. AAC masonry shall be continuously inspected for the first 5000-square feet and periodically inspected afterwards.

#### Schedule of Special Inspection Services Masonry – Level C

	Inspection Task	Task	Freq	Reference	for Criteria	Agent
		Req'd		TMS 402 <sub>a</sub>	TMS 602 <sub>a</sub>	
1.	Test & verify f'm & f'AAC prior to construction & for every 5,000 square feet during construction		С	Table (Tbl) 3.1.3	Art. 1.5	
2.	Test & verify proportions of materials in premixed / preblended mortar, prestressing grout, and grout other than self-consolidating, as delivered to site		С	Tbl 3.1.3		
3.	Test & verify slump flow & visual stability index as delivered to site for self-consolidating grout		С	Tbl 3.1.3	Art. 1.5B.1.b.3	
4. 5.	Verify compliance with the approved submittals Verify that the following are in compliance:		Р	Tbl 3.1.3	Art. 1.5	
	a. Proportions of site-mixed mortar, grout and prestressing grout for bonded tendons		Ρ		Art. 2.1, 2.6A, 2.6B, 2.6C, 2.4G.1.b	
	<ul> <li>Grade, type, &amp; size of reinforcement &amp; anchor bolts, &amp; prestressing tendons &amp; anchorage</li> </ul>		Р	Sec 6.1	Art. 2.4, 3.4	
	c. Placement of masonry units and construction of mortar joints		Р		Art. 3.3B	
	d. Placement of reinforcement, connectors, and prestressing tendons and anchorages		С	Sec 6.1, 6.2.1, 6.2.6, 6.2.7	Art. 3.2E, 3.4, 3.6A	
	e. Grout space is clean, and cleanouts provided when required		С		Art. 3.2D, 3.2F	
	f. Placement of grout and prestressing grout for bonded tendons		С		Art. 3.5, 3.6C	
	g. Size and location of structural elements		Р		Art. 3.3F	
	h. Type, size, and location of anchors including other details of anchorage of masonry to structural members, frames, or other construction		С	Sec. 1.2.1(e), 6.1.4.3, 6.2.1		
	i. Welding of reinforcement		С	Sec 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)		
	<ul> <li>j. Preparation, construction, and protection of masonry during cold weather (temperature &lt; 40°F) or hot weather (temperature &gt; 90°F)</li> </ul>		Ρ		Art. 1.8C, 1.8D	
	k. Application and measurement of prestressing force		С		Art. 3.6B	
	I. Placement of AAC masonry units and construction of thin-bed mortar joints		С		Art. 3.3B.9, 3.3F.1.b	

m. Properties of thin-bed mortar for AAC masonry	С	Art. 2.1C.1	
6. Observe preparation of grout specimens, mortar specimens, and or prisms	С	Art. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4	

a. References to "TMS402" in this table are to the TMS402/ACI530/ASCE5-13. References to "TMS602" are to TMS602/ACI530.1/ASCE6-13.

# Schedule of Special Inspection Services Wood Construction

	Inspection Task	Task	Freq	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Fabricator certification / verification of quality control procedures for prefabricated wood structural elements and assemblies					
	a. Verify fabricator qualifications		С		1704.2.5.1, 1705.5	
	b. Collect certificates of compliance from the fabricator at completion of fabrication		С		1704.5 <i>,</i> 1705.5	
2.	High-load diaphragms				2306.2	
	a. Verify that wood structural panel sheathing is the correct grade and thickness		Р		1705.5.1	
	<ul> <li>b. Verify nominal size of framing members and blocking at adjoining panel edges</li> </ul>		Ρ	AWC- SDPWS 4.2.7.1.2	1705.5.1	
	<ul> <li>Nail and or staple diameter, length, quantity and spacing comply with the contract documents</li> </ul>		Р		1705.5.1	
3.	For metal-plate-connected trusses clear spanning 60 feet or more, verify that both temporary and permanent restraints and braces are installed in accordance with the approved truss submittal package		Ρ		1705.5.2	

