Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

Structural Statement of Special Inspections

Project: Building Addition – Portland Sports Complex

Location: 512 Warren Avenue, Portland, Maine

Owner: Portland Sports Complex – Jim Gratello

This *Statement of Special Inspections* encompass the following discipline: **Structural – Foundations**

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.

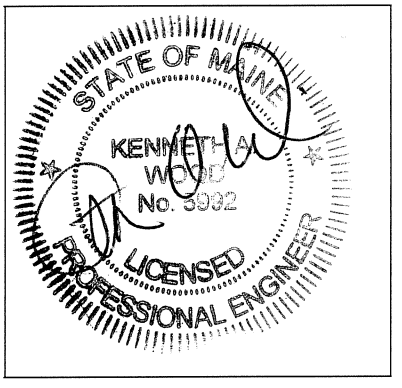
Interim Report Frequency: ☒ *Upon request of Building Official* _____ or ☐ per attached schedule.

Prepared by:

Kenneth A. Wood, P.E.

(Structural Registered Design Professional in Responsible Charge)

Signature 10/5/2012 Date



Design Professional Seal

Owner's Authorization:

Signature Date

Building Code Official's Acceptance:

Signature Date

Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

Structural Statement of Special Inspections (Continued)

List of Agents

Project: Building Addition – Portland Sports Complex

Location: 512 Warren Avenue, Portland, Maine

Owner: Portland Sports Complex – Jim Gratello

This *Statement of Special Inspections* encompass the following discipline: **Structural - Foundations**

(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
- ☐ Masonry Systems
- ☐ Structural Steel
- ☐ Wood Construction
- ☐ Special Cases

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. **STRUCTURAL Special Inspections Coordinator (SSIC)**	Attar Engineering, Inc.	1284 State Rd Eliot, Maine 03903 info@attarengineering.com (207) 439-6023
2. Special Inspector (SI 1)	Attar Engineering, Inc. Kenneth A. Wood, P.E.	1284 State Road, Eliot, Maine 03903
3. Special Inspector (SI 2)	John Turner Consulting, Inc.	73 Rainmaker Drive Portland, ME (207) 883-7878
4. Testing Agency (TA 1)	John Turner Consulting, Inc.	73 Rainmaker Drive Portland, ME (207) 883-7878
5.		
6.		

Note: The inspectors and testing agencies shall be engaged by the Owner or 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 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: Building Addition – Portland Sports Complex
Location: 512 Warren Avenue, Portland, Maine
Owner: Portland Sports Complex – Jim Gratello_
Owner's Address: 512 Warren Avenue, Portland, Maine
Architect of Record: N/A

Structural Registered Design Professional in Responsible Charge: Kenneth A. Wood, P.E.

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. See also:

1) Geotechnical Summary Report for Proposed Expansion Portland Sports Complex
2) Report of pre-Concrete & Reinforcing Steel Inspection
3) Report(s) of Concrete Field & Laboratory Testing (10 total)Summary of Special Inspections
   All Attached.

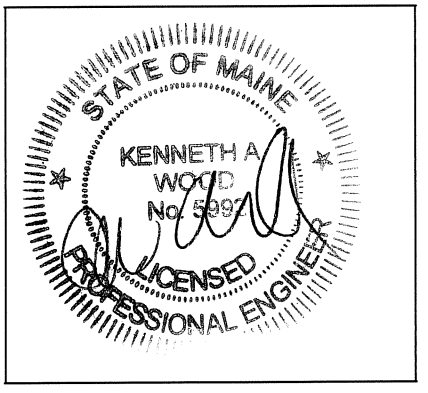
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report (see attached).

Respectfully submitted,
Structural Special Inspection Coordinator

KENNETH A. WOOD, P.E.
(Type or print name)

ATTAR ENGINEERING, INC
(Firm Name)

10/5/2012
Signature Date



Licensed Professional Seal

Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

Project: New Building for Phoenix Property Management
Date Prepared: December 8, 2011

Structural Statement of Special Inspections (Continued)

Special Inspector's/Agent's Final Report

Project: Building Addition – Portland Sports Complex

Special Inspector or Agent: Kenneth A. Wood, P.E.

