

Structural Special Inspections Report

College of Pharmacy

University of New England

Portland, Maine

July 15, 2009

Report prepared by:

Structural Engineer of Record
Becker Structural Engineers, Inc.
75 York Street
Portland, Maine 04101

College of Pharmacy
University of New England
Portland, Maine
July 15, 2009

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EXHIBIT A

01000 Special Inspections - General

BECKER

structural engineers, inc.

Statement of Special Inspections

College of Pharmacy
University of New England
Portland, Maine
March 13, 2008

Statement Prepared by
Structural Engineer of Record
Becker Structural Engineers, Inc.
75 York Street
Portland, ME 04101
207. 879. 1838

Owner
University of New England
11 Hills Beach Rd.
Biddeford, ME
207. 283. 0170

Architect of Record
Port City Architecture
65 Newbury St.
Portland, ME 04101
207. 761. 9000

Contractor
Allied/Cook Construction
PO Box 1396
Portland, ME 04101
207. 772. 2888

Statement of Special Inspections - Exhibit A

Project: *University of New England – College of Pharmacy*

Location: *Portland, Maine*

Owner: *University of New England*

This *Statement of Special Inspections* encompass the following discipline:

- Structural
- Mechanical/Electrical/Plumbing
- Architectural
- Other: _____

Design Professional in Responsible Charge: *Paul B. Becker, P.E.*

Firm Name: *Becker Structural Engineers, Portland, ME*

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

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 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.

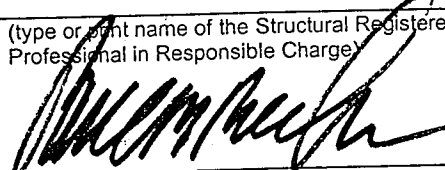
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

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

Prepared by:

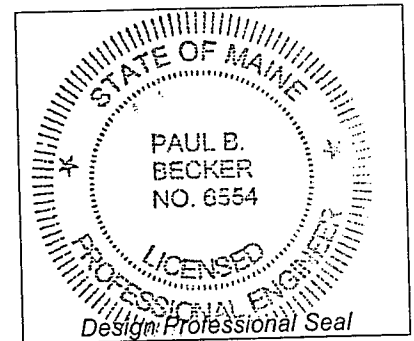
Paul B. Becker, P.E.

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



Signature

3-13-08
Date



Owner's Authorization:

Building Code Official's Acceptance:

Signature

Date

Signature

Date

Statement of Special Inspections (Continued) - Exhibit A

List of Agents

Project: *University of New England – College of Pharmacy*

Location: *Portland, Maine*

Owner: *University of New England*

This *Statement of Special Inspections* encompass the following discipline:

- Structural Mechanical/Electrical/Plumbing
 Architectural Other: _____

(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:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Soils and Foundations | <input type="checkbox"/> Spray Fire Resistant Material |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input type="checkbox"/> Cold-Formed Steel Framing |
| <input type="checkbox"/> Precast Concrete | <input type="checkbox"/> Exterior Insulation and Finish System |
| <input checked="" type="checkbox"/> Masonry | <input type="checkbox"/> Mechanical & Electrical Systems |
| <input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Architectural Systems |
| <input type="checkbox"/> Wood Construction | <input type="checkbox"/> Special Cases |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Structural Special Inspection Coordinator (SSIC)	<i>Becker Structural Engineers (BSE)</i>	<i>75 York Street Portland, ME 04107 (207) 879-1838 info@beckerstructural.com</i>
2. Special Inspector (SI 1)	<i>Becker Structural Engineers (BSE)</i>	<i>75 York Street Portland, ME 04107 (207) 879-1838 info@beckerstructural.com</i>
3. Special Inspector (SI 2)	<i>Haley & Aldrich, Inc.</i>	<i>75 Washington Ave Suite 203 Portland, ME 04101</i>
4. Testing Agency (TA 1)	<i>To Be Determined</i>	
5. Testing Agency (TA 2)		
6. Other (O1)		

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.

Statement of Special Inspections (Continued) - Exhibit A

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: *University of New England – College of Pharmacy*

Location: *Portland, Maine*

Owner: *University of New England*

Owner's Address: *11 Hills Beach Rd.
Biddeford, ME 04005*

Architect of Record: *Lita Semrau*
(name)

Port City Architecture
(firm)

Structural Registered Design

Professional in Responsible Charge: *Paul B. Becker*
(name)

Becker Structural Engineers
(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 other than the following:

Comments:

(Attach continuation sheets if required to complete the description of corrections.)

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

PAUL B. BECKER

(Type or print name)

BECKER STRUCTURAL ENGINEERS, INC.

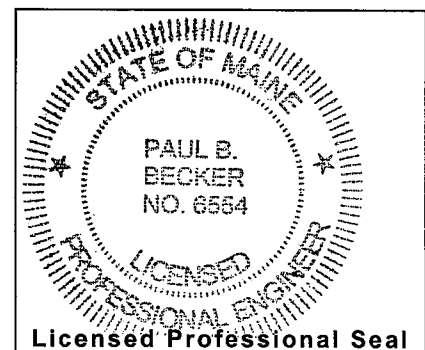
(Firm Name)

[Handwritten Signature]

Signature

7.15.09

Date



Statement of Special Inspections (Continued) - Exhibit A
Special Inspector's/Agent's Final Report

Project: University of New England – College of Pharmacy
Special Inspector or Agent: Andrew Blaisdell Haley & Aldrich, Inc.
(name) (firm)
Designation: SI-2

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 other than the following:

Comments:

Statement above pertains to excavation/foundation subgrade conditions observed by Haley & Aldrich, Inc., including perimeter foundations along south and east sides of building (see actual limits observed in the attached Daily Field Report, dated 1 May 2008).

Condition of remaining foundation excavations/subgrades were not observed by Haley & Aldrich, Inc.

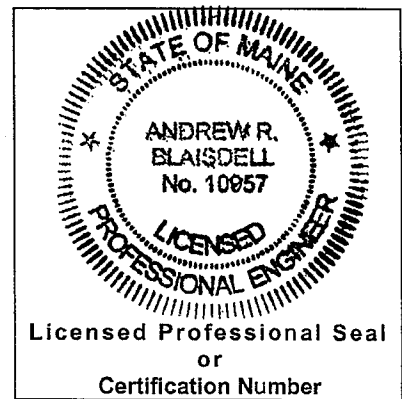
(Attach continuation sheets if required to complete the description of corrections.)

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:

Andrew R. Blaisdell, P.E.
(Type or print name)

[Signature] 3/31/09
Signature Date



Statement of Special Inspections (Continued) - Exhibit A
Special Inspector's/Agent's Final Report

Project: University of New England - College of Pharmacy
Special Inspector or Agent: DARRELL A. GILMAN SUMMIT ENVIRONMENTAL
(name) (firm)
Designation: TAI

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 other than the following:

Comments:

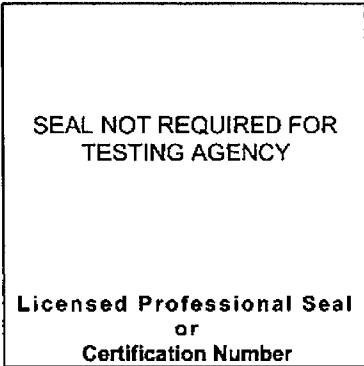
(Attach continuation sheets if required to complete the description of corrections.)

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:

DARRELL A. GILMAN
(Type or print name)

Darrell A. Gilman 7-13-09
Signature Date



01000.5 Disclaimers and Qualifications

The program of Structural/Special Tests and Inspections does not relieve the Contractor or its Subcontractors of their responsibilities and obligations for quality control of the work, for any design work which is included in the scope of services, and for full compliance with the requirements of the Construction Documents. Furthermore, the detection of, or the failure to detect, deficiencies or defects in work during testing and inspection conducted pursuant to the Program does not relieve the Contractor or its subcontractors of their responsibility to correct all deficiencies or defects, whether detected or undetected, in all parts of work, and to otherwise comply with all requirements of the Construction Documents. No warrantee is expressed or implied by the issuance of this document. Additional disclaimers and/or qualifications may be included in the Owner-Special Inspection agreement.

Schedule of Special Inspections - Exhibit B

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 if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

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

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.
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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

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector
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Other

EXHIBIT B

02300 Soils & Foundations

Schedule of Special Inspections – Exhibit B SOILS & FOUNDATION CONSTRUCTION

©Becker Structural Engineers, Inc. 2005

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
IBC Section 1704.7, 1704.8, 1704.9 1. Verify existing soil conditions, fill placement and load bearing requirements a. Prior to placement of prepared fill, determine that the site has been prepared in accordance with the approved soils report. b. During placement and compaction of fill material, verify material being used and maximum lift thickness comply with the approved soils report. c. Test in-place dry density of compacted fill complies with the approved soils report.	Y	P	IBC 1704.7.1	SI2	PE/GE or EIT	5/1/08	
	N	P	IBC 1704.7.2	SI2	PE/GE or EIT		
2. Pile foundations: a. Observe and record procedures for static load testing of piles. b. Observe and record procedures for dynamic load testing of piles. c. Record installation of each pile and results of load test. Include cutoff and tip elevations of each pile relative to permanent reference. d. Test welded splices of steel piles	Y	N	IBC 1704.7.2	TA1	NICET-ST or NICET-GET	NA - FTGS BEAR	OH NATIVE SOIL
	N	C	IBC 1704.8	SI2	PE/GE or EIT		
	N	C		SI2	PE/GE or EIT		
	N	C		TA1	NICET-GET		
	N	C	AWS D1.1	TA1	AWS-CWI		
3. Pier foundations: Verify installation of pier foundations for buildings assigned to Seismic Design Category C, D, E or F. a. Verify pier diameter and length b. Verify pier embedment (socket) into bedrock c. Verify suitability of end bearing strata	N	C	IBC 1704.9	SI2	PE/GE or EIT		
	N	C		SI2	PE/GE or EIT		
	N	P		SI2	PE/GE or EIT		
	N	P		SI2	PE/GE or EIT		

Soils and Foundations Construction has been reviewed in accordance with sections 1704.7, 8 & 9 of the IBC Code

Special Inspector: *DES* Date: 7/15/09



DAILY FIELD REPORT

Project	COLLEGE OF PHARMACY BUILDING UNIVERSITY OF NEW ENGLAND	Report No.	1
Location	PORTLAND, MAINE	Date	1 May 2008
Client	UNIVERSITY OF NEW ENGLAND	Page	1 of 1
Contractor	ALLIED-COOK CONSTRUCTION (CM) R.J. GRONDIN & SONS (SITE)	File No.	34718-010
Weather	CLEAR	Temperature	35°

I. CONTRACTOR'S ACTIVITIES:

1. Prior to Field Representative's arrival, Grondin conducted excavation for footings along column line 1, from column line B to column line G; along column line G, from column line 1 to column line 4; and along column line 4, from column line F to column line G. Excavation was apparently performed with an excavator outfitted with a smooth-edged cleanup bucket attachment. Forms had been constructed and reinforcing steel had been installed in the excavations prior to Field Representative's arrival.

II. FIELD REPRESENTATIVE'S ACTIVITIES:

1. Field Representative met with Gary Kibler (Allied-Cook) to review the prepared excavations. The exposed bearing surfaces generally consisted of naturally deposited, dense sand. Along columns lines 4 and G, exposed surfaces were generally dry, with occasional areas that had become loosened apparently under foot traffic during placement of forms and reinforcing steel. Exposed surfaces were generally moist along column line 1; it appeared that the recent rain had not drained as quickly in this area. Column footing excavations at column lines F-4 and D-1 showed signs of significant foot traffic during or immediately after rainfall, with several piles of loose, wet sand visible in each.
2. Field Representative informed Mr. Kibler that the condition of the dry excavations and the moist excavations without any disturbance appeared firm and were suitable for foundation support in the current condition. The footing excavations at column lines F-4 and D-1 were also generally acceptable with the exception of the piles of loose, wet sand.
3. Field Representative recommended to Mr. Kibler that he direct Grondin to remove the piles of wet sand present at column lines F-4 and D-1 with shovels prior to placement of concrete to provide a smooth, uniform bearing surface. Mr. Kibler agreed.

