Structural Statement of Special Inspections

Project: C-Port Credit Union

Location: Forest Avenue, Portland, ME

Owner: City of Portland

This Statement of Special Inspections encompass the following discipline: Structural

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Structural Special Inspection Coordinator (SSIC) and the identity of other approved agencies to be retained for conducting these inspections and tests.

The Structural Special Inspection Coordinator shall keep records of all Structural inspections and shall furnish inspection reports to the Building Code Official (BCO) and the Structural Registered Design Professional in Responsible Charge (SRDP). 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 Building Official and the Structural Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Structural Registered Design Professional in Responsible Charge at an interval determined by the SSIC and the BCO.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted to the BCO prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor. Interim Report Frequency: ☑ Upon request of Building Official _ or per attached schedule. Prepared by: OF MAIN OF MAIN William P. Faucher, P.E. (type or print name of the Structural Registered Design Professional in Responsible Charge) 11/16/11 Signature Date Design Professional Seal Owner's Authorization: Building Code Official's Acceptance: Signature Date Signature Date

Structural Statement of Special Inspections (Continued)

List of Ag	ents							
Project:	C-Port Credit Union							
Location: Owner:	Forest Avenue, Portland, M. City of Portland	E						
This Statement	This Statement of Special Inspections encompass the following discipline: Structural							
(Note: Statemen	nt of Special Inspections for	other disciplines may be inc	eluded under a s	separate cover)				
This Statement	of Special Inspections / Qual	ity Assurance Plan include the	e following build	ling systems:				
	Soils and Foundations Cast-in-Place Concrete Precast Concrete System Masonry Systems Structural Steel Wood Construction	_	Special Cases	;				
Special Inspe	ection Agencies	Firm		Address, Telephone, e-mail				
4 OTDUOTI	DAL C	A11: 1 T :		100 H 1 G: :				

Special Inspection Agencies	Firm	Address, Telephone, e-mail
STRUCTURAL Special Inspections Coordinator (SSIC)	Allied Engineering, Inc. William P. Faucher, P.E.	160 Veranda Street Portland, ME 04103 207.221.2260 Ext 107
2. Special Inspector (SI 1)	TBD	
3. Special Inspector (SI 2)		
4. Testing Agency (TA 1)		
5. Testing Agency (TA 2)	TBD	
6. Other (O1)		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and <u>not</u> by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Structural Schedule of Special Inspections

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided to the Special Inspector for their records. NOTE VERIFICATION THAT QUALIFIED INDIVIDUALS ARE AVAILABLE TO PERFORM STIPULATED TESTING AND/OR INSPECTION SHOULD BE PROVIDED PRIOR TO SUBMITTING STATEMENT. AGENT QUALIFICATIONS IN SCHEDULE ARE SUGGESTIONS ONLY; FINAL QUALIFICATIONS ARE SUBJECT TO THE DISCRETION OF THE REGISTERED DESIGN PROFESSIONAL PREPARING THE SCHEDULE.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge or Special Inspector of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification, license or experience as indicated below, such requirement shall be listed below and shall be clearly identified within the schedule under the Agent Qualification Designation.

PE/SE Structural Engineer – a licensed SE or PE specializing in the design of building structures PE/GE Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations EIT

Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering

examination

Experienced Testing Technician

ETT Experienced Testing Technician - An Experienced Testing Technician with a minimum 5 years

experience with the stipulated test or inspection

American Concrete Institute (ACI) Certification

ACI-CFTT Concrete Field Testing Technician - Grade 1

ACI-CCI Concrete Construction Inspector

ACI-LTT Laboratory Testing Technician - Grade 1&2

ACI-STT Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI Certified Welding Inspector AWS/AISC-SSI Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT Non-Destructive Testing Technician – Level II or III.