Designation: Agent

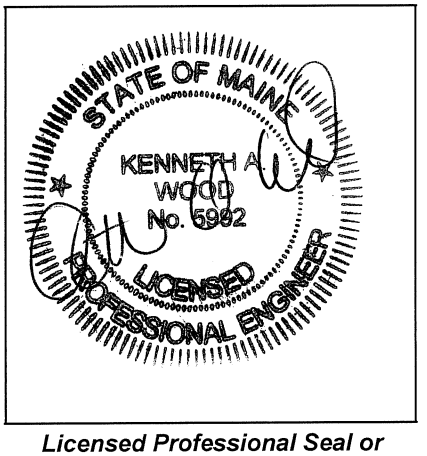
To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

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:

Kenneth A. Wood, P.E.
(Type or print name)

10/5/2012
Signature Date



Licensed Professional Seal or
Certification Number

Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

Project: New Building for Phoenix Property Management
Date Prepared: December 8, 2011

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	Structural Masonry Special Inspector
ICC-SWSI	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

_____ _____

Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

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
Verify existing soil conditions, fill placement and load bearing requirements					
1. Verify materials below shallow foundations are adequate to achieve design bearing capacity	Y	S	IBC 1704.7	SI2	PE/GE, EIT or ETT
2. Verify excavations are extended to proper depth and have reached proper material	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT
3. Perform classification and testing of compacted fill materials	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly	Y	P	IBC 1704.7	SI2	PE/GE, EIT or ETT

Project: Building Addition – Portland Sports Complex
Date Prepared: October 1, 2012

Structural Schedule of Special Inspections

CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION IBC Section 1704.4	Y/N	EXTENT : CONTINUOUS, PERIODIC, SUBMITTAL,	COMMENTS	AGENT	AGENT QUALIFICATION
1. Inspection of reinforcing steel, including prestressing tendons, and placement	Y	P	ACI 318: 3.5, 7.1-7.7	SI1	PE/SE, EIT or ICC-RCSI
2. Inspection of reinforcing steel welding (Refer to Item 6B in Steel Construction Table below)	NA	P	AWS D1.4 ACI 318: 3.5.2		AWS-CWI
3. 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	P	IBC 1911.5, 1912.1 ACI 318: 8.1.3, 21.2.8	SI1	PE/SE, EIT or ICC-RCSI
4. Inspection of anchors installed in hardened concrete	Y	P	IBC 1912.1 ACI 318: 3.8.6, 8.1.3, 21.2.8	SI1	PE/SE, EIT or ICC-RCSI
5. Verifying use of required design mix	Y	P	ACI 318: Ch 4, 5.2-5.4	SI1, SI2 or TA1	PE/SE, EIT or ICC-RCSI
6. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature *In the absence of project specific specifications, the frequency of testing shall be per the schedule following this table*	Y	C	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8 IBC 1913.10	TA1	ACI-CFTT or ACI-STT
7. Inspection of concrete and shotcrete placement for proper application techniques	Y	P	ACI 318: 5.9, 5.10	SI1, SI2 or TA1	PE/SE, EIT or ICC-RCSI
8. Inspection for maintenance of specified curing temperature and techniques	Y	P	ACI 318: 5.11-5.13	SI1, SI2 or TA1	PE/SE, EIT or ICC-RCSI

Concrete Testing Frequency:

Concrete cylinders shall be taken, and fresh concrete tested at least once per placement or at the following intervals:

1. Retaining walls and footings: 50 cubic yards
2. Isolated Footings: 25 cubic yards
3. Slabs: 50 cubic yards

GEOTECHNICAL SUMMARY REPORT FOR:
PROPOSED EXPANSION
PORTLAND SPORTS COMPLEX
WARREN AVENUE
PORTLAND, MAINE
TO:
MR. BILL BELANGER
SEACOAST CRANE
PO BOX 540
98 ROUTE 236
KITTERY, ME 03904

JTC PROJECT NO: 12-15-0023

REPORT OF PRE-CONCRETE FORM & REINFORCING STEEL INSPECTION

CLIENT:	**Attar Engineering, Inc.** **Attn: Mr. Kenneth A. Wood, P.E.** **1284 State Road** **Eliot, ME 03903** **ken@attarengineering.com**	**PROJECT:**	**Portland Sports Center** **Portland, ME**
DATE:	**July 17, 2012**	**REPORT #:**	**12-55-000004-002**