ATTACHMENTS: Site Sketch

<u>Field Representative(s)</u>	<u>Time on site</u>	<u>Report/Travel/Other</u>	<u>Total</u>
A. Blaisdell	0.5 hr	1.0 hr	1.5 hr

Distribution: Al Thibeault, University of New England
Dan Burne, Becker Structural Engineers



Haley & Aldrich, Inc.

EXHIBIT B

03300 Cast-in-Place Concrete

Schedule of Special Inspections – Exhibit B CONCRETE CONSTRUCTION

©Becker Structural Engineers, Inc. 2005

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
IBC Section 1704.4							
1. Inspection of reinforcing steel, including prestressing tendons, and placement	Y	P	ACI 318: 3.5, 7.1-7.7	SII	PE/SE or EIT	5/08-5/09	NSJ
2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B	N		Welding of Reinf Not Allowed	TAI	AWS-CWI		
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased	N	C	IBC 1912.5	SII	PE/SE or EIT		
4. Verifying use of required design mix	Y	P	ACI 318: Ch 4, 5.2-5.4	SII	PE/SE or EIT	5/08-5/09	NSJ
5. At time fresh concrete is sampled to fabricate specimens for strength test, perform slump and air content test and temperature	Y	C	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	TAI	ACI-CFTT or ACI-STT	5/08-5/09	NSJ
6. Inspection of concrete and shotcrete placement for proper application techniques	Y	C	ACI 318: 5.9, 5.10	SII	PE/SE or EIT	5/08-5/09	NSJ
7. Inspection for maintenance of specified curing temperature and techniques	Y	P	ACI 318: 5.11-5.13	SII	PE/SE or EIT	5/08-5/09	NSJ
8. Inspection of Prestressed Concrete							
a. Application of prestressing force.	N	C	ACI 318: 18.20	SII	PE/SE or EIT		
b. Grouting of bonded prestressing tendons in seismic force resisting system	N	C	ACI 318: 18.18.4	SII	PE/SE or EIT		
9. Erection of precast concrete members	N	P	ACI 318: Ch 16	SII	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 beams and structural slabs	N	P	ACI 318: 6.2	TAI	ACI-STT		

Concrete Construction has been reviewed in accordance with section 1704.4 of the IBC Code

Special Inspector *NSJ*

Date 7/15/09

Page 1 of 1

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT
Cast in Place Concrete

Date:	5-1-08
Time:	12:00 PM
Temp:	60 F
Weather:	Sunny

Observation Location: Wall footings: F4-G4, G4-G3, G2-G1, G-1-A1, & large areaway ret wall footing

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Insufficient side cover at G1.6, G3, G3.6. Insufficient side and bottom cover, due to sand in form, at G2. Vertical dowels at wrong wall face at large areaway. Discussed all with Project Superintendent. All was being corrected at time of visit to be complete prior to placement. Testing agency on site.

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	5-14-08
Time:	10:00 AM
Temp:	60 F
Weather:	Sunny

Observation Location: Wall footings: F4-B4 Wall Rebar Along 1 Line from D to G & Along G Line from 1 to 2

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Incomplete items found during the visit included:

Sand was kicked up in some areas underneath footing bearing along 4 line, bars were missing at thin walls behind beam pockets, shear lug bond outs missing at piers, pier ties missing at col G2, corner bars missing at wall corner of 1 line and D line.

All issues were brought to the attention of Superintendent Gary Kibler of Allied Cook. Work began fixing all missing or incomplete items while on site.

Signed: Daniel S. Burne, P.E.
James D. Hughes, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT
Cast in Place Concrete

Date:	5-27-08
Time:	7:30 AM
Temp:	70 F
Weather:	Sunny

Observation Location: Wall Rebar Along 4 Line from D to G & Along G Line from 3 to 4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Incomplete items found during the visit included:

Pier ties missing at col G3 and corner bars missing at wall corner of 4 line and D line.

Both issues were brought to the attention of Superintendent Gary Kibler of Allied Cook. Work began fixing all missing or incomplete items while on site.

Signed: James D. Hughes, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	5-29-08
Time:	9:15 AM
Temp:	70 F
Weather:	Sunny

Observation Location: Footing Rebar Along 1 Line from A to C & Along A Line from 1 to 2.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

At footing A-2 footing was squared off at interior of bldg. to simplify forming.



Signed: James D. Hughes, E.I.

B E C K E R

03300

structural engineers, inc.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT
Cast in Place Concrete

Date:	6-5-08
Time:	3:30 PM
Temp:	70 F
Weather:	Cloudy

Observation Location: Interior footings: F2, F3, E3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Reinforcement installed in F2 & F3 at time of visit; no deficiencies. Work was interrupted due to incorrect subgrade elevation. Grade to be corrected and footings placed. Advised GC to provide photographs of completed footings prior to placement.

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	6-13-08
Time:	10:00 AM
Temp:	70 F
Weather:	Sunny

Observation Location: Wall placement: C1 through A2, Interior footing at E2, shaft wall footing at stair between E & F

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	6-24-08
Time:	11:00 AM
Temp:	72 F
Weather:	Sunny

Observation Location: Elevator pit walls

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

(1) pier tie not placed properly. Tie was corrected in my presence.

Signed: Daniel S. Burne, P.E.

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structural engineers, inc.

03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	7-3-08
Time:	10:00 AM
Temp:	70 F
Weather:	Sunny

Observation Location: Wall placement: A3 through A4 and A4 through C4, Interior footing at B3.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Some corner rebar missing, CMU wall dowels missing in footing B3, all items brought to the attention of Gary Kibler of Allied Cook and corrected prior to leaving the site.

Signed: James D. Hughes, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	7-10-08
Time:	11:00 AM
Temp:	78 F
Weather:	Sunny

Observation Location: Interior Ftg B-2.4, Ftg at Stair B, Wall stem at Stair A

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Daniel S. Burne, P.E.

B E C K E R

structural engineers, inc.

03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	7-18-08
Time:	9:45 AM
Temp:	78 F
Weather:	Sunny

Observation Location: Wall A-2 thru A-3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: James D. Hughes, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	7-22-08
Time:	8:30 AM
Temp:	72 F
Weather:	Sunny

Observation Location: Wall A-2 thru A-3

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
					Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: James D. Hughes, E.I.

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03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	7-30-08
Time:	2:00 PM
Temp:	80 F
Weather:	Sunny

Observation Location: Areeaway A-B line, Wall G2-G3, Ext piers G3.6-C4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Insufficient cover at areaway wall bars ((3) bars at top corner). Issue to be corrected prior to placement.

Signed: Daniel S. Burne, P.E.

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03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	8-15-08
Time:	10:15 AM
Temp:	80 F
Weather:	Sunny

Observation Location: Masonry Piers D-1 and E-1

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: James D. Hughes, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	8-19-08
Time:	2:15 PM
Temp:	80 F
Weather:	Sunny

Observation Location: Masonry Piers A-1.6, A-2, A-3, A3.6

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

One pier tie was missing at the top of the masonry pier at A-1.6, issue was brought to the attention of Gary Kibler of Allied Cook. Pier was marked for addition of a tie prior to scheduled pour on 8/20.

Signed: James D. Hughes, E.I.

B E C K E R

structural engineers, inc.

03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	8-20-08
Time:	3:30 PM
Temp:	75 F
Weather:	Sunny

Observation Location: Areaway walls off 1 line

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Bar size incorrect at two walls, one area noted with insufficient cover. Advised GC to add additional reinforcement. Will revisit site prior to placement.

Signed: Daniel S. Burne, P.E.

B E C K E R

structural engineers, inc.

03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	8-21-08
Time:	3:30 PM
Temp:	75 F
Weather:	Sunny

Observation Location: Areaway walls off 1 line

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	8-27-08
Time:	11:00 AM
Temp:	70 F
Weather:	Sunny

Observation Location: First floor elevated slab

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WWF Installation near completion at time of visit
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Daniel S. Burne, P.E.

B E C K E R

structural engineers, inc.

03300

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	9-8-08
Time:	12:30 PM
Temp:	80 F
Weather:	Sunny

Observation Location: Elevated slab 2nd & 3rd floor

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Bar not tied at portion of 3rd floor, A line. Rebar scrap and debris noted. Advised Superintendent to secure bar and remove scrap and debris prior to placement.

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT
Cast in Place Concrete

Date:	11-10-08
Time:	2:30 PM
Temp:	50 F
Weather:	Sunny

Observation Location: Basement floor slab prior to placement

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:
Moisture barrier installed with all seams taped.

Signed: Nathan Merrill, E.I.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT
Cast in Place Concrete

Date:	4-13-09
Time:	3:00 PM
Temp:	50 F
Weather:	Sunny

Observation Location: Exterior concrete off G line: Stair walls, angled frost walls, pier foundation

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Masonry dowels not yet installed
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Daniel S. Burne, P.E.

Project:	UNE College of Pharmacy
Location:	Portland, Maine
Becker Job No:	1889

OBSERVATION REPORT

Cast in Place Concrete

Date:	5-4-09
Time:	1:00 PM
Temp:	60 F
Weather:	Sunny

Observation Location: Curved ramp walls off A line, Basement vault slab

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	One area of insufficient cover noted and correction was underway.
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Masonry dowels not yet installed
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Ramp frost wall footings in place. Large drainage pipe was observed to penetrate two footings completely at end of ramp. Considered to not be located in critical area. No corrective action required.

Signed: Daniel S. Burne, P.E.



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

April 3, 2008

Allied/Cook Construction
PO Box 1396
Portland, ME 04101-1396

RE: UNE College of Pharmacy

Dear Sirs,

Enclosed please find copies of the mix designs and an trailer card for the above reference project:

Mix# 1	3000 psi, 3/4 inch	optional:	Mid-range
Mix# 2	3000 psi, 3/4 inch no air	optional:	Mid-range, Fiber
Mix# 3	4500 psi, 3/4 inch	optional:	Mid-range

In order to better assure you that the approved design mix is shipped, please note that Dragon Products will not ship concrete until a stamped approved submittal is received by Dragon Products. Be sure to use the above mix number and description when ordering concrete for your project. Please be sure that the appropriate personnel on your project have this mix design information.

WARNING: Plastic concrete is a highly corrosive material with an alkalinity level of ph 12 to ph 13. If not handled properly it can cause severe alkali burns. Please see enclosed Material Safety Data Sheet for further information.

Please include us on the distribution list for any concrete test reports that are generated from this project. If you have any questions of I can be of any further assistance, please do not hesitate to contact me at 207-774-6355

Sincerely,

Mark West
Technical Services

Enclosure
cc: Phil Nunley

RECEIVED

APR - 4 2008

ALLIED CONSTRUCTION

033006
LINE/CLP

Reviews: GARY KIBLER

Date: 4-8-08

Submit # 03300-001

Spec Section: 033000

CAST-IN-PLACE CONCRETE

Complies w/ Cons.