Schedule of Special Inspection Services **Soils** 

	Inspection Task	Task	Freq	Reference	for Criteria	Agents
		Req'd		Standard	NCBC	
1.	Verify materials below shallow foundations are adequate to achieve the design bearing capacity		Ρ		1705.6	
2.	Verify excavations extend to proper depth and have reached the correct soil material		Ρ		1705.6	
3.	Perform classification and testing of compacted fill materials		Р		1705.6	
4.	Verify that materials used, densities, lift thickness and procedures used during placement and compaction of compacted fill are in accordance with the approved soils report and the construction documents		С		1705.6	
5.	Prior to placement of compacted fill, verify that the subgrade has been prepared in accordance with the approved soils report and the construction documents		Р		1705.6	

#### Schedule of Special Inspection Services **Driven Deep Foundations** abc

	Inspection Task	Task	Freq	Reference	for Criteria	Agents
		Req'd		Standard	NCBC	
1.	Verify that deep foundation materials, sizes and lengths comply with the construction documents		С		1705.7	
2.	Observe pile load tests and determine capacities of test elements ensuring compliance with the construction documents.		С		1705.7	
3.	Inspect driving operations and maintain complete and accurate records for each element		С		1705.7	
4.	Verify placement, location, plumbness, hammer size and type, blow count per foot of penetration, required penetrations to achieve design capacity, tip and butt elevations, damage and anomalies		С		1705.7	

a. For steel elements, perform additional inspections in accordance with Section 1705.2 of the North Carolina Building Code and the applicable Schedules included herein

b. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1705.3 of the North Carolina Building Code and the applicable Schedules included herein

c. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge and the applicable Schedules included herein

#### Schedule of Special Inspection Services Cast-in-Place Deep Foundations a

	Inspection Task		Freq	Reference	for Criteria	Agents
		Req'd		Standard	NCBC	
1.	Observe drilling operations and maintain complete and accurate records		С		1705.8	
2.	Verify deep foundation materials comply with the construction documents		С		1705.8	
3.	Verify pile placement, location, plumbness, diameters, bell diameter (if applicable), lengths, rock embedment, end-bearing strata capacity, and anomalies		С		1705.8	
4.	Record concrete or grout volumes		С		1705.8	

a. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1705.3 of the North Carolina Building Code and the applicable Schedules included herein

Schedule of Special Inspection Services Helical Pile Foundations

	Inspection Task	Task	Freq	Reference for Criteria		Agents
		Req'd		Standard	NCBC	
1.	Confirm the following are in compliance with the construction documents prepared by the registered design professional in responsible charge: The installation equipment used, pile dimension, pile placement location, tip elevations, final depth, and final installation torque		C		1705.9	

### Schedule of Special Inspection Services Rammed Aggregate Piers & Stone Columns

	Inspection Task		Freq	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Verify that the pier installation program and soil parameters are in accordance with the approved soils report and the construction documents		С		1705.1.1	
2.	During installation, verify the aggregate properties, type and number of lifts of aggregate, pier size, installed depth, top elevation and applied ram energy		Ρ		1705.1.1	
3.	Review the modulus load testing, uplift pull-out testing, bottom or crowd stabilization tests and dynamic cone penetration test results from production pier elements and verify that all comply with the design specifications		С		1705.1.1	

#### Schedule of Special Inspection Services Sprayed Fire-Resistant Materials a

	Inspection Task	Task	Freq	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
4.	Prior to the application of sprayed on fire resistant materials, verify structural member surfaces are prepared in accordance with the approved fire- resistance design and the written instructions of the approved manufacturer		Ρ		1705.14.2	
5.	During the application of sprayed on fire resistant materials, verify that the following are in compliance:					
	<ul> <li>Substrate has minimum ambient temperature before and after application as specified by the fire resistance design and approved manufacturer's written instructions</li> </ul>		Ρ		1705.14.3	
	b. Work area properly ventilated during and after application				1705.14.3	
	c. Thickness of sprayed on material conforms with the approved fire resistance design and NCBC minimums		Ρ		1705.14.4, 1705.14.4.4, 1705.14.4.5, 1705.14.4.6, 1705.14.4.7, 1705.14.4.8, 1705.14.4.9	
	<ul> <li>The density of sprayed on materials is not less than the requirements of the approved fire-resistance design</li> </ul>		Ρ		1705.14.5	
	e. The cohesive / adhesive bond strength is not less than 150 pounds per square foot		Ρ		1705.14.6	

a. Inspections shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems, and suspension systems for ceilings.