Supplemental Information

Field Representative: **Dave Grodan**

Weather: **Clear**

Temperature: **80°F**

Forms

Is the subbase approved by the engineer? **Yes**

State Forms (Width/Depth) **2' x 1'**

Water & debris removed? **Yes**

Are the forms in good condition? **Yes**

Tight? **Yes**

Clean? **Yes**

Oil? (If applicable) **N/A**

Control joints placed? **No**

Does footing call for keyways? **No**

Embedment in and correct? **Yes**

Form Temperature? **80°F**

Reinforcing Steel Inspection

1. Rebar size per approved drawing? **Yes**
2. Are all bars accounted for? **Yes**
3. Vertical spacing within tolerance? **Yes**
4. Horizontal spacing within tolerance? **Yes**
5. Rebar supported properly? **Yes**
6. Dowels properly placed? **Yes**
7. Overlap specification? (Inches/Diameters) **24"**
8. Supporting system for bars? **Bricks**
9. Are bars tied and clean? **Yes**
10. Is clearance from ground/forms as specified? **Yes**
11. Was rebar disturbed during placement? **No**

Reinforcing Steel Details Observation:

Exact location of placement: F2.0 @ A Line & All of Line 7

1. **Footings:**

   Description of Horizontal: (2) #5 Continuous w/transverse, #4 @ 2'-6"

   Description of Vertical: #5 @ 2'-6"

   Detail Drawing:

2. **Pier/Column:** F2.0/F1.0

   Mats: F2.0 – (11) #6 Short way; (13) #6 Long way; F1.0 – (6) #5 Each way

   Description of Vertical: (8) #6

   Detail Drawing: Pier Schedule

CONSULTING TESTING INSPECTION JTC inc. GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 10, 2012 **REPORT #:** 12-55-000004-001

General Location: North wall strip footing (except for F.20 footing)
Date Cast: 07/13/12
Field Rep: John McCarthy
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: Air, Superplasticizer
Air Temp: 94°F
Weather: Sunny
Nominal size of Aggr: ¾"

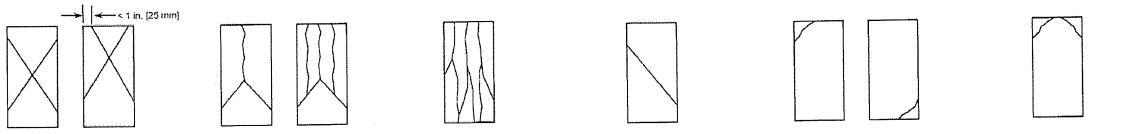
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7319/5 Cyls	5.0	5.2	86°F	2:04-3:06/62 Mins
7321	5.5	-	86°F	3:44-4:30/46 Mins

*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/20/12	7	12.56 in^2	3150	5
08/10/12	28	12.56 in^2	4470	5
08/10/12	28	12.56 in^2	4470	3
08/10/12	28	12.56 in^2	4280	3
	Hold	12.56 in^2		



Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 Columnar vertical cracking through both ends, no well-formed cones

Type 4 Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1

Type 5 Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6 Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: West half of footing line
Yards placed: 20.0 Yards
Design Strength: 3000 PSI
Remarks:

19 DOVER STREET
DOVER, NH 03820
T 603.749.1841 F 603.516.6851

66 SOUTHGATE STREET
WORCESTER MA 01603
T 508.505.0126

6 CLINTON AVENUE
WESTFIELD MA 01085
T 413.642.0138

73 RAINMAKER DRIVE
PORTLAND ME 04103-1291
T 207.883.7878

CONSULTING TESTING INSPECTION JTC INC. GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 14, 2012 **REPORT #:** 12-55-000004-003

General Location: Pier Footing
Date Cast: 07/17/12
Field Rep: Dave Grodan
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Partly Cloudy
Nominal size of Aggr: ¾"