Submittal List on file

Comments:

DRAGON[®]
PRODUCTS COMPANY

**PROJECT MIX DESIGN
TRAILER CARD**

**UNE College of Pharmacy
Allied/Cook Construction**

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	¾-inch		Mid-Range
2	3000	¾-inch	No air	Mid-Range, Fiber
3	4500	¾-inch		Mid-Range

Supplied by: Dragon Concrete

**Dispatch:
800-773-2951**

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355

**UNE College of Pharmacy
Allied/Cook Construction**

Mix No.	Strength (psi)	Agg. Size	Description	Optional Admixtures
1	3000	¾-inch		Mid-Range
2	3000	¾-inch	No air	Mid-Range, Fiber
3	4500	¾-inch		Mid-Range

Supplied by: Dragon Concrete

**Dispatch:
800-773-2951**

Area Rep: Phil Nunley
Tech. Services: Mark West
207-774-6355

Dragon Products Company, Inc.
Material Safety Data Sheet
for
Ready Mixed Concrete
May 1994

Section I - Identity

Material Name: Portland Cement Concrete
Manufacturer's Name: Dragon Products Company, Inc.
Address: U. S. Route 1 P. O. Box 191
Thomaston, ME
Chemical Name: Not Applicable
Chemical Family: Portland Cement Product
Chemical Formula: Mixture cementitious material,
aggregates and water
Trade Name & Synonyms: Ready mixed concrete;
concrete
Molecular Weight: Not applicable
Material Use: Construction materials

Section II - Hazardous Ingredients

Concrete is a mixture of inert gravel or rock, sand, Portland Cement and water. It may also contain chemical admixtures and/or flyash and/or granulated slag and/or silica fume and/or color pigment. The chemical admixtures are present in quantities comprising less than 2% of the material.

Hazardous Ingredients

Portland Cement (CAS 65997-15-1)	10 - 20%
Quartz (SiO ₂) (CAS 14808-60-7)	3 - 7%
Portlandite (Ca(OH) ₂) (CAS 1305-62-0)	2 - 4%

The hazardous ingredients in plastic (wet) concrete cannot become airborne. However, water added to the materials reacts with some of the ingredients to form calcium hydroxide, a corrosive chemical which will irritate the eyes and skin upon contact. Concrete dust from dried Portland Cement Concrete may also contain hazardous ingredients in sufficient concentrations to cause skin, eye, or respiratory irritation.

Section III - Physical Data

Boiling Point (°F.),

N/A

Vapor Pressure (mm Hg.)	N/A
Vapor Density (Air=1)	N/A
Solubility in Water	0.1%
pH	12 - 13
Specific Gravity (H ₂ O=1)	1.5 - 2.9
Percent, Volatile By Volume (%)	N/A
Evaporation Rate	N/A
Appearance and Odor	Gray - unless color pigment has been added.

Section IV - Fire and Explosion Hazard Data

N/A

Section V - Health Hazard Data

(a) Plastic Concrete

Toxicological Properties

Plastic concrete has an alkalinity level of pH12 to pH13.

Route of Entry: Skin contact, eye contact, ingestion.

Effects of Acute Exposure: Plastic concrete can cause dry skin, alkali burns, eye irritations and burns. Ingestion may cause irritation of the throat.

Effects of Chronic Exposure: Damage to the epidermis and dermis (outer layers of skin).

(b) Hardened or "Set" Concrete

Toxicological Properties

In place, hardened concrete does not present a health hazard. Sawing or other demolition techniques may result in exposure to dust which may contain Portland Cement, Portlandite, Quartz, and trace admixtures. The ingredients in concrete dust, when in contact with water or perspiration, may cause the same health effects as plastic concrete.

The following information concerns dry concrete dust:

- Route of Entry: Skin contact, eye contact, inhalation, ingestion.
- Effects of Acute Exposure: Concrete dusts can cause dry skin and skin, eye, and upper respiratory tract irritation.
- Effects of Chronic Exposure: Concrete dust can cause inflammation of the tissue lining, the interior of the nose and the cornea (white) of the eye. Hyper-sensitive people may develop allergic dermatitis.
- Chronic exposure to respirable dust containing quartz at levels exceeding exposure limits has caused silicosis.

Section VI - First Aid Measures

Wash exposed areas of the body with soap and water;
Irrigate eyes with large amounts of water;
Consult a physician in cases of severe exposure;
In case of accidental ingestion, drink two or three glasses of milk, call a physician and do not induce vomiting.

Section VII - Reactivity Data

Stability: Product is stable
Conditions to Avoid: N/A
Incompatibility (Materials to avoid): Acids
Hazardous Decomposition Products: N/A
Hazardous Polymerization: Will not occur
Conditions to Avoid: N/A

Section VIII - Spill or Leak Procedures

Leak and Spill Procedure: Sweep and shovel into waste disposal containers. Flush with water hose for final clean-up of floors, walkways, etc. Ready Mixed Concrete or flushing water should not be allowed to reach surface water (rivers, lakes, streams).

Waste Disposal: At approved landfill or waste disposal sites in accordance with all applicable state, federal and local regulations.

Section IX - Special Protection Information

Personal Equipment:

Use gloves, boots and clothing to prevent skin contact. Wear safety glasses or goggles to prevent contact with eyes. Wear an approved respirator if exposed to dust from hardened concrete when sawing or using other demolition methods.

Engineering Controls:

Provide ventilation when sawing or using other demolition techniques to maintain dust concentrations below exposure limits.

Section X - Special Precautions

See Section V - Health Hazard Data
Section VIII - Spill and Leak Procedures
Section IX - Special Protection Information

The information contained herein is based on knowledge believed to be reliable, but Dragon Products Company makes no warranties, express or implied, as to the accuracy or adequacy thereof. Nothing herein excuses the recipient hereof from such duties as shall be imposed by the Occupational Safety & Health Act of 1970 and regulations issued pursuant thereto.



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

**see MIX II Mix Report
304120**


**Strength Compressive: 3,000 psi
4/2/2008**

Contractor : **ALLIED - COOK CONSTRUCTION**
Project : **UNE COLLEGE OF PHARMACY**
Source of Concrete : **DRAGON PRODUCTS COMPANY**
Construction Type : **MIX #1**
Placement : **CHUTE, PUMP**

	Weights per Cubic Yard (Saturated, Surface-Dry)		
	Quantity	Density	Yield, ft ³
DRAGON, TYPE II, lb	400	3.150	2.04
LAFARGE, NEWCEM, lb	100	2.820	0.57
Water, lb	265	1.000	4.25
3/4" QUARRY STONE, ASTM C-33, lb	1,750	2.700	10.39
FINE AGGREGATE, ASTM C-33, lb	1,352	2.650	8.18
BASF: POZZOLITH 200N, oz (US)	15.0	1.000	0.02
BASF: MICRO-AIR, oz (US)	2.5	1.000	0.00
(OPTIONAL) BASF: POLYHEED 997, oz (US)	40.0	1.000	0.04
Total Air, %	6.0 ± 1.5		1.63
		TOTAL	27.10

Water/Cement Ratio, lbs/lb 0.53
Slump, High, in 4.00
Low, in 2.00
Concrete Unit Weight, pcf 142.84
Yield, % 100.4
Exposure Condition : Severe exposure

**NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6 " MAX SLUMP WITH POLYHEED 997**

Prepared by : 

TECHNICAL SERVICES

SACO TRANSPORTATION CENTER
 Mix: PSSACOTRANS34 F'c: 3000 psi
 04/01/08

MIX DESCRIPTION
 =====

PSSACOTRANS34 ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
1/28/ 8	59989	35	67	5.1	5.00	3515	5140	-
1/28/ 8	59997	35	58	5.3	5.50	2955	4973	-
2/ 8/ 8	60130	25	54	7.2	4.25	2900	4565	4893
2/19/ 8	60182	35	56	6.2	6.00	2420	4053	4530
2/20/ 8	60206	31	56	5.5	3.75	3260	4560	4393
2/25/ 8	60230	45	60	8.0	7.00	2650	4180	4264
2/28/ 8	60302	29	66	5.9	3.75	3255	-	-
3/ 4/ 8	60318	51	59	5.2	3.50	4410	-	-
3/11/ 8	60379	41	63	6.0	5.75	3280	-	-
Count -----		9	9	9	9	9	6	4
Average -----		36	60	6.0	4.94	3183	4578	4520
Standard Deviation -----		8	5	1.0	1.21	574	426	271
Range -----		25	54	5.1	3.50	2420	4053	4264
Coefficient of Variation -----		51	67	8.0	7.00	4410	5140	4893
		22.36	7.63	16.19	24.48	18.03	9.30	6.00

SALVATION ARMY
 Mix: PDSALARMY34 F'c: 3000 psi
 04/01/08

MIX DESCRIPTION
 =====

PDSALARMY34 ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
11/21/ 7	59735	45	72	7.6	6.00	1490	3235	-
12/ 6/ 7	59789	43	65	5.9	5.25	3190	5340	-
12/ 6/ 7	59793	44	66	5.7	4.50	3425	5025	4533
12/13/ 7	59825	36	66	5.6	5.00	2320	4055	4807
12/21/ 7	59829	32	60	5.9	5.50	2460	4030	4370
Count		5	5	5	5	5	5	3
Average		40	66	6.1	5.25	2577	4337	4570
Standard Deviation		6	4	0.8	0.56	767	847	221
Range		32	60	5.6	4.50	1490	3235	4370
		45	72	7.6	6.00	3425	5340	4807
Coefficient of Variation		14.25	6.48	13.46	10.65	29.78	19.52	4.83

NAPPI DISTRIBUTORS
 Mix: WKNAPPI304120 F'c: 3000 psi
 04/01/08

MIX DESCRIPTION
 =====

WKNAPPI304120 ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
1/11/ 7	1	31	59	5.0	2.50	3610	-	-
1/12/ 7	2	43	56	6.1	3.75	3060	-	-
1/18/ 7	4	10	38	5.2	4.50	2670	-	-
1/22/ 7	5	18	62	5.0	2.75	2850	3875	-
1/23/ 7	6	20	68	6.8	3.75	2570	-	-
1/24/ 7	7	30	52	7.0	3.50	2810	3700	-
1/25/ 7	8	20	52	5.0	2.50	3100	4420	3998
1/30/ 7	9	11	61	4.8	2.50	3100	4925	4348
2/ 2/ 7	10	30	56	6.2	4.25	2810	3625	4323
2/ 9/ 7	11	26	53	6.0	3.50	2900	-	-

2/12/ 7	12	28	62	4.5	3.50	2580	-	-
2/15/ 7	13	17	48	5.0	5.75	2850	-	-
2/16/ 7	14	21	47	5.3	6.50	2390	4000	4183
2/20/ 7	15	21	48	4.4	3.25	4320	5420	4348
2/22/ 7	16	38	56	6.1	3.75	2620	4625	4682
2/23/ 7	17	35	53	5.5	2.25	2510	4680	4908
2/27/ 7	18	51	64	6.5	4.75	2760	4130	4478
2/28/ 7	19	62	64	6.2	5.00	2600	3890	4233
3/ 1/ 7	20	47	65	6.8	4.75	3660	4280	4100
3/ 6/ 7	21	-	56	4.8	3.50	3250	4595	4255

3/ 7/ 7	22	37	62	6.8	6.00	2940	3730	4202
3/12/ 7	23	55	57	5.4	4.50	3640	4360	4228
3/13/ 7	24	53	62	5.8	4.25	3220	3740	3943
3/14/ 7	25	58	62	6.2	0.75	3310	4015	4038
3/14/ 7	26	67	72	5.3	5.00	2950	3685	3813
3/15/ 7	27	42	64	6.2	5.00	3380	-	-
3/20/ 7	28	39	61	6.3	5.00	2900	3980	3893
3/21/ 7	29	39	57	5.5	3.75	3060	-	-
3/21/ 7	30	39	53	7.1	5.00	3220	4445	4037
3/22/ 7	31	48	56	8.0	6.50	2850	3910	4112

3/23/ 7	32	45	60	6.0	4.50	2580	4255	4203
3/26/ 7	33	43	54	4.8	2.75	2410	4505	4223
3/30/ 7	34	50	62	5.4	5.75	2480	4095	4285

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
4/ 3/ 7	35	36	63	4.5	2.50	3080	3670	4090
4/ 6/ 7	36	40	61	4.8	5.00	2690	3625	3797
Count		34	35	35	35	35	26	24
Average		37	58	5.7	4.08	2964	4161	4197
Standard Deviation		14	7	0.9	1.31	415	451	254
Range		10	38	4.4	0.75	2390	3625	3797
		67	72	8.0	6.50	4320	5420	4908
Coefficient of Variation		39.36	11.52	15.18	32.02	13.99	10.85	6.04