### Schedule of Special Inspection Services Mastic and Intumescent Fire-Resistant Coatings

	Inspection Task	Task	Freq(a)	Reference	for Criteria	Agents
		Req'd		Standard	NCBC	
1.	Prior to application, verify preparation of substrate and suitability of primers, if present, are in accordance with approved fire resistance design, approved manufacturer's written instructions, and the requirements of AWCI 12-B		Ρ	AWCI 12-B	1705.15	
2.	Observe the application of fire-resistant coatings ensuring compliance with approved fire resistance design, approved manufacturer's written instructions, and the requirements of AWCI 12-B		Ρ	AWCI 12-B	1705.15	
3.	After adequate drying but prior to the application of any topcoat, measure the final mastic / intumescent material thickness ensuring compliance with the construction documents and approved material / installation submittals. Measurements must consider the thickness of primers or other existing coatings on the surface of the substrate.		Ρ	AWCI 12-B	1705.15	

### Schedule of Special Inspection Services Exterior Insulation and Finish Systems (EIFS)

	Inspection Task		Freq	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Verify that EIFS is installed in conformance with project specifications		Р		1705.16	
2.	If a water resistive barrier coating complying with ASTM E2570 is installed over a sheathing substrate, verify that the water-barrier and drainage strip are installed in conformance with the project specifications.		Ρ		1705.16.1	

#### Schedule of Special Inspection Services Fire-resistant Penetrations and Joints a

	Inspection Task		Freq	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Inspect through-penetration firestop systems at fire walls, fire barriers, smoke barriers and fire partition walls in accordance with ASTM E2174		Ρ		1705.17.1, 714.3.1.2	
2.	Inspect penetration firestop systems at penetrations through membranes that are part of a horizontal assembly in accordance with ASTM E2174		Р		1705.17.1, 714.4.2	
3.	Inspect fire-resistant joint systems in accordance with ASTM 2393		Р		1705.17.2, 715.3, 715.4	

a. The inspection of fire-resistant penetrations and joints applies only to high-rise buildings or buildings assigned to Risk Category III or IV.

#### Schedule of Special Inspection Services Retaining Walls Exceeding 5 Feet abcd

	Inspection Task	Task	Freq(a)	Reference	for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Foundation support system is adequate for the intended site conditions		Р		1807.2.5.1	
2.	Verify that retaining wall materials and installations are in compliance with the construction documents		Р		1807.2.5.2	
3.	Verify that actual soil conditions are similar to those anticipated by the approved engineered design		Р		1807.2.5.3	
4.	Examination of backfill materials for compliance with the approved specifications		Р		1807.2.5.4	
5.	Confirm that all subsoil drainage piping is undamaged, drains freely to the designated outlet or structure, and has been installed per the approved engineered design		Р		1807.2.5.4	

a. All retaining walls exceeding 5 feet in height require special inspections.

b. For concrete retaining walls and footings, perform additional inspections in accordance with Section 1705.3 of the North Carolina Building Code and the applicable Schedules included herein

c. For masonry retaining walls, perform additional inspections in accordance with Section 1705.4 of the North Carolina Building Code and the applicable Schedules included herein

d. For soils, perform additional inspections in accordance with Section 1705.6 of the North Carolina Building Code and the applicable Schedules included herein

# Schedule of Special Inspection Services Smoke Control

	Inspection Task		Freq	Reference	e for Criteria	Agent
		Req'd		Standard	NCBC	
1.	During erection of ductwork and prior to concealment, perform leakage testing and record device location(s)		Ρ		1705.18.1.1	
2.	Upon completion of smoke control system, perform pressure difference testing, flow measurements, and detection and control verification		Ρ		1705.18.1.2	