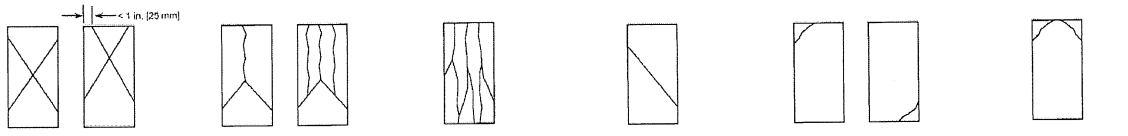
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
013218/5 Cyls	3.0	5.5	85°F	7:59-9:20/81 Mins
013221	4.5	-	85°F	N/A

*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/24/12	7	12.56 in^2	3560	5
08/14/12	28	12.56 in^2	4350	5
08/14/12	28	12.56 in^2	4480	3
08/14/12	28	12.56 in^2	4540	3
	Hold	12.56 in^2		



Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 Columnar vertical cracking through both ends, no well-formed cones

Type 4 Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1

Type 5 Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6 Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: F2.0 @ A line
Yards placed: 23.0 Yards
Design Strength: 3000 PSI
Remarks:

19 DOVER STREET
DOVER, NH 03820
T 603.749.1841 F 603.516.6851

66 SOUTHGATE STREET
WORCESTER MA 01603
T 508.505.0126

6 CLINTON AVENUE
WESTFIELD MA 01085
T 413.642.0138

73 RAINMAKER DRIVE
PORTLAND ME 04103-1291
T 207.883.7878

CONSULTING TESTING INSPECTION JTC inc. GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 14, 2012 **REPORT #:** 12-55-000004-003

General Location: Footing 7 Line
Date Cast: 07/17/12
Field Rep: Dave Grodan
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Cloudy
Nominal size of Aggr: ¾"

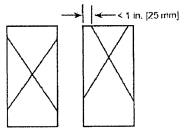
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
013223/5 Cyls	5.0	5.0	85°F	10:50-11:30/40 Mins

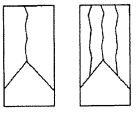
*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/24/12	7	12.56 in^2	2680	3
08/14/12	28	12.56 in^2	4150	6
08/14/12	28	12.56 in^2	4260	5
08/14/12	28	12.56 in^2	4170	5
	Hold	12.56 in^2		



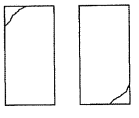
Type 1
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps



Type 2
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3
Columnar vertical cracking through both ends, no well-formed cones

Type 4
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



Type 5
Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6
Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Left rear corner
Yards placed: 23.0 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 16, 2012 **REPORT #:** 12-55-000004-004

General Location: Strip Footing, South wall
Date Cast: 07/19/12
Field Rep: John McCarthy
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR, Retarder
Air Temp: 60-70°F
Weather: Sunny
Nominal size of Aggr: ¾"

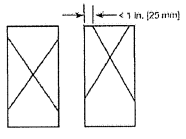
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7356	5.0	-	75°F	6:57-7:48/51 Mins
7357/5 Cyls	5.5	5.0	76°F	7:45-8:30/45 Mins
7358	5.5	-	75°F	8:37-9:20/43 Mins

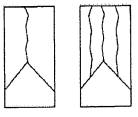
*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/26/12	7	12.56 in^2	3410	5
08/16/12	28	12.56 in^2	4530	5
08/16/12	28	12.56 in^2	4620	3
08/16/12	28	12.56 in^2	4520	5
	Hold	12.56 in^2		

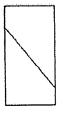


Type 1
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

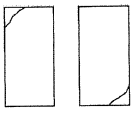


Type 2
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

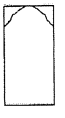
Type 3
Columnar vertical cracking through both ends, no well-formed cones



Type 4
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



Type 5
Side fractures at top or bottom (occur commonly with unbonded caps)



Type 6
Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Middle section of South strip footing
Yards placed: 33.0 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 27, 2012 **REPORT #:** 12-55-000004-009

General Location: Grade Beam @ Line 2
Date Cast: 07/30/12
Field Rep: Cliff Jones
Contractor: CDM Concrete Construction
Supplier: Hissong
Admixtures: MRWR
Air Temp: 78°F
Weather: Clear
Nominal size of Aggr: ¾"