International Code Council (ICC) Certification

ICC-SMSI ICC-SWSI	Structural Masonry Special Inspector Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I. II. III & IV

NICET-GET Geotechnical Engineering Technician - Levels I, II, III & IV

Other

Structural Schedule of Special Inspections SOILS & FOUNDATION CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.7, 1704.8, 1704.9	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
Verify existing soil conditions, fill placement and load bearing requirements		NONE				
 a. Prior to placement of prepared fill, determine that the site has been prepared in accordance with the approved soils report. 		P	IBC 1704.7.1		PE/GE, EIT or ETT	
 b. During placement and compaction of fill material, verify material being used and maximum lift thickness comply with the approved soils report. 		P	IBC 1704.7.2		PE/GE, EIT or ETT	
 c. Test in-place dry density of compacted fill complies with the approved soils report. 		p	IBC 1704.7.2		PE/GE, EIT or ETT	
2. Pile foundations:						
a. Observe and record procedures for static load testing of piles.		е	IBC 1704.8		PE/GE, EIT or ETT	
b. Observe and record procedures for dynamic load testing of piles.		e			PE/GE, EIT or ETT	
c. Record installation of each pile and results of load test. Include cutoff and tip elevations of each pile relative to permanent reference.		C			PE/GE, EIT or ETT	
d. Test welded splices of steel piles		E	AWS D1.1		AWS CWI	
3. Pier foundations: Verify installation of pier foundations for buildings assigned to Seismic Design Category C, D, E or F.		e	IBC 1704.9		PE/GE, EIT or ETT	
a. Verify pier diameter and length		E			PE/GE, EIT or ETT	
b. Verify pier embedment (socket) into bedrock		P			PE/GE, EIT or ETT	
e. Verify suitability of end bearing strata		₽			PE/GE, EIT or ETT	

Structural Schedule of Special Inspections CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.4	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGEN T	AGENT QUALIFICATION	TASK COMPLETED
Inspection of reinforcing steel, including pre-stressing tendons, and placement		P	ACI 318: 3.5, 7.1-7.7		PE/SE or EIT	N/A
Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B			Welding of Reinf Not Allowed		AWS-CWI	
 Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased 		С	IBC 1912.5		PE/SE or EIT	N/A
Verifying use of required design mix		P	ACI 318: Ch 4, 5.2-5.4		PE/SE or EIT	
5. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature		С	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8		ACI-CFTT or ACI-STT	
6. Inspection of concrete and shotcrete placement for proper application techniques		С	ACI 318: 5.9, 5.10		PE/SE or EIT	
7. Inspection for maintenance of specified curing temperature and techniques		P	ACI 318: 5.11- 5.13		PE/SE or EIT	
8. Inspection of Prestressed Concrete						
a. Application of prestressing force.		e	ACI 318: 18.20		PE/SE or EIT	
b. Grouting of bonded prestressing tendons in seismic force resisting system		E	ACI 318: 18.18.4		PE/SE or EIT	
9. Erection of precast concrete members		P	ACI 318: Ch 16		PE/SE or EIT	
10. Verification of in situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms beans and structural slabs		P	ACI 318: 6.2		ACI-STT	