#### Schedule of Special Inspection Services Special Inspections for Wind Resistance

	Inspection Task	Task	Freq	Reference	e for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Prior to any work taking place, each contractor responsible for the construction of a wind-resisting system or component shall submit a written statement of contractor responsibility		С		1704.4	
2.	Structural Wood					
	<ul> <li>Verify field gluing operations pertinent to the main wind force- resisting system</li> </ul>		С		1705.11.1	
	<ul> <li>Inspect nailing, anchoring, and fastening of components within the main windforce-resisting system including shear walls, diaphragms, drag struts, braces &amp; hold-downs</li> </ul>		Ρ		1705.11.1	
3.	Cold-Formed Steel Light Frame Construction					
	<ul> <li>a. Inspect welding operations at elements of the main windforce- resisting system</li> </ul>		Р		1705.11.2	
	<ul> <li>Inspect screw attachment, bolting, anchoring, and fastening of elements within the main windforce-resisting system including shear walls, braces, diaphragms collectors, drag struts and hold- downs</li> </ul>		Ρ		1705.11.2	
4.	Wind-resisting components					
	<ul> <li>a. Inspect the fastening of roof covering, roof deck and supporting roof framing connections</li> </ul>		Р		1705.11.3.1	
	<ul> <li>Inspect the fastening of exterior wall coverings &amp; the wall connections to the roof / floor diaphragms &amp; framing members</li> </ul>		Р		1705.11.3.2	

<u>Structural Wood and Cold-Formed Steel Light-Frame Construction Main Wind-Force Resisting System(s) Subject</u> to Special Inspections:

Roof Cladding Components and Connections Subject to Special Inspections:

Wall Cladding Components and Connections Subject to Special Inspections:

#### Schedule of Special Inspection Services Special Inspections for Seismic Resistance

	Inspection Task	Task	Freq	Reference	e for Criteria	Agent
		Req'd		Standard	NCBC	
1.	Prior to any work taking place, each contractor responsible for the construction of a seismic-resisting system or component shall submit a written statement of contractor responsibility		С		1704.4	
2.	Structural Steel (see following tables)		O/C		1705.12.1	
3.	Structural Wood					
	a. Verify field gluing operations of elements of the seismic force- resisting system (SFRS)		С		1705.12.2.1	
	<ul> <li>Inspect nailing, bolting, anchoring &amp; other fastening at elements of SFRS</li> </ul>		Р		1705.12.2.2	
4.	Cold-Formed Steel Light Frame Construction					
	<ul> <li>Verify welding operations of elements of the SFRS</li> </ul>		Р		1705.12.3.1	
	<ul> <li>Inspect screw attachment, bolting, anchoring, &amp; fastening used by SFRS</li> </ul>		Р		1705.12.3.2	
	<ul> <li>c. Inspect special bolted moment frames</li> </ul>		Р		1705.12.9	
5.	Verify erection & fastening of exterior cladding, non-bearing walls and veneer		Р		1705.12.5	
6.	Confirm anchorage of access floors		Р		1705.12.5.1	
7.	Confirm anchorage of storage racks		Р		1705.12.7	
8.	Collect certificates of compliance for qualifying equipment, supports, attachments & components; verify correctness of labels & installation		С	ASCE7 13.2.2, 13.2.1	1705.12.4, 1705.13.2	
9.	Plumbing, Mechanical, Electrical Components					
	<ul> <li>Verify anchorage of elec. equip for emergency &amp; standby power systems</li> </ul>		Р		1705.12.6	
	<ul> <li>b. Verify installation &amp; anchorage of pipe &amp; duct systems carrying</li> </ul>		Р		1705.12.6	

hazardous materials & associated mech units				
<ul> <li>c. Confirm the installation &amp; anchorage of vibration isolation systems with nominal clearances ≤¼"</li> </ul>	Ρ		1705.12.6	
<ul> <li>Inspect &amp; test seismic isolation systems at seismic isolated structures</li> </ul>	Ρ	ASCE7 17.8	1705.12.8, 1705.13.4	