Corporate Offices

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seeMIX II Mix Report
304145

Strength Compressive: 3,000 psi
4/2/2008

Contractor : ALLIED - COOK CONSTRUCTION
Project : UNE COLLEGE OF PHARMACY
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #2
Placement : CHUTE, PUMP

Weights per Cubic Yard	(Saturated, Surface-Dry)		
	Quantity	Density	Yield, ft ³
DRAGON, TYPE II, lb	416	3.150	2.12
LAFARGE, NEWCEM, lb	104	2.820	0.59
Water, lb	280	1.000	4.49
3/4" QUARRY STONE, ASTM C-33, lb	1,800	2.700	10.68
FINE AGGREGATE, ASTM C-33, lb	1,425	2.650	8.62
BASF: POZZOLITH 200N, oz (US)	15.6	1.000	0.02
(OPTIONAL) POLYHEED 997, oz (US)	41.6	1.000	0.04
Total Air, %	2.0 ± 1.5		0.54
		TOTAL	27.10
Water/Cement Ratio, lbs/lb	0.54		
Slump, High, in	4.00		
Low, in	2.00		
Concrete Unit Weight, pcf	148.68		
Yield, %	100.4		

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6" MAX SLUMP WITH POLYHEED. AIR CONTENT MAY EXCEED 3% WITH POLYHEED
(OPTIONAL) FIBERMESH: POLYPROPYLENE FIBER REINFORCEMENT

Prepared by :

TECHNICAL SERVICES

REDINGTON HOSPITAL
 Mix: FDREDHOSP3034NA F'c: 3000 psi
 04/01/08

MIX DESCRIPTION
 =====

FDREDHOSP3034NA ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
8/28/ 7	10	75	76	2.3	6.00	3520	5050	-
9/20/ 7	11	78	75	2.0	2.25	3020	4490	-
Count		2	2	2	2	2	2	-
Average		77	76	2.2	4.13	3270	4770	-
Standard Deviation		2	-	0.2	2.65	354	396	-
Range		75	75	2.0	2.25	3020	4490	-
		78	76	2.3	6.00	3520	5050	-
Coefficient of Variation		2.77	0.94	9.87	64.28	10.81	8.30	-



Corporate Offices

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Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

seeMIX II Mix Report
454110

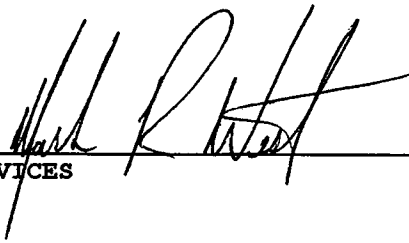
Strength Compressive: 4,500 psi
4/2/2008

Contractor : ALLIED - COOK CONSTRUCTION
Project : UNE COLLEGE OF PHARMACY
Source of Concrete : DRAGON PRODUCTS COMPANY
Construction Type : MIX #3
Placement : CHUTE

	Weights per Cubic Yard (Saturated, Surface-Dry)		Yield, ft ³
	Quantity	Density	
DRAGON, TYPE II, lb	504	3.150	2.56
LAFARGE, NEWCEM, lb	126	2.820	0.72
Water, lb	265	1.000	4.25
3/4" QUARRY STONE, ASTM C-33, lb	1,830	2.700	10.86
FINE AGGREGATE, ASTM C-33, lb	1,159	2.650	7.01
BASF: POZZOLITH 200N, oz (US)	18.9	1.000	0.02
BASF: MICRO-AIR, oz (US)	3.2	1.000	0.00
(OPTIONAL) BASF: POLYHEED 997, oz (US)	50.4	1.000	0.05
Total Air, %	6.0 ± 1.5		1.63
TOTAL			27.10

Water/Cement Ratio, lbs/lb 0.42
Slump, High, in 4.00
Low, in 2.00
Concrete Unit Weight, pcf 143.50
Yield, % 100.4
Exposure Condition : Severe exposure

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
6" MAX SLUMP WITH POLYHEED

Prepared by : 
TECHNICAL SERVICES

PAYNE ROAD BRIDGE
 Mix: WK454180PAYNERD F'c: 4500 psi
 04/01/08

MIX DESCRIPTION
 =====

WK454180PAYNERD ----- 4500 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
12/ 1/ 5	01	42	61	6.5	5.00	4360	5540	-
12/ 9/ 5	02	24	71	5.8	4.00	3390	5575	-
12/21/ 5	03	27	70	6.9	4.50	3900	6065	5727
1/ 3/ 6	04	28	59	6.9	4.75	4170	5570	5737
1/ 9/ 6	05	20	62	5.5	6.50	4080	5375	5670
5/17/ 6	06	58	62	5.8	3.75	4590	6060	5668
5/17/ 6	07	69	64	5.4	5.75	4030	5965	5800
6/23/ 6	09	71	73	6.6	5.50	3460	4670	5565
8/16/ 6	10	80	74	5.9	6.75	3640	5690	5442
8/18/ 6	11	84	78	6.3	6.00	4090	5360	5240

8/24/ 6	12	72	74	6.1	7.00	3890	5520	5523
8/28/ 6	13	76	74	6.6	6.75	3980	5700	5527
8/31/ 6	14	72	75	5.1	4.50	4050	6050	5757
9/12/ 6	15	62	64	5.8	7.50	4690	5435	5728
9/12/ 6	16	66	67	6.0	6.25	3760	5515	5667
9/14/ 6	17	71	71	5.4	5.25	4380	5620	5523
9/15/ 6	18	72	76	6.2	6.25	3460	5850	5662
9/19/ 6	19	73	71	5.8	5.50	3950	6405	5958
9/20/ 6	20	67	71	6.3	6.50	4580	5935	6063
9/22/ 6	21	68	70	5.8	7.50	3320	5180	5840

10/13/ 6	22	68	68	7.0	8.00	4180	6035	5717
10/16/ 6	23	68	70	7.0	5.50	4110	5785	5667
10/17/ 6	24	68	60	6.2	5.50	4210	5560	5793
10/25/ 6	25	68	69	6.0	4.25	4380	6035	5793
10/25/ 6	26	68	61	5.5	5.50	4110	6040	5878
10/25/ 6	27	68	61	5.8	4.75	4170	6445	6173
10/31/ 6	28	68	65	7.0	5.50	4690	6340	6275
11/ 3/ 6	29	68	60	7.3	5.50	3290	5605	6130
1/29/ 7	30	-	59	6.8	5.25	3960	5175	5707
1/29/ 7	31	-	57	7.0	8.00	4050	5120	5300

2/ 1/ 7	32	-	56	6.8	5.50	4250	5465	5253
2/22/ 7	33	-	60	5.4	4.00	3330	4745	5110
2/22/ 7	34	-	50	5.6	5.50	3220	5005	5072

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
2/28/ 7	35	-	66	6.8	6.00	4440	5760	5170
2/28/ 7	36	-	60	6.8	5.00	4270	5155	5307
3/12/ 7	37	-	53	5.2	6.00	4260	5150	5355
3/15/ 7	38	-	61	6.3	6.00	3580	4860	5055
3/19/ 7	39	-	54	6.8	5.25	4200	6065	5358
3/19/ 7	40	-	54	6.8	5.25	4030	6030	5652
3/22/ 7	41	-	70	6.8	5.50	4760	6540	6212
3/28/ 7	42	-	58	6.0	5.00	4450	5735	6102
5/ 4/ 7	43	-	63	5.5	6.50	5260	6075	6117
5/ 7/ 7	44	-	67	6.6	6.50	4390	6025	5945
5/23/ 7	45	-	60	5.3	7.00	5410	5900	6000
5/23/ 7	46	-	61	5.5	4.00	5570	5835	5920
5/23/ 7	47	-	60	5.3	5.00	4880	5475	5737
6/ 8/ 7	48	-	69	5.4	5.50	5130	6660	5990
Count		28	47	47	47	47	47	45
Average		62	65	6.2	5.68	4178	5696	5686
Standard Deviation		17	7	0.6	1.03	543	460	319
Range		20	50	5.1	3.75	3220	4670	5055
Coefficient of Variation		84	78	7.3	8.00	5570	6660	6275
		27.61	10.49	10.07	18.11	13.01	8.07	5.61

GARDINER BRIDGE
 Mix: AA454180GRDNR F'c: 4500 psi
 04/01/08

MIX DESCRIPTION
 =====

AA454180GRDNR ----- 4500 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
4/17/ 6	01	-	63	6.0	7.00	3840	4945	-
5/ 2/ 6	02	45	56	6.6	5.00	3910	4915	-
5/16/ 6	03	50	64	6.0	4.00	4700	5820	5227
7/ 7/ 6	04	77	76	6.0	6.75	4580	5555	5430
7/17/ 6	05	80	80	7.0	6.25	4990	6100	5825
7/21/ 6	06	76	80	6.8	4.25	4210	4970	5542
7/24/ 6	07	73	77	7.0	7.00	5130	5925	5665
7/27/ 6	08	72	80	6.5	5.50	4170	4945	5280
8/ 8/ 6	10	83	80	7.0	6.00	3980	5120	5330
8/16/ 6	11	63	74	6.2	5.25	4510	5155	5073

8/25/ 6	13	57	71	7.0	5.50	3680	4815	5030
8/29/ 6	15	65	75	6.8	7.00	3860	5235	5068
9/ 1/ 6	16	68	72	6.4	6.00	4740	5830	5293
10/ 9/ 6	24	66	62	7.3	8.00	3750	5250	5438
10/16/ 6	26	55	65	6.8	5.00	3680	4760	5280
10/20/ 6	27	53	67	5.0	3.50	5340	6590	5533
10/24/ 6	28	50	58	5.8	5.00	4480	6060	5803
Count -----		16	17	17	17	17	17	15
Average -----		65	71	6.5	5.71	4326	5411	5388
Standard Deviation -----		12	8	0.6	1.21	530	546	251
Range -----		45	56	5.0	3.50	3680	4760	5030
Coefficient of Variation -----		83	80	7.3	8.00	5340	6590	5825
		18.31	11.47	9.05	21.25	12.26	10.10	4.65



P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-594-5555

January 22, 2008

Dragon Products Company
38 Preble Street
PO Box 1521
Portland, Maine 04104

Attn: Mark West,

At your request, we are supplying the following certification in accordance with the proposed usage of Dragon Products Company's Portland Cement, Type I/II.

It is herein certified that Dragon Products Company's Portland Cement, Type I/II, as manufactured at Thomaston, Maine, meets the requirements of ASTM Specification C-150 for both Type I and Type II Portland Cements.

Dragon Products Company's Portland Cement, Type I/II conforms to the material requirements of ASTM Specification C-270 and when used with other materials and proportioning which meet the requirements of this Specification, produces mortar in compliance with ASTM Specification C-270.

Very truly yours,

Jennifer K. Colburn
Quality Control Manager

Enclosure



P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-594-5555

MILL TEST RESULTS Laboratory at Thomaston, Maine	Date: March, 2008 Cement Type: I / II
---	--

CHEMICAL DATA	Percent	PHYSICAL DATA	
Silicon Dioxide.....	20.1	Specific Surface.....	370
Aluminum Dioxide.....	4.4	Blaine (sq m /kg)	(Per ASTM C 204)
Ferric Oxide.....	3.0	Percent Passing 325 Mesh.	96.8
Calcium Oxide.....	61.1	(Per ASTM C 430)	
Magnesium Oxide.....	2.9	Compressive Strength (psi)	
Sulphur Trioxide.....	3.9	(Per ASTM C 109)	
Loss on Ignition.....	1.8	1 day.....	2440
Insoluble Residue.....	0.3	3 day.....	3720
Tricalcium Silicate.....	51	7 day.....	4520
Dicalcium Silicate.....	19	28 day.....	
Tricalcium Aluminate.....	7	Vicat Setting Time	
Sum of C3S + 4.75*C3A....	83	(Per ASTM C 191)	
Sodium Oxide.....	0.3	Initial (min.).....	130
Potassium Oxide.....	1.4	Final (min.).....	230
Equivalent Alkalies.....	1.2	Air Content (%).....	5.9
(Chemical Analysis all per ASTM C 114)		(Per ASTM C 185)	
		Autoclave Expansion (%)...	0.11
		(Per ASTM C 151)	
		Expansion in water (%).....	0.015
		(Per ASTM C 1038)	
		Heat of Hydration (%)	80
		(Per ASTM C186)	
		Certified by:	
		Jennifer K. Colburn	

We hereby certify that this cement complies with current ASTM C 150, AASHTO M-85 and CSA-A3000 - 03 Type GU specifications.