Structural Schedule of Special Inspections

MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY) – Not Applicable

VERIFICATION AND INSPECTION IBC Section 1704.5	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. As masonry construction begins, the following shall be verified to ensure compliance:						
a. Proportions of site prepared mortar.		₽	ACI530.1, 2.6A		PE/SE or EIT	
b. Construction of mortar joints.		₽	ACI530.1, 3.3B		PE/SE or EIT	
c. Location of reinforcement and connectors.		P	ACI530.1, 3.4, 3.6A		PE/SE or EIT	
d. Prestressing technique.		P	ACI530.1, 3.6B		PE/SE or EIT	
e. Grade and size of prestressing tendons and anchorages.		P	ACI530.1, 2.4B, 2.4H		PE/SE or EIT	
2. The inspection program shall verify:						
a. Size and location of structural elements.		P	ACI530.1, 3.3G		PE/SE or EIT	
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		₽	ACI530, 1.2.2(e), 2.1.4, 3.1.6		PE/SE or EIT	
e. Specified size, grade and type of reinforcement.		P	ACI530, 1.12, ACI530.1, 2.4, 3.4		PE/SE or EIT	
d. Welding of reinforcing bars.		E	AC530, 2.1.10.6.2, 3.24 (b)		AWS CWI	
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).		₽	IBC 2104.3, 2104.4; ACI530.1, 1.8C, 1.8D		PE/SE or EIT	
f. Application and measurement of prestressing force.		P	ACI530.1, 3.6B		PE/SE or EIT	
3. Prior to grouting, the following shall be verified to ensure compliance:						
a. Grout space is clean.		₽	ACI530.1, 3.2D		PE/SE or EIT	
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.		P	ACI530, 1.12, ACI530.1, 3.4		PE/SE or EIT	
e. Proportions of site prepared grout and prestressing grout for bonded tendons.		P	ACI530.1, 2.6B		PE/SE or EIT	
d. Construction of mortar joints.		P	ACI530.1, 3.3B		PE/SE or EIT	
Grout placement shall be verified to ensure compliance with code and construction document provisions.		E	ACI530.1, 3.5		PE/SE or EIT	
a. Grouting of prestressing bonded tendons.		E	ACI530.1, 3.6C		PE/SE or EIT	
5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.		E	IBC 2105.2.2, 2105.3; ACI530.1, 1.4		PE/SE or EIT	
6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.		₽	ACI530.1, 1.5		PE/SE or EIT	

Structural Schedule of Special Inspections

MASONRY CONSTRUCTION LEVEL 2 (ESSENTIAL FACILITY) Not Applicable

VERIFICATION AND INSPECTION IBC Section 1704.5	Y/N	EXTENT: CONTINUOU S, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. From the beginning of masonry construction, the following shall be verified to ensure compliance:						
a. Proportions of site mixed mortar, grout and prestressing grout for bonded tendons.		P	ACI530.1, 2.6A		PE/SE or EIT	
b. Placement of masonry units and construction of mortar joints.		P	ACI530.1, 3.3B		PE/SE or EIT	
e. Placement of reinforcement, connectors and prestressing tendons and anchorges.		P	ACI530, 1.12; ACI530.1, 3.4, 3.6 A		PE/SE or EIT	
d. Grout space prior to grouting.		E	ACI530.1, 3.2D		PE/SE or EIT	
e. Placement of grout.		C	ACI530.1, 3.5		PE/SE or EIT	
f. Placement of prestressing grout.		C	ACI530.1, 3.6C		PE/SE or EIT	
2. The inspection program shall verify:						
a. Size and location of structural elements.		P	ACI530.1, 3.3G		PE/SE or EIT	
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		E	ACI530, 1.2.2(e), 2.1.4, 3.1.6		PE/SE or EIT	
e. Specified size, grade and type of reinforcement.		P	ACI530, 1.12; ACI530.1, 2.4, 3.4		PE/SE or EIT	
d. Welding of reinforcement.		e	ACI530, 2.1.10.6.2, 3.2.3.4(b);		PE/SE or EIT	
e. Protection of masonry during cold weather and (temperature below 40°F) or hot weather (temperature above 90°F).		<u>P</u>	IBC 2104.3, 2104.4; ACI530.1, 1.8C, 1.8D		PE/SE or EIT	
f. Application and measurement of prestressing force.		E	ACI530.1, 3.6B		PE/SE or EIT	
3. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.		E	IBC 2105.2.2, 2105.3; ACI 530.1, 1.4		PE/SE or EIT	
4. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.		P	ACI530.1, 1.5		PE/SE or EIT	