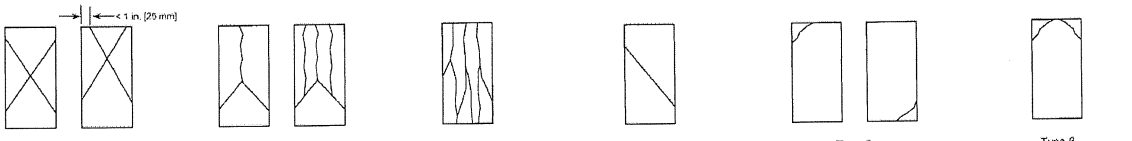
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7454/5 Cyls	5.5	5.3	81°F	12:54-2:00/66 Mins

*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
08/06/12	7	12.56 in^2	3290	5
08/27/12	28	12.56 in^2	4460	6
08/27/12	28	12.56 in^2	4520	2
08/27/12	28	12.56 in^2	4540	3
	Hold	12.56 in^2		



Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 Columnar vertical cracking through both ends, no well-formed cones

Type 4 Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1

Type 5 Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6 Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Grade beam @ Line 2 – Approximately 15' South of North end
Yards placed: 6.5 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc. GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 28, 2012 **REPORT #:** 12-55-000004-010

General Location: Footing; A line, 1-4
Date Cast: 07/31/12
Field Rep: Travis Sherburne
Contractor: CDM Concrete Construction
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Clear
Nominal size of Aggr: ¾"

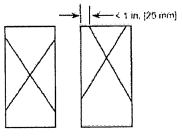
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7469/5 Cyls	4.5	4.6	81°F	2:42-3:27/45 Mins

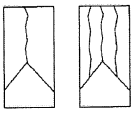
*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
08/07/12	7	12.56 in^2	4210	5
08/28/12	28	12.56 in^2	5210	2
08/28/12	28	12.56 in^2	5210	3
08/28/12	28	12.56 in^2	4930	3
	Hold	12.56 in^2		

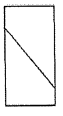


Type 1
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

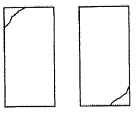


Type 2
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3
Columnar vertical cracking through both ends, no well-formed cones



Type 4
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



Type 5
Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6
Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Middle of footing @ Line A-4
Yards placed: 13.0 Yards
Design Strength: 3000 PSI
Remarks:

19 DOVER STREET
DOVER, NH 03820
T 603.749.1841 F 603.516.6851

66 SOUTHGATE STREET
WORCESTER MA 01603
T 508.505.0126

6 CLINTON AVENUE
WESTFIELD MA 01085
T 413.642.0138

73 RAINMAKER DRIVE
PORTLAND ME 04103-1291
T 207.883.7878

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 17, 2012 **REPORT #:** 12-55-000004-005

General Location: North Foundation Wall
Date Cast: 07/20/12
Field Rep: John McCarthy
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Sunny
Nominal size of Aggr: ¾"

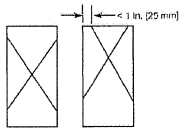
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7376/5 Cyls	5.5	5.8	82°F	3:40-4:20/40 Mins
7377	5.5	-	82°F	4:10-5:15/65 Mins

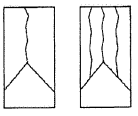
*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/27/12	7	12.56 in^2	3230	5
08/17/12	28	12.56 in^2	4440	3
08/17/12	28	12.56 in^2	4280	5
08/17/12	28	12.56 in^2	4280	5
	Hold	12.56 in^2		



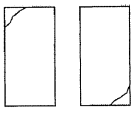
Type 1
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps



Type 2
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3
Columnar vertical cracking through both ends, no well-formed cones

Type 4
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



Type 5
Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6
Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: East end to center of North wall
Yards placed: 11.5 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 20, 2012 **REPORT #:** 12-55-000004-006

General Location: East Foundation Wall
Date Cast: 07/23/12
Field Rep: John McCarthy
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Sunny
Nominal size of Aggr: ¾"

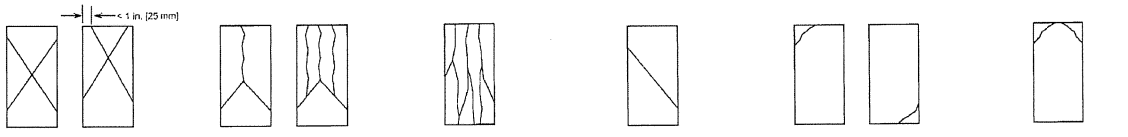
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7396/5 Cyls	6.0	6.8	82°F	3:33-4:20/47 Mins
7397	-	-	-	4:06-5:00/54 Mins