Testing was completed by Brian Secord and/or Marie-Michele Bouchard.
This mill test report is generated for silos produced in the calendar month prior to the date upon this report.



Cement

Annual NewCem Certification Statement - 2008

January 2, 2008

This is to certify that all NewCem[®] Ground Granulated Blast-Furnace Slag produced and distributed by Lafarge North America, from our Sparrows Point Plant, Baltimore, Maryland, complies with the current chemical and physical requirements of ASTM C 989-05, Grade 120 and AASHTO M 302-06, Grade 120.

No changes occurred to the manufacturing process, distribution facilities or product quality specifications during 2007.

Sincerely,

Thomas R.
Griffiths

Digitally signed by Thomas R. Griffiths
DN: CN = Thomas R. Griffiths, C = US,
O = Lafarge, OU = Sparrows Point Plant
Reason: I am the author of the
document
Date: 2008.01.02 11:22:30 -0500

Thomas R. Griffiths
Quality Control Manager

US East Region
Sparrows Point Plant
2001 Wharf Road
Baltimore, MD 21219
Phone: (410) 388-1177
Fax: (410) 388-1206



NewCem

Mill Test Certificate - Sparrows Point Plant

Chemical

	<u>Specification</u>	
Sulfide Sulfur (S), %	0.8	2.5 max.
Sulfate Ion (as SO ₃), %	2.0	4.0 max.
Equivalent Alkalies, %	0.44	n/a

Physical

	<u>Specification</u>	
<u>Slag Activity Index, %:</u>		
7 Day	109	95
28 Day	135	115
<u>Compressive Strength: psi</u>		
7 Day	5,163	n/a
28 Day	7,572	n/a
<u>Fineness:</u>		
Blaine; cm ² /g	4,629	n/a
45 Micron;		
% retained	1	20 max.
<u>Other:</u>		
Air Content, %	3	12 max.
Specific Gravity;	2.93	n/a

Sample Identification

NewCem shipping composite sample results for the month of :

December-07

This ground granulated blast furnace slag complies with the current specification of the chemical and physical requirements of ASTM C-989, AASHTO M-302; Grade 120. NewCem is guaranteed to meet all applicable FDOT, GADOT, SCDOT, NYDOT and VADH specifications.

Northeast Region
 Sparrows Point Plant
 2001 Wharf Rd, Baltimore, MD 21219
 Telephone: (410) 388-1177 x202

Thomas R. Griffiths
 Quality Control Manager

1/15/08
 Date

FIELD TESTS of AGGREGATES

Fine Aggregate: Source: PIKE WESTBROOK

Sieve Size:	Weight Retained	Percent Retained	Percent Passing	Specified Range
3/8"			100.0	100
#4			97.6	95 - 100
#8			94.2	80 - 100
#16			81.6	50 - 85
#30			52.3	25 - 60
#50			18.6	5 - 30
#100			5.6	0 - 10
pan		FM:	2.50	2.3 - 3.1

Date Sampled: 10/15/2007
 Weight of sample (wet): _____
 Weight of sample (dry): _____
 Absorption: _____

Tests:	Results:
ASTM C 136	see chart (right)
ASTM C 566	Free Moisture:
ASTM C 40	
ASTM C 117	% passing #200 0.8

Coarse Aggregate # 1: Source:

Sieve Size:	Weight Retained	Percent Retained	Percent Passing	Specified Range
				#8
1/2"				100
3/8"				85 - 100
#4				10 - 30
#8				0 - 10
#16				0 - 5
pan				

Size: _____
 Date Sampled: _____
 Weight of sample (wet): _____
 Weight of sample (dry): _____
 Absorption: _____

Tests:	Results:
ASTM C 136	see chart (right)
ASTM C 566	Free Moisture:
ASTM C 117	% passing #200

Coarse Aggregate # 2: Source: PIKE WESTBROOK

Sieve Size:	Weight Retained	Percent Retained	Percent Passing	Specified Range	
				#67	#57
1 1/2"				-----	100
1"			100.0	100	95 - 100
3/4"			98.6	90 - 100	-----
1/2"			46.0	-----	25 - 60
3/8"			22.4	20 - 55	-----
#4			5.1	0 - 10	0 - 10
#8			1.8	0 - 5	0 - 5
pan					

Size: 3/4"
 Date Sampled: 10/15/2007
 Weight of sample (wet): _____
 Weight of sample (dry): _____
 Absorption: _____

Tests:	Results:
ASTM C 136	see chart (right)
ASTM C 566	Free Moisture:
ASTM C 117	% passing #200 0.50%

Coarse Aggregate # 3: Source:

Sieve Size:	Weight Retained	Percent Retained	Percent Passing	Specified Range
				#467
2"				100
1 1/2"				95 - 100
1"				-----
3/4"				35 - 70
1/2"				-----
3/8"				10 - 30
#4				0 - 5
#8				-----
pan				

Size: _____
 Date Sampled: _____
 Weight of sample (wet): _____
 Weight of sample (dry): _____
 Absorption: _____

Tests:	Results:
ASTM C 136	see chart (right)
ASTM C 566	Free Moisture:
ASTM C 117	% passing #200

Coarse Agg.	Percent of total CA	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4	#8
# 1									
# 2									
# 3									
# 4									
Combined Grading:									
Specified Ranges:				100	90 - 100	---	20 - 55	0 - 10	0 - 5
		100	95 - 100	---	25 - 60	---	10 - 30	0 - 10	0 - 5
		100	95 - 100	---	35 - 70	---	10 - 30	0 - 5	---
									# 67
									# 57
									# 467

Tested by: _____

Date: _____



The Chemical Company

January 22, 2008

Certificate of Conformance
Pozzolith 200N
BASF Construction Chemicals, LLC* Admixture for Concrete

(*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

Dragon Products

I, Mark E. Piechuta, Sr. Technical Marketing Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of Pozzolith 200N; and

That Pozzolith 200N, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00013 percent (1.3 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Pozzolith 200N, depending upon the dosage used, meets the current requirements for a Type A, Water-Reducing, Type B, Retarding, and Type D, Water-Reducing and Retarding Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

A handwritten signature in black ink that reads 'Mark E. Piechuta'.

Mark E. Piechuta
Sr. Technical Marketing Specialist

POZZOLITH® 200N

Concrete admixture



DESCRIPTION:

POZZOLITH 200N liquid admixture is ready-to-use for making more uniform and predictable quality concrete. It meets ASTM C-494 requirements for Type A water-reducing, Type B retarding and Type D retarding and water-reducing admixtures, specifically:

- Increased strength – compressive and flexural
- Relative durability to damage from freezing and thawing – wet above industry standards
- Reduced water content required for a given workability
- Normal setting characteristics

ADVANTAGES:

Concrete with POZZOLITH 200N admixture sets at a rate comparable to plain concrete while providing the following special qualities:

- Improved workability
- Reduced segregation
- Improved finishing characteristics for flatwork and cast surfaces
- Effective as a singular admixture or as a component in an admixture system

WHERE TO USE:

POZZOLITH 200N admixture is recommended for use in all types of concrete where normal-setting characteristics are desired.

As a result of the above advantages, this admixture improves pumped concrete, shotcrete (wet mix), and conventionally placed concretes. It improves plain, reinforced, precast, prestressed, lightweight or standard weight concrete.

POZZOLITH 200N admixture can be used with air-entraining cements and with air-entraining admixtures approved under AASHTO, ASTM and CRD specifications – including those manufactured by Master Builders – if air-entrained concrete is desired. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

POZZOLITH 200N admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00015% (1.5 PPM) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lb (65 ml per 100 kg) of cement.

POZZOLITH 200N admixture can be used in white, colored and architectural concrete.

QUANTITY TO USE:

POZZOLITH 200N admixture is recommended for use at a rate of 4 ± 2 fl oz per 100 lb (280 ± 65 ml per 100 kg) of cement for most concrete mixes using average concrete ingredients. However, it is appreciated that variations in job conditions and concrete materials may make usage rates outside the recommended dosage range desirable. In such cases, contact your local Master Builders representative.

PACKAGING:

POZZOLITH 200N admixture is supplied in 55 U.S. gallon (208 litre) drums and by bulk delivery.

TEMPERATURE PRECAUTION:

If POZZOLITH 200N admixture has frozen, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

For additional information on POZZOLITH 200N admixture or on its use in developing a concrete mix with special performance characteristics, contact your local Master Builders representative.

Master Builders, Inc.

United States

23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada

3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico

Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903



The Chemical Company

January 22, 2008

Certificate of Conformance
Micro Air
BASF Construction Chemicals, LLC* Admixture for Concrete

(*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

Dragon Products

I, Mark E. Piechuta, Sr. Technical Marketing Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That Micro-Air is an air-entraining admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Micro-Air; and

That Micro-Air, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.0001 percent (1.0 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Micro-Air meets the current requirements of ASTM C 260, Corps of Engineers CRD-C 13 and AASHTO M154, the Standard Specifications for Air-Entraining Admixtures for Concrete.

Mark E. Piechuta
Sr. Technical Marketing Specialist

MICRO-AIR®

Admixture for entraining air in concrete



DESCRIPTION:

MICRO-AIR air-entraining admixture provides concrete with extra protection by creating ultrastable air bubbles that are strong, small and closely spaced—a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage rate than standard air-entraining admixtures, MICRO-AIR meets the requirements of ASTM C 260, AASHTO M 154, CRD-C 13 and other Federal and State specifications.

ADVANTAGES OF AIR ENTRAINMENT:

The entrainment of optimum air content in concrete results in the following improvements in concrete quality:

- Increased resistance to damage from freeze/thaw cycles and to scaling from deicing salts¹
- Reduced permeability—increased watertightness
- Reduced segregation and bleeding
- Improved plasticity and workability

¹Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and deicing salts results from: • proper air content in the hardened concrete; • a suitable air-void system in terms of bubble size and spacing; and • adequate concrete strength, assuming the use of sound aggregates and proper mixing, placing, handling and curing techniques.

When unusually low or high amounts of an air-entraining admixture are required to achieve normal ranges of air content or if the required amount of air-entraining admixture necessary to achieve required levels of air content is observed to change significantly under given conditions, the reason should be investigated. In such cases, it is especially important to determine: (a) that a proper amount of air is contained in the fresh concrete at the point of placement; and (b) that a suitable air-void system (spacing factor) is being obtained in the hardened concrete.

ADVANTAGES OF MICRO-AIR:

- Greatly improved stability of air-entrainment
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete; concrete containing high-carbon content fly ash; concrete containing large amounts of fine materials; concrete using high-alkali cements; high-temperature concrete; and concrete with extended mixing times

FEATURES/BENEFITS:

Ready to Use—Solution is the proper concentration for rapid, accurate dispensing.

Compatible for Use—MICRO-AIR admixture is compatible with concrete containing other admixtures—water-reducers, high-range water-reducers, accelerators, retarders, and water repellents.

The use of MICRO-AIR air-entraining admixture with Master Builders water-reducing, set-controlling admixtures forms a desirable combination for producing the highest quality, normal or lightweight concrete. Heavyweight concrete normally does not contain entrained air.