Structural Schedule of Special Inspections - STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	Y/N		COMMENTS	AGENT	AGENT	TASK
IBC Section 1704.3		CONTINUOUS, PERIODIC, SUBMITTAL, OR			QUALIFICATION	COMPLETED
Material verification of high-strength bolts, nuts and washers:		NONE				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		S	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3		PE/SE or EIT	
b. Manufacturer's certificate of compliance required.		S			PE/SE or EIT	
2. Inspection of high-strength bolting						
a. Bearing-type connections.		P	AISC LRFD Section M2.5		AWS/AISC-SSI	
b. Slip critical connections.		C or P (method dependent)	IBC Sect 1704.3.3		AWS/AISC SSI	
3. Material verification of structural steel (IBC Sect 1708.4):						
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4		PE/SE or EIT	
b. Manufacturers' certified mill test reports.		S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4		PE/SE or EIT	
4. Material verification of weld filler materials:						
a. Identification markings to conform to AWS specification in the approved construction documents.		S	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5		PE/SE or EIT	
b. Manufacturer's certificate of compliance required.		S			PE/SE or EIT	
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.		S	AWS D1.1		PE/SE or EIT	
6. Inspection of welding (IBC 1704.3.1): a. Structural steel:						
Complete and partial penetration groove welds.		С			AWS-CWI	
2) Multipass fillet welds.		С			AWS-CWI	
3) Single-pass fillet welds> 5/16"		С	AWS D1.1		AWS-CWI	
4) Single-pass fillet welds< 5/16"		P			AWS-CWI	
5) Floor and deck welds.		P	AWS D1.3		AWS-CWI	
b. Reinforcing steel (IBC Sect 1903.5.2):						
Verification of weldability of reinforcing steel other than ASTM A706.		С				
 Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement. 		E	AWS D1.4		AWS CWI	
3) Shear reinforcement.		E	ACI 318: 3.5.2		AWS CWI	
4) Other reinforcing steel.		P			AWS-CWI	
7. Inspection of steel frame joint details for compliance (IBC Sect 1704.3.2) with approved construction documents:						
a. Details such as bracing and stiffening.		P			PE/SE or EIT	
b. Member locations.		P			PE/SE or EIT	
c. Application of joint details at each connection.		P			PE/SE or EIT	

Structural Schedule of Special Inspection Services Fabrication and implementation procedures – structural steel

VERIFICATION AND INSPECTION IBC Section 1704.2	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents. -OR- 2. AISC Certification		S	Fabricator shall submit one of the two qualifications		PE/SE or EIT	
3. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents.		S	IBC 1704.2.2		PE/SE or EIT	

Structural Schedule of Special Inspection Services FABRICATION AND IMPLEMENTATION PROCEDURES WOOD TRUSSES

VERIFICATION AND INSPECTION	Y/N	EXTENT:	COMMENTS	AGENT	AGENT	TASK
		CONTINUOUS,			QUALIFICATION	COMPLETED
IBC Section 1704.2		PERIODIC,				
		SUBMITTAL,				
		OR NONE				
1. Fabrications Procedures: Review of fabricator's						
written procedural and quality control manuals and						
periodic auditing of fabrication practices by an			Fabricator			
approved special inspection agency. At the			shall submit			
completion of fabrication, the approved fabricator shall		S	one of the two		PE/SE or EIT	
submit a certificate of compliance to the building code			qualifications			
official stating that the work was performed in			quamreations			
accordance with the approved construction documents.						
-OR-						
2. TPI Inspection Program: Fabricator shall participate						
in the TPI Quality Assurance Inspection Program, and						
maintain a copy of the Quality Assurance Procedures						
Manual, QAP 90. Submit copy of certificate. All						
trusses shall bear the TPI Registered Mark.						
3. At completion of fabrication, the approved fabricator						
shall submit a certificate of compliance to the building		S	IBC 1704.2.2		PE/SE or EIT	
code official stating that the work was performed in		5	1DC 1/04.2.2		FE/SE OF EIT	
accordance with the approved construction documents						

