Project: Canal Zero Date Prepared: 9/19/16

Structural Statement of Special Inspections

Project: Canal Zero

Location: *Portland, ME*

Owner: East Brown Cow Management, Inc.

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.

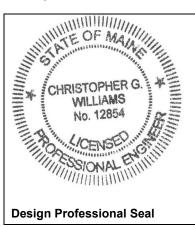
Prepared by:

Christopher G. Williams, P.E., S.E.

(type or print name of the Structural Registered Design Professional in Responsible Charge

Shu

Signature



Owner's Authorization:

Building Code Official's Acceptance:

Signature Date Signature Date

9/19/16 Date

Structural Statement of Special Inspections (Continued)

List of Agents

Project: Canal Zero

Location: Portland, ME

Owner: East Brown Cow Management, Inc.

This Statement of Special Inspections encompass the following discipline: Structural

(Note: Statement of Special Inspections for other disciplines may be included under a separate cover)

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- Soils and Foundations Cast-in-Place Concrete
- Precast Concrete System
- Structural Masonry Systems
- Structural Steel
- Wood Construction

Special Cases

| Special Inspection Agencies | Firm | Address, Telephone, e-mail |
|--|-----------------------------------|---|
| 1. STRUCTURAL Special Inspections Coordinator (SSIC) | Becker Structural Engineers, Inc. | 75 York Street Portland, ME 04101 (207)879-1838 |
| 2. Special Inspector (SI 1) | Becker Structural Engineers, Inc. | 75 York Street Portland, ME 04101 (207)879-1838 |
| 3. Special Inspector (SI 2) | S.W. Cole Engineering, Inc. | 286 Portland Road Gray, ME 04039 (207)657-2866 |
| 4. Testing Agency (TA 1) | S.W. Cole Engineering, Inc. | 286 Portland Road Gray, ME 04039 (207)657-2866 |
| 5. Testing Agency (TA 2) (Post-Tensioning Installer and Inspector) | T.B.D. | T.B.D. |
| 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 Statement of Special Inspections (Continued)

Final Report of Special Inspections (SSIC/SI 1)

[To be completed by the Structural Special Inspections Coordinator (SSIC/SI 1). Note that all Agent's Final Reports must be received prior to issuance.]

| Project: | Canal Zer | 0 | | | | | |
|-----------------|--------------|-----------------------|----------------|----------------------|-----------------------------------|--|--|
| Location: | Portland, ME | | | | | | |
| Owner: | East Brow | n Cow Management, In | с. | | | | |
| Owner's Addre | ess: | 100 Commercial Street | t, Ste. 306 | | | | |
| | | Portland, ME 04101 | | | | | |
| Architect of Re | ecord: | Timothy Hart | | Canal 5 Stu | dio | | |
| | | (name) | | (firm) | | | |
| Structural Reg | istered De | esign | | | | | |
| Professional in | Respons | ible Charge: | Christopher G. | Williams, P.E., S.E. | Becker Structural Engineers, Inc. | | |
| | - | - | (name) | | (firm) | | |

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted, Structural Special Inspection Coordinator

(Type or print name)

(Firm Name)

Signature

Date



Structural Statement of Special Inspections (Continued) Special Inspector's/Agent's Final Report

| Project: | Canal Zero | |
|--------------------------------|---------------|--------|
| Special Inspector or Agent: | | |
| Designation: | (name) SI2 | (firm) |

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted, Special Inspector or Agent:

(Type or print name)

Signature

Date

Licensed Professional Seal or Certification Number

Structural Statement of Special Inspections (Continued) Special Inspector's/Agent's Final Report

| Project: | Canal Zero | | |
|--------------------------------|------------|--------|--|
| Special Inspector or Agent: | | | |
| | (name) | (firm) | |
| Designation: | TA1 | | |

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted, Special Inspector or Agent:

(Type or print name)

Signature

Date

Licensed Professional Seal or Certification Number

SEAL NOT REQUIRED FOR TESTING AGENCY

Structural Statement of Special Inspections (Continued) Special Inspector's/Agent's Final Report

| Project: | Canal Zero | | |
|--------------------------------|------------|--------|--|
| Special Inspector or Agent: | | | |
| | (name) | (firm) | |
| Designation: | TA2 | | |

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted, Special Inspector or Agent:

(Type or print name)