NOTE: As stated in ACI 212 and other publications, when two or more admixtures are used, they must be added to the mix separately (through dispensers or manually) and must not be mixed with each other prior to adding to the concrete mix.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. When using lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

USAGE INFORMATION:

Add MICRO-AIR admixture to the concrete mix using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

Measure the air content of the trial mix and either increase or decrease the quantity of MICRO-AIR admixture to obtain the desired air content in the production mix. Check the air content of the first batch and make further adjustments if needed. Due to possible changes in the factors that affect the dosage rate of MICRO-AIR, frequent checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.



QUANTITY TO USE:

There is no standard dosage rate for MICRO-AIR admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete is not predictable because of differences in concrete making materials. Typical factors which might influence the amount of air entrained are: temperature, cement, sand grading, mix proportions, slump, means of conveying and placement, use of extra fine materials such as fly ash, etc.

The amount of MICRO-AIR admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 1/8 to 1-1/2 fl oz/100 lb (8 to 98 mL/100 kg) of cement. In mixes containing water-reducing, set-controlling admixtures, the amount of MICRO-AIR needed is somewhat less than the amount required in plain concrete. In mixes requiring a higher or lower dosage to obtain the desired air content, consult your local Master Builders representative.

AIR CONTENT DETERMINATION:

The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method." The air content of lightweight concrete should only be determined using the Volumetric Method.

The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138, "Unit Weight, Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1-1/2%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

TEMPERATURE PRECAUTION:

MICRO-AIR admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

PACKAGING:

MICRO-AIR admixture is supplied in 55 U.S. gallon (208 liter) drums and bulk delivery.

CAUTION:

MICRO-AIR admixture is a CAUSTIC solution. Chemical goggles and gloves are recommended if transferring or handling large quantities of material. (See MSDS and/or product label for complete information.)

NON-CHLORIDE, NON-CORROSIVE:

MICRO-AIR admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Calcium chloride is not an added ingredient in the manufacture of MICRO-AIR admixture. Based on the chlorides originating from all ingredients used in manufacture, MICRO-AIR admixture contributes less than 0.0001% (1.0 ppm) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lb (65 mL per 100 kg) of cement.

For suggested specification information or for additional product data on MICRO-AIR air-entraining admixture, contact your local Master Builders representative.

Master Builders, Inc.

United States

23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada

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Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico

Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903



The Chemical Company

January 22, 2008

Certificate of Conformance
PolyHeed 997
BASF Construction Chemicals, LLC* Admixture for Concrete

(*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

Dragon Products

I, Mark E. Piechuta, Sr. Technical Marketing Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of PolyHeed 997; and

That PolyHeed 997, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00012 percent (1.2 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That, depending on dosage, PolyHeed 997 meets the current requirements for a Type A, Water-Reducing, and Type F, High-Range Water-Reducing Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Mark E. Piechuta
Sr. Technical Marketing Specialist

POLYHEED® 997

Superior pumping/finishing admixture



DESCRIPTION:

POLYHEED 997 multi-component, non-chloride, mid-range water-reducing admixture is formulated to produce:

1. True mid-range (5-18%) water reduction and excellent performance across a wide concrete slump range, especially the difficult slump range of 6-8 inches (150-200 mm);
2. Normal concrete setting time throughout the recommended dosage range;
3. Superior workability, pumpability and finishability qualities even in concrete mixes containing low amounts of cementitious materials;
4. Strength performance comparable to chloride-bearing, water-reducing admixtures at all ages;
5. Improved performance with a wide range of cements, fly ashes, silica fumes, granulated slags, and aggregates (including coarse and manufactured sands).

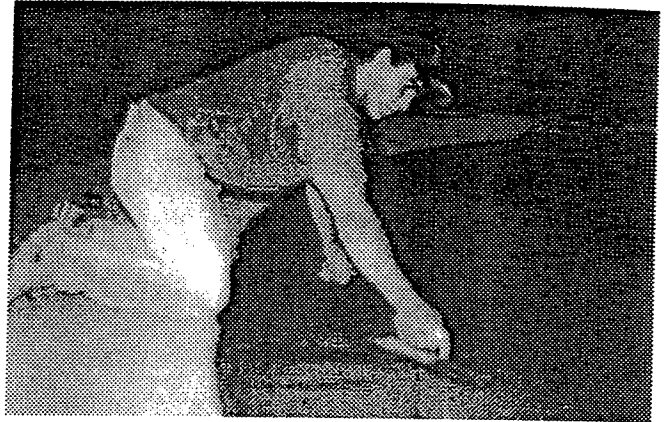
POLYHEED 997 admixture meets ASTM C 494 requirements for Type A, water-reducing admixtures, and Type F, water-reducing high-range admixtures, specifically:

- Reduced water content for a given slump
- Normal setting time characteristics
- Increased compressive and flexural strength performance at all ages
- Improved concrete durability to damage from freezing and thawing

ADVANTAGES:

POLYHEED 997 admixture facilitates the production of quality concrete through these special benefits:

- Superior workability and pumpability in various concrete applications
- Reduced segregation
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces
- Consistent performance in low to high slump concrete mixtures, in particular, the mid-range slump of 6-8 inches (150-200 mm)
- Effective as a singular admixture or as a component in a Master Builders admixture system



PERFORMANCE CHARACTERISTICS:

MIX DATA

500 lb of Type I cement per cubic yard (295 kg/m³). Slump, 7 inches (180 mm), Non-air-entrained concrete; Concrete temperature 70 °F (21 °C), Ambient temperature, 70 °F (21 °C).

Setting Time Performance¹

Mix	Initial Set Hrs:Min	Difference Hrs. Min
Plain	4:46	—
POLYHEED 997 admixture		
5 fl oz/cwt (325 mL/100 kg)	4:32	-0:14
10 fl oz/cwt (650 mL/100 kg)	4:47	+0:01
15 fl oz/cwt (950 mL/100 kg)	5:14	+0:28

Compressive Strength Performance

Mix	7 Day			28 Day		
	PSI	MPa	%	PSI	MPa	%
Plain	3390	23.4	100	4230	29.2	100
POLYHEED 997 admixture						
5 fl oz/cwt (325 mL/100 kg)	4160	28.7	123	5620	38.7	132
10 fl oz/cwt (650 mL/100 kg)	4760	32.8	140	6070	41.8	143
15 fl oz/cwt (980 mL/100 kg)	4870	33.6	144	5970	41.2	141

¹NOTE: The data shown is based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.



WHERE TO USE:

POLYHEED 997 mid-range water-reducing admixture is recommended for use in all concrete where normal setting characteristics, and superior workability, pumpability and finishability qualities are desired.

POLYHEED 997 admixture is particularly useful in placing concrete in the mid-range slump of 6-8 inches (150-200 mm). Field data have consistently shown improved workability, pumpability and finishability versus conventional water-reducing admixtures.

This admixture improves conventionally placed concrete mixes containing a wide range of cements, granulated slags, Class C and F fly ashes, silica fumes, and aggregates. It improves reinforced, precast, prestressed, lightweight or normal weight concrete, and pumped concrete.

POLYHEED 997 admixture can be used with air-entraining admixtures approved under ASTM, AASHTO and CRD specifications when air-entrained concrete is specified or desired. Master Builders air-entraining admixtures are recommended for use with **POLYHEED 997** admixture when air-entrained concrete is specified or desired.

POLYHEED 997 admixture may be used in all colored and architectural concrete.

When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix.

QUANTITY TO USE:

POLYHEED 997 mid-range water-reducing admixture has a recommended dosage range of 3-15 fl oz per 100 lb (195-975 mL per 100 kg) of cement for most concrete mixes.

As the dosage rate of **POLYHEED 997** admixture increases to 15 fl oz per 100 lb (975 mL per 100 kg) of cement, normal concrete setting time characteristics are maintained, and early and ultimate compressive strengths increase.

Master Builders does not recommend the use of dosage rates outside the recommended range without trial testing. Consult your local Master Builders sales representative for assistance in determining the dosage rate for optimum performance.

PACKAGING:

POLYHEED 997 is supplied in 55 U.S. gallon (208 liter) drums and by bulk delivery.

TEMPERATURE PRECAUTION:

If **POLYHEED 997** admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

NON-CHLORIDE, NON CORROSIVE:

POLYHEED 997 admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00012% (1.2 ppm chloride ions) by weight of the cement when used at a dosage rate of 1 fl oz per 100 lb (65 mL per 100 kg) of cement.

For additional information on **POLYHEED 997** admixture or on its use in developing a concrete mixture with special performance characteristics, contact your local Master Builders representative.

Master Builders, Inc.

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53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903

FIBERMESH® I50

PRODUCT DATA SHEET

FIBERMESH® I50 SYNTHETIC FIBER

Fibermesh I50, formerly Stealth® e3®, micro-reinforcement system for concrete—100 percent virgin homopolymer polypropylene multifilament fibers containing no reprocessed olefin materials. Specifically engineered and manufactured in an ISO 9001:2000 certified facility for use as concrete reinforcement at an application rate of 1.0 to 1.5 lbs per cubic yard (.60 to .90 kg per cubic meter). UL Classified. Complies with National Building Codes and ASTM C 1116 Type III 4.1.3.

ADVANTAGES

Non-magnetic • Rustproof • Alkali proof • Requires no minimum amount of concrete cover • Is always positioned in compliance with codes • Safe and easy to use • Saves time and hassle.

FEATURES & BENEFITS

- Inhibits and controls the formation of intrinsic cracking in concrete
- Reinforces against impact forces
- Reinforces against abrasion
- Reinforces against the effect of shattering forces
- Reinforces against water migration
- Provides improved durability
- Reduces plastic shrinkage and settlement cracking
- Alternate system to traditional reinforcement when used for secondary (crack control) reinforcing in concrete

PRIMARY APPLICATIONS

Applicable to all types of concrete which demonstrate a need for resistance to intrinsic cracking and improved water tightness and an aesthetic finish.

- Slabs-on-ground
- Stucco
- Slope paving
- Sidewalks
- Curbs
- Exposed aggregate
- Driveways
- Overlays & toppings

CHEMICAL AND PHYSICAL PROPERTIES

Absorption	Nil	Melt Point	324°F (162°C)
Specific Gravity	0.91	Ignition Point	1100°F (593°C)
Fiber Length*	Graded	Thermal Conductivity	Low
Electrical Conductivity	Low	Alkali Resistance	Alkali Proof
Acid & Salt Resistance	High		

*Also available in single cut lengths

DO SPECIFY FIBERMESH I50 FIBERS:

- Reduced plastic shrinkage cracking
- Improved impact, shatter and abrasion resistance
- Reduced water migration and damage from freeze/thaw
- Improved durability
- Areas requiring non-metallic materials
- Concrete that needs an architectural finish

DO NOT SPECIFY FIBERMESH I50 FIBERS:

- Crack control from external stresses
- Increasing joint spacing beyond ACI and PCA guidelines
- Decreasing thickness of slabs
- Replacing any moment or structural steel

FIBERMESH 150

PRODUCT USE

MIXING DESIGNS AND PROCEDURES: Fibermesh® 150 micro reinforcing is a mechanical, not chemical, process. The addition of Fibermesh 150 multifilament fibers do not require any additional water or other mix design changes at normal rates. Fibermesh 150 fibers are added to the mixer before, during or after batching the other concrete materials. Mixing time and speed are specified in ASTM C 94.

FINISHING: Fibermesh 150 micro-reinforced concrete can be finished by any finishing technique. Exposed aggregate, broomed and tined surfaces are no problem.

APPLICATION RATE: The application rate for Fibermesh 150 fibers is 1.0 to 1.5 lbs per cubic yard (.60 to .90 kg per cubic meter).*

GUIDELINES

Fibermesh 150 fibers should not be used to replace structural, load-bearing reinforcement. Fibermesh 150 fibers should not be used as a means of using thinner concrete sections than original design. Fibermesh 150 fibers should not be used to increase joint spacing past those dimensions suggested by PCA and ACI industry standard guidelines.