Structural Schedule of Special Inspections

WOOD-CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.6	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	TASK COMPLETED
1. Fabrication of high load diaphragms						
a. Verify wood structural panel sheathing for grade and thickness		P	IBC 1704.6		PE/SE or EIT	
b. Verify the nominal size of framing members at adjoining panel edges		P	IBC 1704.6		PE/SE or EIT	
b. Verify the nail or staple diameter and length		P	IBC 1704.6		PE/SE or EIT	
b. Verify the number of fastener lines		P	IBC 1704.6		PE/SE or EIT	
b. Verify the spacing between fasteners in each line and at edge margins		P	IBC 1704.6		PE/SE or EIT	
2. Load Tests for Joist Hangers: Provide evidence of manufacturer's load test in accordance with ASTM D1761 including the vertical load bearing capacity, torsional moment capacity, and deflection characteristics when there is no calculated procedure recognized by the code.		S	IBC 1715 [submit ICBO reports]		PE/SE or EIT	

Structural Schedule of Special Inspections SEISMIC RESISTANCE - STRUCTURAL

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOU	COMMENTS	AGENT		TASK
IBC Section 1707		S, PERIODIC, SUBMITTAL, OR NONE			QUALIFICATION	D D
1. Special inspections for seismic resistance. Special inspection as specified in this section is required for the following:			Seismic Design Category: B			
a. The seismic force resisting systems in structures assigned to Seismic Design Category C, D, E or F		₽	IBC 1707.1		PE/SE or EIT	
2. Structural steel: Continuous special inspection for structural welding in accordance with AISC 341.		4	IBC 1702.2		AWS CWI	
3. Structural wood:						
a. Continuous special inspection during field gluing operations of elements of the seismic force resist- ing system.		e	IBC 1702.3		PE/SE or EIT	
b. Periodic special inspections for nailing, bolting, anchoring and other fastening of components within the seismic force resisting system, including drag struts, braces and hold downs		4	IBC 1702.3		PE/SE or EIT	
4. Cold formed steel framing: Periodic special inspections during welding operations of elements of the seismic force-resisting system. Periodic special inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force resisting system, including struts, braces, and hold downs		М				
4. Seismic isolation system. Provide periodic special inspection during the fabrication and installation of isolator units and energy dissipation devices if used as part of the seismic isolation system		N	IBC 1707.8			

		SURANCE FOR SEISMIC RESISTANCE CHECK LIST [IBC 1705] Category B					
	MIC DE	SIGN CATEGORY C OR HIGHER:					
		resisting systems					
		rames and associated connections/anchorage Frames and associated connections					
_		CMU Wood Concrete Diaphragms: Floor Roof					
Other	:						
		SURANCE FOR WIND RESISTANCE CHECK LIST [IBC 1706]					
ind E	xposui	re Category B					
	CE						
RED	(AB)	QUALITY ASSURANCE PLAN REQUIREMENTS					
NOT REQUIRED	NOT APPLICABLE	(A Quality Assurance Plan is required where indicated below)					
NOT	NOT APPI						
		In wind exposure Categories A and B, where the 3-second-gust basic wind speed is 120 miles per					
		hour (mph) (52.8 <i>m/sec</i>) or greater. In wind exposure Categories C and D, where the 3-second-gust basic wind speed is 110 mph					
		(49 m/sec) or greater.					

Signature

Date

11/16/11

Date

Signature

Contractor's Statement of Responsibility

Each contractor responsible for the construction or fabrication of a system or component designated in the Quality Assurance Plan must submit a Statement of Responsibility. The Statement of Responsibility is required for Seismic Design Category C or higher. Make additional copies of this form as required.
Project:
Contractor's Name:
Address:
License No.:
Description of designated building systems and components included in the Statement of Responsibility:
Contractor's Asknowledgment of Chariel Degringments
Contractor's Acknowledgment of Special Requirements
I hereby acknowledge that I have received, read, and understand the Quality Assurance Plan and Special Inspection program.
I hereby acknowledge that control will be exercised to obtain conformance with the construction documents approved by the Building Official.
Signature Date

Contractor's Provisions for Quality Control

Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of reports is attached to this Statement.

Identification and qualifications of the person(s) exercising such control and their position(s) in the organization are attached to this Statement.