Seismic-Force Resisting System(s) subject to Special Inspections:

Seismic-Resisting Components and Connections Subject to Special Inspections:

#### Schedule of Special Inspection Services Special Inspections for Seismic Resistance Structural Steel & High-Strength Bolting

	Inspection Task	Task	Freq₁	Reference for Criteria		Agent
		Req'd		AISC 341	NCBC	
1.	Inspections Prior to Bolting					
	a. Proper fasteners selected for the joint detail		0	Table J7-1		
	b. Correct bolting procedure selected for joints		0	Table J7-1		
	<ul> <li>Faying surface condition, hole preparation, etc. meet applicable requirements for connecting elements</li> </ul>		0	Table J7-1		
	<ul> <li>Pre-installation verification testing by installation personnel observed for fastener assemblies and methods used</li> </ul>		0	Table J7-1		
	e. Fastener components are stored properly		0	Table J7-1		
2.	Inspection Tasks During Bolting					
	a. Fastener assemblies placed in all holes and washers are positioned as required		0	Table J7-2		
	<ul> <li>Joint brought to "snug tight" prior to pretensioning operation</li> </ul>		0	Table J7-2		
	<ul> <li>Fastener component not turned by the wrench prevented from rotating</li> </ul>		0	Table J7-2		
	<ul> <li>Bolt pretensioning progresses systematically from the most rigid point toward the free edge</li> </ul>		0	Table J7-2		
3.	After bolting activities are complete, document accepted and rejected connections		С	Table J7-3		

4.	Verify contour, finish and dimensional tolerances of reduced beam sections (RBS)	С	Table J8-1	
5.	Ensure no holes or unapproved attachments made by fabricator or erector in protected zone	С	Table J8-1	
6.	Inspection of Composite Structures Prior to Concrete Placement			
	a. Verify reinforcing steel type and grade	0	Table J9-1	
	<ul> <li>Determine carbon equivalent for reinforcing steel other than ASTM A706</li> </ul>	0	Table J9-1	
	c. Verify reinforcing size, spacing & orientation	0	Table J9-1	
	d. Verify reinforcing steel not re-bent in field	0	Table J9-1	
	e. Reinforcing tied & supported as required	0	Table J9-1	
	d. Required reinforcing clearances are provided	0	Table J9-1	
	e. Composite member has required size	0	Table J9-1	
7.	Inspection of Composite Structures During Concrete Placement			
	<ul> <li>Verify mix design, compressive strength, maximum aggregate size, maximum slump</li> </ul>	0	Table J9-2	
	b. Limits on water added at the truck or pump	0	Table J9-2	
	c. Proper placement to limit segregation	0	Table J9-2	
8.	After concrete placement of composite structures, verify specified f'c achieved at specified age	С	Table J9-3	