COMPATIBILITY

Fibermesh 150 fibers are compatible with all concrete admixtures and performance enhancing chemicals, but require no admixtures to work.

PACKAGING

Fibermesh 150 fibers are available in a variety of packaging options. Special packaging is available for full truckload addition. Fibermesh 150 fibers are packaged, packed into cartons, shrink-wrapped and palletized for protection during shipping.

*Note: Lower addition rates may be acceptable depending upon local building codes

TECHNICAL SERVICES

Trained Propex Concrete Systems specialists are available worldwide to assist and advise in specifications and field service. Propex Concrete Systems representatives do not engage in the practice of engineering or supervision of projects and are available solely for service and support of our customers.

REFERENCES

- ASTM C 94 Standard Specification for Ready-Mixed Concrete Uniformity Requirements.
- ASTM C 1399 Average Residual Strength of Fiber Reinforced Concrete.
- ASTM C 1436 Standard Specification for Materials for Shotcrete.
- ASTM C 1609/C 1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading). Replaces ASTM C 1018.
- ASTM C 1116 Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 506 Guide for Shotcrete.
- UL® Approvals for use as an alternate or in addition to welded wire fabric used in floor-ceiling D700, D800 and D900 series designs.
- International Code Council (ICC) NER-414 Evaluation Report.

SPECIFICATION CLAUSE

Use Fibermesh 150 only 100 percent virgin polypropylene fibers containing no reprocessed olefin materials and specifically engineered and manufactured in an ISO 9001-2000 certified facility for use as concrete secondary reinforcement. Application per cubic yard shall equal a minimum of 1.0 lb/yd³ (.60 kg/m³). Fibers are for the control of cracking due to plastic shrinkage, plastic settlement and thermal expansion/contraction, lowered permeability, increased impact, abrasion and shatter resistance. Fiber manufacturer must document evidence of five-year satisfactory performance history, compliance with applicable building codes and ASTM C 1116 Type III, 4.1.3. Fibrous concrete reinforcement shall be manufactured by Propex Concrete Systems, 6025 Lee Highway, Suite 425, PO Box 22788, Chattanooga, TN, 37422, USA, tel: 423 892 8080, fax: 423 892 0157, web site: fibermesh.com.

PROPEX
CONCRETE SYSTEMS

THE ADVANTAGE CREATORS.™

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Fax: +44 (0) 1246 465201

www.fibermesh.com

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Summit Geoenvironmental Services

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621-8334 Fax: (207) 626-9094

Project Name: UNE College of Pharmacy
Client: University of New England
Supplier: Dragon Products

Project Number: 14063
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi



Cylinder Set Number	Date Cast	Slump (inches)	Air Content (%)	Concrete Temp. °F	7 Day Result (psi) AVG.	14 Day Result (psi)	28 Day Result (psi)	28 Day Result (psi)	28 Day AVG. (psi)	Range	Design Strength (PSI)	3 Test Day Moving Ave.	28 Day Running Average	LOCATION OF PLACEMENT
C1	1-May	4 1/2	4	69	2660		4520	4470	4495	50	3,000		4495	Line 4 from F to G Footing and Foundation Wall
C2	14-May	3 3/4	5.5	69.2	3180		4910	4640	4775	270	3,000		4635	Wall; Line 1, C.2 to Line G.2, Footing; From F4 to C4
C3	14-May	5	5.7	71.2	2680		4490	4100	4295	390	3,000	4522	4522	Wall; Line 1, C.5 to Line G.2, Footing; From F4 to C4
C4	27-May	6	7.6	71	2350		3780	3580	3680	200	3,000	4250	4311	North Side Wall
C5	27-May	6	7.5	71	2630		4080	3970	4025	110	3,000	4000	4254	West Side Wall
C6	29-May	5	5.9	70	2740		4280	4140	4210	140	3,000	3972	4247	Line 6 to A2 and Line G2 to G3
C7	13-Jun	6	6	73	3370		4210	4140	4175	70	3,000	4137	4236	Foundation Walls: Line 1 B.5-A, Line A 1-2, Pier at E-2, Stairwell A Footings
C8	13-Jun	6	5.4	74	4040		4410	4140	4275	270	3,000	4220	4241	Foundation Walls: Line 1 B.5-A, Line A 1-2, Stairwell A Footings, Pier at E-2
C9	20-Jun	5	6	75	3790		4810	4690	4750	120	3,000	4400	4298	Elevator Pit Floor - Including Footing D-3 & C-3
C10	3-Jul	6-3/4*	4.5	82.5	2800		4080	3970	4025	110	3,000	4350	4271	Wall line C5 to A3 and footing line A3, B3
C11	10-Jul	5 1/2	5.5	85	3210		4800	4510	4655	290	3,000	4477	4305	Footing B2.4, Stair A Wall, Stair B Footing
C12	18-Jul	5 3/4	4.8	87	3410		4150	3960	4055	190	3,000	4245	4285	Walls: A from 2 to 3 and 1' Walls Around Stairway
C13	31-Jul	4	5.8	85	2720		4770	4680	4725	90	3,000	4478	4318	South Area Footing
C14	20-Aug	5	2.3	75	3040		4780	4680	4730	100	3,000	4503	4348	Attic Slab
C15	20-Aug	5 1/2	5.5	75	2910		3960	3920	3940	40	3,000	4465	4321	Piers Line 4-A
C16	22-Aug	3 1/2	4.7	78	3400		4150	4070	4110	80	3,000	4260	4308	South Area Way and Loading Dock Footing
C17	28-Aug	6 1/2	2.6	77	2770		4370	4080	4225	290	3,000	4092	4303	First Floor Slab
C18	28-Aug	8	2.9	76	2590		4080	3990	4035	90	3,000	4123	4288	First Floor Slab
C19	28-Aug	5 3/4	3	76	2460		3660	3650	3655	10	3,000	3972	4254	First Floor Slab
C20	9-Sep	6	2.1	73	2520		4610	4570	4590	40	3,000	4093	4271	Second Floor Slab; F-Line to G-Line from 4 to 3.5
C21	9-Sep	7 1/2	2.3	73	2610		4400	4300	4350	100	3,000	4198	4275	Second Floor Slab; B-line to C-Line from 1 to 1.5
C22	9-Sep	6 1/4	2.1	74	2760		4840	4590	4715	250	3,000	4552	4295	Second Floor Slab; A-Line to B-Line from 1 to 1.5
C23	6-Sep	7 1/4	2.4	73	2810		4730	4630	4680	100	3,000	4582	4312	Third Floor Slab
C24	10-Sep	6 3/4	2.3	72	2720		4970	4810	4890	160	3,000	4762	4336	Third Floor Slab
C25	10-Sep	7	3	74	2780		4830	4800	4815	30	3,000	4795	4355	Third Floor Slab
C26	10-Sep	7 1/4	2.6	72	2720		4980	4700	4840	280	3,000	4848	4374	Third Floor Slab
C27	15-Sep	5 1/2	2.4	81	2590		4340	4170	4255	170	3,000	4637	4369	Attic Equipment Deck
C28	11-Nov	6	8	56	1990		3520	3360	3440	160	3000	4178	4336	Basement Slab
C29	11-Nov	6	3.2	60	3360		4780	4560	4670	220	3000	4122	4348	Basement Slab
C30	11-Nov	6	3.4	60	3100		5030	4980	5005	50	3000	4372	4370	Basement Slab
C31	5-May	5 1/2	5.8	63	3360		4550	4310	4430	240	3000	4702	4371	West Side South Siting Wall
C32	7-May	6	3	55	3460		4570	4400	4485	170	3000	4640	4375	Basement Patch
C33	11-May	3 1/2	3.1	62	3090		3910	3760	3835	150	3000	4250	4359	Ramp in Basement
C35	11-May	5 1/2	6.5	64	3720		4500	4240	4370	260	3000	4230	4359	Rear Handicap Walls

FOR ACCEPTABLE CONCRETE, ACI STATES THAT THE AVERAGE OF ALL SETS OF THREE CONSECUTIVE STRENGTH TESTS EQUAL OR EXCEED THE SPECIFIED STRENGTH, AND THAT NO INDIVIDUAL STRENGTH TEST (AVERAGE OF TWO CYLINDERS) FALLS BELOW THE SPECIFIED STRENGTH BY MORE THAN 500 PSI.

Remarks: *Denotes slump after addition of superplasticizer.

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621-8334 Fax: (207) 626-9094



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, Maine 04005

Field Test Data

Set No.: C1
Placement Date: 1-May-08
Lab Rec'd Date: 2-May-08
Location: Line 4 from F to G Footing and Foundation Wall

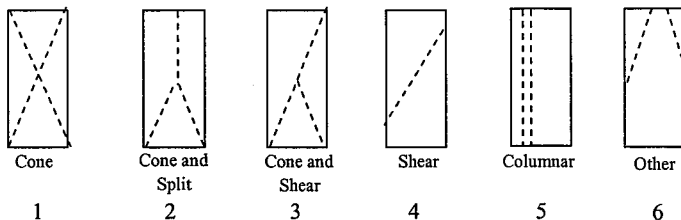
Technician: A. Boubacar
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) in.
Slump (placed) 4 1/2 in.
Air Content 4.0 %
Conc Temp. 69.6 °F
Air Temp. 49.8 °F
Volume (yds) 10.0 of 46.5
Admixture:

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C1a	8-May-08	7	6	143.8	28.16	74.8	2660
C1b	29-May-08	28	6	143.9	28.23	126.1	4470
C1c	29-May-08	28	6	143.9	28.18	127.4	4520
C1d							

Average 28 Day (psi): 4495



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, Maine 04005

Field Test Data

Set No.: C2
Placement Date: 14-May-08
Lab Rec'd Date: 15-May-08
Location: Wall; Line 1, C.2 to Line G.2
Footing; From F4 to C4
Technician: A. Boubacar
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) in.
Slump (placed) 3 3/4 in.
Air Content 5.5 %
Conc Temp. 69.2 °F
Air Temp. 73.5 °F
Volume (yds) 10.0 of 100.0
Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C2a	21-May-08	7	5	143.9	28.23	89.8	3180
C2b	11-Jun-08	28	6	143.7	28.18	138.5	4910
C2c	11-Jun-08	28	6	143.7	28.27	131.3	4640
C2d							

Average 28 Day (psi): 4775



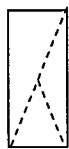
Cone

1



Conc and Split

2



Cone and Shear

3



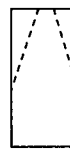
Shear

4



Columnar

5



Other

6

Remarks:

SUMMIT GEOENGINEERING SERVICES

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Phone: (207) 621-8334 Fax: (207) 626-9094



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

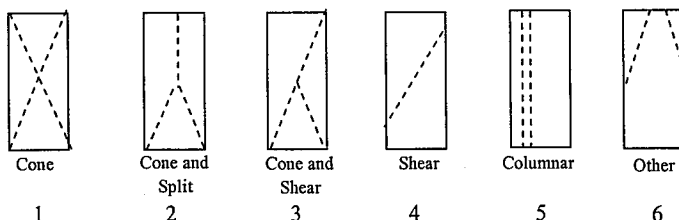
Set No.: C3
 Placement Date: 14-May-08
 Lab Rec'd Date: 15-May-08
 Location: Wall; Line 1, C.5 to Line G.2
 Footing; From F4 to C4
 Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 in.
 Air Content 5.7 %
 Conc Temp. 71.2 °F
 Air Temp. 72.8 °F
 Volume (yds) 10.0 of 100.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C3a	21-May-08	7	5	143.5	28.18	75.6	2680
C3b	11-Jun-08	28	4	143.5	28.23	126.6	4490
C3c	11-Jun-08	28	6	143.5	28.13	115.5	4100
C3d							

Average 28 Day (psi): 4295



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C4
 Placement Date: 27-May-08
 Lab Rec'd Date: 28-May-08
 Location: North Side Wall