Signature

Date

Licensed Professional Seal or Certification Number

SEAL NOT REQUIRED FOR TESTING AGENCY

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

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 | REQD Y/N | <u>EXTENT:</u> Continuous, Periodic, Submittal, or None | COMMENTS | AGENT | AGENT QUALIFICATION | TASK COMPLETED |
|--|-------------|---|------------|-------|------------------------|-------------------|
| 1. Required Verification and Inspection of Soils: | | | | | | |
| a. Verify materials below shallow foundations are adequate to achieve the design bearing capacity. | Y | Р | IBC 1704.7 | SI2 | PE/GE, EIT or ETT | |
| b. Verify excavations are extended to proper depth and have reached proper material. | Y | Р | IBC 1704.7 | SI2 | PE/GE, EIT or ETT | |
| c. Perform classification and testing of compacted fill materials. | Y | Р | IBC 1704.7 | TA1 | PE/GE, EIT or ETT | |
| Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill. | Y | С | IBC 1704.7 | TA1 | PE/GE, EIT or ETT | |
| e. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly. | Y | Р | IBC 1704.7 | SI2 | PE/GE, EIT or ETT | |
| 2. Required Verification and Inspection of Driven Deep Foundation Elements: | | | | | | |
| a. Verify element materials, sizes and lengths comply with the requirements. | N | С | IBC 1704.8 | TA1 | PE/GE, EIT or ETT | |
| b. Determine capacities of test elements and conduct additional load tests, as required. | N | С | IBC 1704.8 | SI2 | PE/GE, EIT or ETT | |
| c. Observe driving operations and maintain complete and accurate records for each element. | N | С | IBC 1704.8 | TA1 | PE/GE, EIT or ETT | |
| d. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element. | N | С | IBC 1704.8 | TA1 | PE/GE, EIT or ETT | |
| 3. Required Verification and Inspection of Cast-in-Place Deep Foundation Elements: | | | | | | |
| a. Observe drilling operations and maintain complete and accurate records for each element. | Y | С | IBC 1704.9 | TA1 | PE/GE, EIT or ETT | |
| b. Verify placement locations and plumbness, confirm elelment diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end bearing strata capacity. Record concrete or grout volumes. | Y | С | IBC 1704.9 | TA1 | PE/GE, EIT or ETT | |

See Concrete, Masonry, and/or Steel Schedules for additional material inspections for deep foundation elements as applicable.

Structural Schedule of Special Inspections CONCRETE CONSTRUCTION

| IBC Section 1704.4 | <u>REQD</u> Y/N | EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE | COMMENTS | AGENT | AGENT QUALIFICATION | TASK COMPLETED |
|---|--------------------|--|---|-------|------------------------|-------------------|
| 1. Inspection of reinforcing steel, including prestressing tendons, and placement | Y | Р | ACI 318: 3.5, 7.1-7.7 | SI1 | PE/SE or EIT | |
| 2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B | N | - | Not applicable. Welding of Reinf Not Allowed | - | - | |
| Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used. | Y | С | IBC 1911.5 | SI1 | PE/SE or EIT | |
| 4. Inspection of anchors installed in hardened concrete. | Y | Р | IBC 1212.1 | SI1 | PE/SE or EIT | |
| 5. Verifying use of required design mix | Y | Р | ACI 318: Ch 4, 5.2-5.4 | TA1 | ACI-CFTT or ACI-STT | |
| At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete. | Y | С | ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8 | TA1 | ACI-CFTT or ACI-STT | |
| 7. Inspection of concrete and shotcrete placement for proper application techniques | N | С | ACI 318: 5.9, 5.10 | TA1 | ACI-CFTT or ACI-STT | |
| 8. Inspection for maintenance of specified curing temperature and techniques | Y | Р | ACI 318: 5.11- 5.13 | SI1 | PE/SE or EIT | |
| 9. Inspection of Prestressed Concrete | | | | | | |
| a. Application of prestressing force. | Y | С | ACI 318: 18.20 | TA2 | PE/SE or EIT | |
| b. Grouting of bonded prestressing tendons in seismic force resisting system | Y | С | ACI 318: 18.18.4 | TA1 | ACI-CFTT or ACI-STT | |
| 10. Erection of precast concrete members. | Ν | Р | ACI 318: Ch 16 | SI1 | PE/SE or EIT | |
| 11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beans and structural slabs. | Y | Р | ACI 318: 6.2 | TA1 | ACI-CFTT or ACI-STT | |
| 12. Inspect formwork for shape, location and dimensions of the concrete member being formed. | Y | Р | Limitations apply. See below | SI1 | PE/SE or EIT | |

Limitations of item 12: Special inspection includes periodic review of formwork shape, general location, and formwork dimensions that can be readily measured with conventional tape measure. Verification of building layout, building location, foundation extents, column grids, and foundation elevations is excluded.

SEISMIC RESISTANCE CHECK LIST [IBC 1705.3]

Seismic Design Category

FOR SEISMIC DESIGN CATEGORY C OR HIGHER:Structural:

The seismic-force-resisting systems

Steel Braced Frames and associated connections/anchorage (Not required for SDC C, R=3)

Steel Moment Frames and associated connections (Not required for SDC C, R=3)

B

☐ Shear walls: ☐ CMU ☐ Wood ☐ Concrete

Other:

Diaphragms: Floor Roof

WIND RESISTANCE CHECK LIST [IBC 1705.4] Wind Exposure Category

| REQUIRED | NOT REQUIRED | NOT APPLICABLE | WIND RESISTANCE REQUIREMENTS |
|----------|-----------------|-------------------|--|
| | \boxtimes | | In wind exposure Category 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 <i>m/sec</i>) or greater. |

End of Structural Statement of Special Inspections