#### Schedule of Special Inspection Services Special Inspections for Seismic Resistance Welding of Structural Steel

		Inspection Task	Task	•	Reference for Criteria		Agent
			Req'd		AISC 341	NCBC	
1.	Vis	ual Inspections Prior to Welding					
	a.	Verify type & grade of connection materials		0	Table J6-1		
	b.	Welder identification system established		0	Table J6-1		
	с.	Fit-up & joint geometry of groove welds		0	Table J6-1		
		Joint preparation					
		<ul> <li>Dimensions including alignment, root</li> </ul>					
		opening, root face & bevel					
		Cleanliness of steel surfaces					
		Tack weld quality & location					
		Backing type & fit					
	d.	Verify configuration & finish of access holes		0	Table J6-1		
	e.	Inspect fit-up of fillet welds including		0	Table J6-1		
		dimensions, alignment, root gaps, cleanliness					
		of steel surfaces, tack weld quality, and tack weld location					
2	Vic	sual Inspection Tasks During Welding					
Ζ.	a.	Verify welding procedure specification (WPS)		0	Table J6-2		
	a.	followed: Settings on welding equipment,		0	Table JO-2		
		travel speed, welding materials selected,					
		shielding gas type & flow rate, preheat					
		applied, interpass temperature maintained,					
		weld position (F, V, H, OH), and intermix of					
		filler metals avoided unless approved by					
		engineer of record					
	b.	Verify welder qualifications		0	Table J6-2		
	с.	Control & handling of welding consumables,		0	Table J6-2		
		including packaging & exposure		_			
	d.	Environmental conditions, including wind		0	Table J6-2		
		speed, precipitation & temperature, within					
	0	defined limits Verify welding techniques: Interpass & final		0	Table J6-2		
	с.	cleaning, each pass within profile limitations,		0	Table JU-2		
		and each pass meets quality requirements					
	f.	No welding over cracked tack welds		0	Table J6-2		
3.		sual Inspections Tasks After Welding					
	g.	Verify welds are cleaned		0	Table J6-3		
	h.	Confirm correct weld size, length & location		C	Table J6-3		
	i.	Welds meet visual acceptance criteria: Crack		C	Table J6-3		
		prohibition, weld/base-metal fusion, crater		, j			
		cross section, weld profiles and size, undercut					
		& porosity					
	j.	Confirm placement of reinforcing or		С	Table J6-3		
		contouring fillet welds					

<ul> <li>k. Verify backing removed, weld tabs removed</li> <li>&amp; finished, and fillet welds added</li> </ul>	С	Table J6-3	
I. Observe repair activities	С	Table J6-3	

#### Schedule of Special Inspection Services Special Inspections for Seismic Resistance Non-Destructive Testing (NDT) of Welded Joints

	Inspection Task		Freq	Reference for Criteria		Agent
		Req'd		AISC 341	Standard	
1.	Web base metal tested for cracks using magnetic particle testing (MT) when doubler plates, continuity plates or stiffeners are welded in the k- area. MT inspection shall include k-area metal within 3" of the weld and be performed ≥ 48hours		С	Part J6.2a		
2.	Inspect complete Joint Penetration (CJP) Groove Welds in materials $\ge 5/16''$ thick					
	a. Ultrasonic testing (UT) performed on 100% of CJP groove welds except for ordinary moment frames for which only <i>demand critical welds</i> need be tested		С	Part J6.2b, J6.2g	AWS D1.1 Table 6.2	
	<ul> <li>b. MT performed on 25% of beam-to-column</li> <li>CJP groove welds except for ordinary moment</li> <li>frames for which only <i>demand critical welds</i></li> <li>need be tested</li> </ul>		Ρ	Part J6.2b, J.6.2h		
	c. At the end of welds where weld tabs have been removed (excluding continuity plate weld tabs), MT performed on 100% of beam- to-column joints receiving UT in accordance with Item 2.a above		С	Part J6.2f, J.6.2h		
3.	UT check for base metal lamellar tearing & laminations at base metal thickness $\ge 1\%''$ loaded in tension in through-thickness direction in tee & corner joints where connected material is $\ge 34'''$ and contains CJP groove welds		С	Part J6.2c	AWS D1.1 Table 6.2	
4.	At welded splices & connections, MT or penetrant testing performed at thermally cut surfaces of beam copes and access holes when flange thickness > $1\frac{1}{2}$ " (rolled shapes) or web thickness > $1\frac{1}{2}$ " (built-up shape)		С	Part J6.2d		
5.	MT performed on welds & adjacent areas of reduced beam section (RBS) cut surface repaired by welding or on base metal of RBS cut surfaces if a sharp notch was removed by grinding		С	Part J6.2e		

Schedule of Special Inspection Services Special Inspections for Seismic Resistance Steel H-Piles

	Inspection Task		Freq	Reference for Criteria		Agent
		Req'd		AISC 341	NCBC	
1.	Ensure no holes or unapproved attachments		С	Table		
	made by responsible contractor in protected zone			J10-1		