*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
07/30/12	7	12.56 in^2	3290	5
08/20/12	28	12.56 in^2	3960	5
08/20/12	28	12.56 in^2	3980	5
08/20/12	28	12.56 in^2	3950	5
	Hold	12.56 in^2		



Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 Columnar vertical cracking through both ends, no well-formed cones

Type 4 Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1

Type 5 Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6 Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Center of East wall
Yards placed: 9.0 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 22, 2012 **REPORT #:** 12-55-000004-007

General Location: South Foundation Wall
Date Cast: 07/25/12
Field Rep: John McCarthy
Contractor: Seacoast Crane
Supplier: Hissong
Admixtures: MRWR
Air Temp: 83°F
Weather: Sunny
Nominal size of Aggr: ¾"

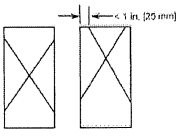
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
7421/5 Cyls	6.0	5.9	82°F	2:29-4:00/91 Mins
7422	6.0	-	83°F	3:50-5:00/70 Mins

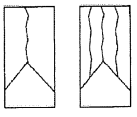
*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

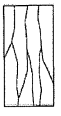
Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
08/01/12	7	12.56 in^2	3350	3
08/22/12	28	12.56 in^2	4180	1
08/22/12	28	12.56 in^2	4520	2
08/22/12	28	12.56 in^2	4290	1
	Hold	12.56 in^2		



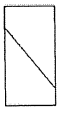
Type 1
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps



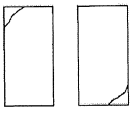
Type 2
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



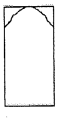
Type 3
Columnar vertical cracking through both ends, no well-formed cones



Type 4
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



Type 5
Side fractures at top or bottom (occur commonly with unbonded caps)



Type 6
Similar to Type 5 but end of cylinder is pointed

Specific Sample Location: Center of wall
Yards placed: 11.0 Yards
Design Strength: 3000 PSI
Remarks:

CONSULTING TESTING INSPECTION JTC inc.
GEOTECHNICAL • CONSTRUCTION

REPORT OF CONCRETE FIELD & LABORATORY TESTING

CLIENT: Attar Engineering, Inc.
Attn: Mr. Kenneth A. Wood, P.E.
1284 State Road
Eliot, ME 03903
ken@attarengineering.com

PROJECT: Portland Sports Center
Portland, ME

DATE: August 24, 2012 **REPORT #:** 12-55-000004-008

General Location: F6 Grade Beam
Date Cast: 07/27/12
Field Rep: Spencer Weston
Contractor: CDM Concrete Construction
Supplier: Hissong
Admixtures: MRWR
Air Temp: 80°F
Weather: Sunny
Nominal size of Aggr: ¾"

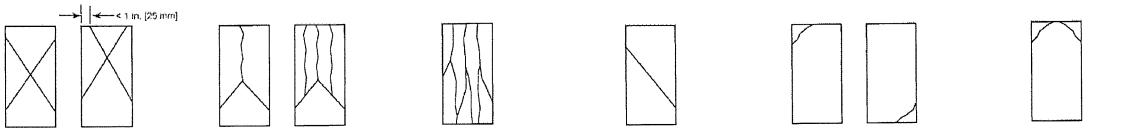
FIELD TEST RESULTS

Ticket #/ #CYL*	ASTM C143 SLUMP TEST	ASTM C231 AIR CONTENT	ASTM C1064 TEMPERATURE °F	ELAPSED TIME Batch : Final Discharge
013327/5 Cyls	6.0	5.5	84°F	3:15-4:10/55 Mins
013328	-	-	-	3:55-4:35/40 Mins

*Specimens molded in accordance with ASTM C31

LABORATORY COMPRESSIVE STRENGTH TESTING ASTM C39

Date of Test	Age	Specimen Area (in^2)	PSI	Break Type
08/03/12	7	12.56 in^2	3240	5
08/24/12	28	12.56 in^2	4290	3
08/24/12	28	12.56 in^2	4190	2
08/24/12	28	12.56 in^2	4150	2
	Hold	12.56 in^2		



Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps

Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 Columnar vertical cracking through both ends, no well-formed cones

Type 4 Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1

Type 5 Side fractures at top or bottom (occur commonly with unbonded caps)

Type 6 Similar to Type 5 but end of cylinder is pointed

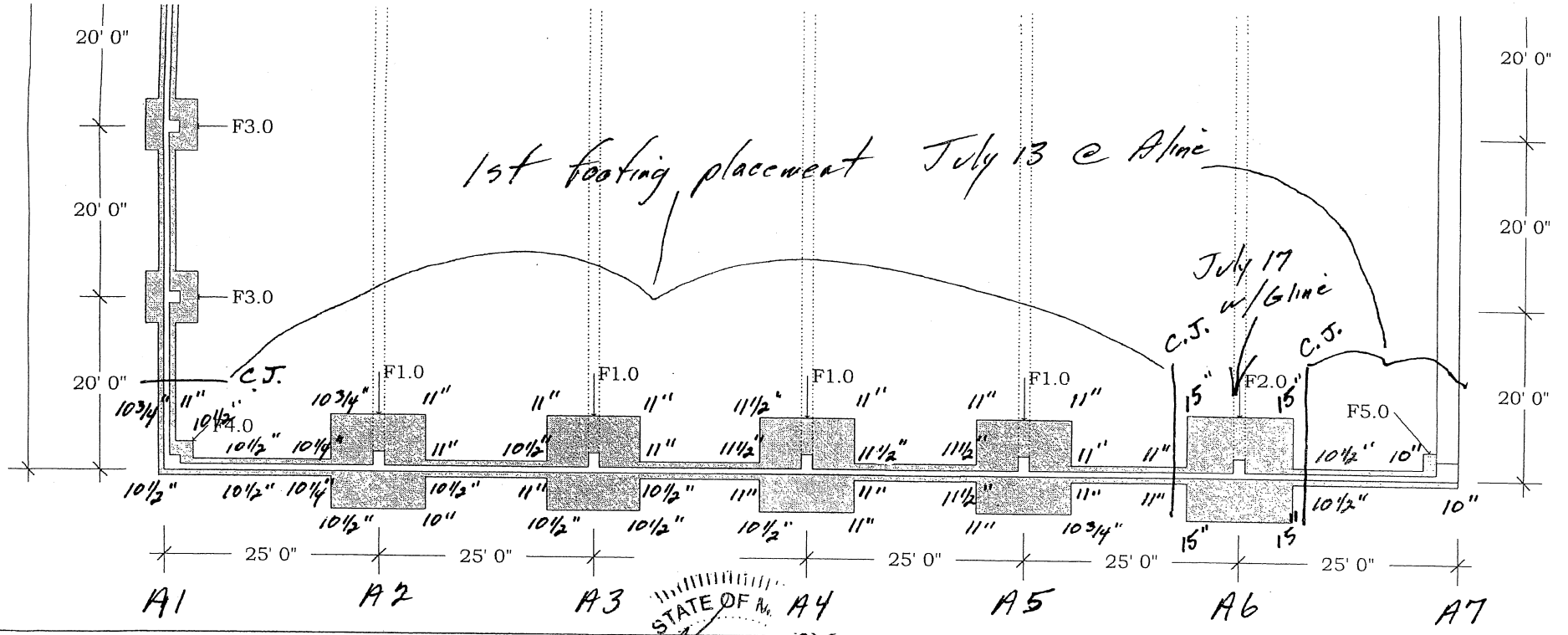
Specific Sample Location: Center of grade beam
Yards placed: 16.0 Yards
Design Strength: 3000 PSI
Remarks:

SPECIAL INSPECTIONS
PORTLAND SPORTS CENTER, 512 WARREN AVENUE, PORTLAND MAINE
JULY – OCTOBER, 2012

Date	Inspector	Summary
7/13/2012	KAW/LSC	Front wall (towards Joker's/Pkg Lot – rebar inspection – Pilaster/wall footings – Sat
7/15/2012	KAW	Conc. Cast – Front wall footings.
7/16/2012	KAW	Front wall Forms stripped wall footing thickness Varies – 9 ½" +. Pilaster footing thickness varies 10", 10 ¼", 10 ½" – checked w/designer – Ted Greenlaw who agrees thickness variation is acceptable see follow-up e-mail from Ted Greenlaw dtd 9/12/2012). Bill Belanger will have contractor block up forms (2 X 12") to get 12" Thickness. Left sidewall (towards Prescott) footing rebar installed.
7/18/2012	KAW	Rear wall (towards RR) footing rebar installed. Left wall forms stripped, Conc thickness is satisfactory (12" +)
7/20/2012	KAW	Rear wall footing forms stripped and backfilled, Front wall pilaster rebar installed.
7/23/2012	KAW	Rear wall cast less area for access (OVHD Door Wall) which will be 12" Thk.
7/25/2012	KAW	Ft wall forms stripped, geo-forms installed – rear wall rebar is SAT, forms are correct dims for concrete.
7/27/2012	EAB	Right wall (against the Dome) forms and rebar set. Rear wall forms stripped. Geoforms set on rear wall.
7/30/2012	EAB	Forms and rebar set for continuous concrete beam at column line #2 (furthest beam from existing building); pouring concrete when I left. Forms and rebar were being set for column line #6 (1 from existing building). Rebar and forms were right size and depth.
7/31/2012	EAB	The concrete beams at column lines #2, #3, and #6 had been poured. Forms were set for the concrete beams at column line #4 and #5 to be poured in the afternoon. Rebar and forms were right width and depth. (16" X 12")

8/2/2012	KAW	Checked concrete beams for depth and width – all meet or exceed plan dims. Also checked grade beam for width (area was backfilled) – 33" exceeds 30" req'd. All concrete has been poured and interior areas are being graded. Two Geo-Foam blocks has floated due to large rain events last week – ballasted with 3,500# Conc Blocks until backfilled and secured. Tie rods were according to Bill Belanger) "Bar Lock w/High Strength Couplers", as an approved equal.
8/29/2012	KAW/LSC	Periodic inspection of high-strength bolts… All bolts accessible from ground visually observed and hand checked for looseness - all OK. Observed one roof peak joint in mid-building frame line from scissor lift – OK. Large majority of frame bolts and roof purlin bolts visible from ground – all appeared to be in place. Note- wall girt bolts are medium strength. (LSC).
9/6/2012	KAW	Inspection for the remainder of the purlin and flange bracing.
9/17/2012	KAW	Inspection of site improvements and final for building materials (framing and roof).

*Photographs available for most site visits.



OWNER
Portland Sports Realty, LLC
512 Warren Ave
Portland, ME 04103

ENGINEER OF RECORD
Ted Greenlaw, P.E.
183 Columbia Road
Hanover, MA 02339

STATE OF ME
THEODORE GREENLAW
No. 3852
LICENSED PROFESSIONAL ENGINEER

FOUNDATION PLAN & NOTES

PORTLAND SPORTS COMPLEX ADDITIO
PORTLAND, MAINE

Re Portland Sports ctr

From: Ted Greenlaw [tedgreenlawpe@yahoo.com]
Sent: Wednesday, September 12, 2012 1:53 PM
To: ken wood
Cc: William J. Belanger
Subject: Re: Portland Sports ctr

yes I believe we are ok

From: Ken Wood <ken@attarengineering.com>
To: 'Ted Greenlaw' <tedgreenlawpe@yahoo.com>
Cc: 'William J. Belanger III' <wjb3@seacoastcranebuilding.com>; 'William J. Belanger' <wjbjr@seacoastcranebuilding.com>
Sent: Wednesday, September 12, 2012 11:15 AM
Subject: Portland Sports ctr

Hi Ted - Hope things are going well with you - I have attached a sketch of the footing depths for the first footing pour at the Dome - we had discussed this last July in a telephone conversation and I believe that you confirmed that these depths were satisfactory - could you please confirm by reply to my e-mail? Thanks Ted - call with questions.

Ken

Kenneth A. Wood, P.E.
President
ATTAR
ENGINEERING, INC.

OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

CIVIL u STRUCTURAL u MARINE

1284 State Road
Eliot, ME 03903
Phone: (207) 439-6023
Fax: (207) 439-2128