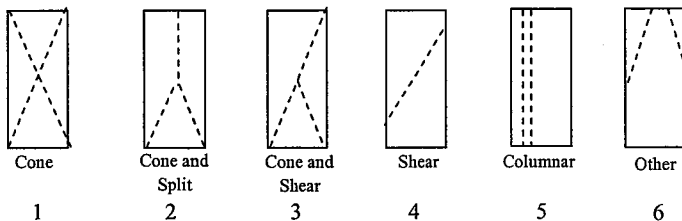
Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 7.6 %
 Conc Temp. 71.0 °F
 Air Temp. 80.0 °F
 Volume (yds) 30.0 of 87.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C4a	3-Jun-08	7	6	136.4	28.27	66.4	2350
C4b	24-Jun-08	28	6	135.7	28.23	101.1	3580
C4c	24-Jun-08	28	6	135.9	28.25	106.9	3780
C4d							

Average 28 Day (psi): 3680



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C5
 Placement Date: 27-May-08
 Lab Rec'd Date: 28-May-08
 Location: West Side Wall

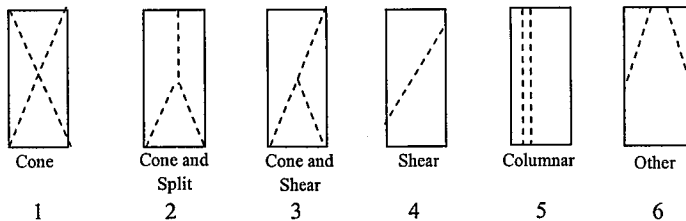
Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 7.5 %
 Conc Temp. 71.0 °F
 Air Temp. 80.0 °F
 Volume (yds) 70.0 of 87.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C5a	3-Jun-08	7	6	141.9	28.23	74.3	2630
C5b	24-Jun-08	28	6	141.9	28.13	114.8	4080
C5c	24-Jun-08	28	6	142.1	28.26	112.1	3970
C5d							

Average 28 Day (psi): 4025



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C6
 Placement Date: 29-May-08
 Lab Rec'd Date: 30-May-08
 Location: Line C to A2 and Line G2 to G3

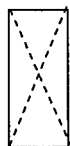
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 in.
 Air Content 5.9 %
 Conc Temp. 68.1 °F
 Air Temp. 70.8 °F
 Volume (yds) 8.5 of 17.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

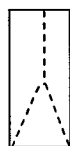
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C6a	5-Jun-08	7	5	141.3	28.27	77.4	2740
C6b	26-Jun-08	28	6	142.0	28.18	116.7	4140
C6c	26-Jun-08	28	6	141.0	28.23	120.8	4280
C6d							

Average 28 Day (psi): 4210



Cone

1



Cone and Split

2



Cone and Shear

3



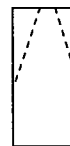
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

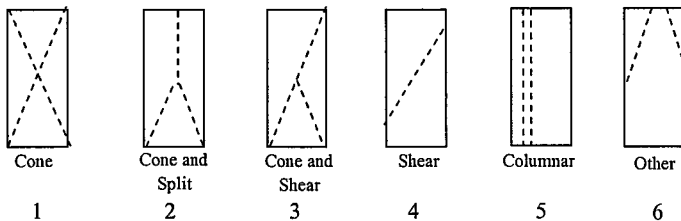
Set No.: C7
 Placement Date: 13-Jun-08
 Lab Rec'd Date: 14-Jun-08
 Location: Foundation Walls: Line 1 B.5 - A, Line A 1-2
 Pier at E - 2, Stairwell A Footings
 Technician: A. Lyons
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 6.0 %
 Conc Temp. 73.0 °F
 Air Temp. 77.5 °F
 Volume (yds) 21.0 of 71.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C7a	20-Jun-08	7	6	144.2	28.23	95.1	3370
C7b	11-Jul-08	28	6	144.2	28.26	117.1	4140
C7c	11-Jul-08	28	6	144.9	28.27	119.1	4210
C7d							

Average 28 Day (psi): 4175



Remarks: _____

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

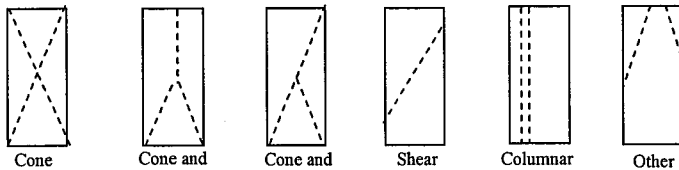
Set No.: C8
 Placement Date: 13-Jun-08
 Lab Rec'd Date: 14-Jun-08
 Location: Foundation Walls: Line 1 B.5-A, Line A 1-2
 Stairwell A Footings, Pier at E-2
 Technician: A. Lyons
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 5.4 %
 Conc Temp. 74.0 °F
 Air Temp. 83.0 °F
 Volume (yds) 61.5 of 71.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C8a	20-Jun-08	7	6	144.5	28.26	114.3	4040
C8b	11-Jul-08	28	6	145.1	28.27	117.1	4140
C8c	11-Jul-08	28	6	144.6	28.23	124.5	4410
C8d							

Average 28 Day (psi): 4275



1 2 3 4 5 6

Remarks: _____



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C9
 Placement Date: 20-Jun-08
 Lab Rec'd Date: 23-Jun-08
 Location: Elevator Pit Floor - Including Footing D-3 & C-3

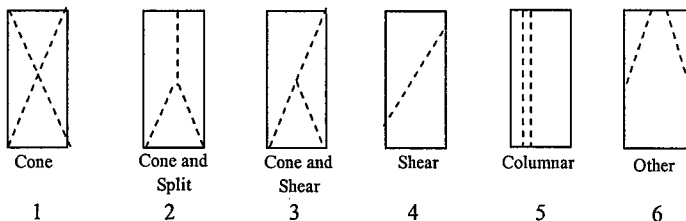
Technician: A. Lyons
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 in.
 Air Content 6.0 %
 Conc Temp. 75.0 °F
 Air Temp. 80.0 °F
 Volume (yds) 10.5 of 31.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C9a	27-Jun-08	7	4	142.6	28.23	107.1	3790
C9b	18-Jul-08	28	6	145.8	28.27	132.6	4690
C9c	18-Jul-08	28	4	144.0	28.26	135.9	4810
C9d							

Average 28 Day (psi): 4750



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, Maine 04005

Field Test Data

Set No.: C10
Placement Date: 3-Jul-08
Lab Rec'd Date: 4-Jul-08
Location: Wall line C5 to A3 and footing line A3 and B3

Technician: AB
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) in.
Slump (placed) 6-3/4 in.
Air Content 4.5 %
Conc Temp. 82.5 °F
Air Temp. 75.0 °F
Volume (yds) 10.0 of 70.0
Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

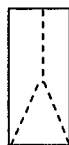
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C10a	10-Jul-08	7	4	143.8	28.13	78.9	2800
C10b	31-Jul-08	28	4	143.5	28.27	115.3	4080
C10c	31-Jul-08	28	6	143.5	28.27	112.2	3970
C10d							

Average 28 Day (psi): 4025



Cone

1



Cone and Split

2



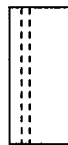
Cone and Shear

3



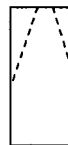
Shear

4



Columnar

5



Other

6

Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C11
 Placement Date: 10-Jul-08
 Lab Rec'd Date: 11-Jul-08
 Location: Footing B2.4, Stair A Wall, Stair B Footing

Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 1/2 in.
 Air Content 5.5 %
 Conc Temp. 85.0 °F
 Air Temp. 80.0 °F
 Volume (yds) 8.0 of 8.0
 Admixture:

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C11a	17-Jul-08	7	6	144.3	28.13	90.3	3210
C11b	7-Aug-08	28	6	143.0	28.27	127.6	4510
C11c	7-Aug-08	28	6	143.4	28.26	135.5	4800
C11d							

Average 28 Day (psi): 4655



Cone

1



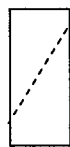
Cone and Split

2



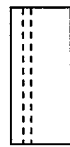
Cone and Shear

3



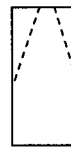
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C12
 Placement Date: 18-Jul-08
 Lab Rec'd Date: 19-Jul-08
 Location: Walls: A from 2 to 3 and 1' Walls Around Stairway

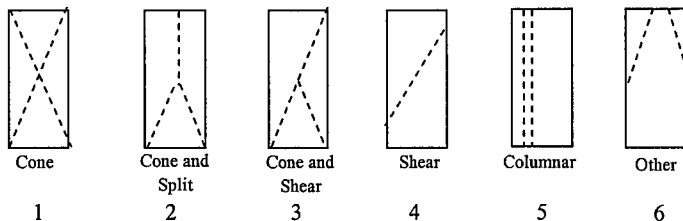
Technician: F. Clark
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 3/4 in.
 Air Content 4.8 %
 Conc Temp. 87.0 °F
 Air Temp. 98.0 °F
 Volume (yds) 6.5 of 13.0
 Admixture: Glenium 7500 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C12a	25-Jul-08	7	6	144.4	28.23	96.2	3410
C12b	15-Aug-08	28	6	145.0	28.27	117.3	4150
C12c	15-Aug-08	28	6	144.6	28.27	112.0	3960
C12d							

Average 28 Day (psi): 4055



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C13
 Placement Date: 31-Jul-08
 Lab Rec'd Date: 1-Aug-08
 Location: South Area Footing

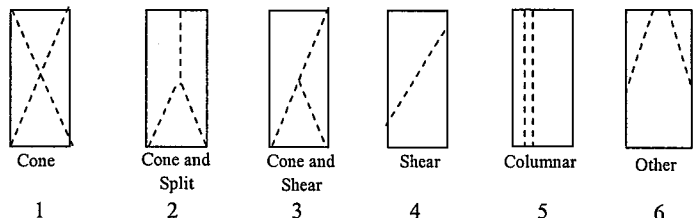
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 4 in.
 Air Content 5.8 %
 Conc Temp. 85.0 °F
 Air Temp. 80.0 °F
 Volume (yds) 10.5 of 52.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C13a	7-Aug-08	7	4	141.0	28.27	76.9	2720
C13b	28-Aug-08	28	6	141.7	28.26	134.9	4770
C13c	28-Aug-08	28	6	141.5	28.27	132.3	4680
C13d							

Average 28 Day (psi): 4725



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C14
 Placement Date: 20-Aug-08
 Lab Rec'd Date: 21-Aug-08
 Location: Attic Slab

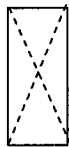
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 in.
 Air Content 2.3 %
 Conc Temp. 75.0 °F
 Air Temp. 60.0 °F
 Volume (yds) 10.0 of 57.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

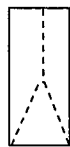
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C14a	27-Aug-08	7	1	145.3	28.27	85.9	3040
C14b	17-Sep-08	28	4	145.7	28.27	132.2	4680
C14c	17-Sep-08	28	5	145.7	28.27	135.1	4780
C14d							

Average 28 Day (psi): 4730



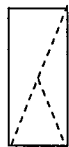
Cone

1



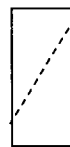
Cone and Split

2



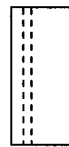
Cone and Shear

3



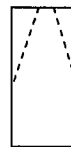
Shear

4



Columnar

5



Other

6

Remarks:

Reviewed: Darrell Gilman, CMT Manager

Sent:09/18/08

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C15
 Placement Date: 20-Aug-08
 Lab Rec'd Date: 21-Aug-08
 Location: Piers Line 4-A

Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 1/2 in.
 Air Content 5.5 %
 Conc Temp. 75.0 °F
 Air Temp. 65.0 °F
 Volume (yds) 10.5 of 57.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

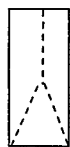
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C15a	27-Aug-08	7	1	140.7	28.27	82.3	2910
C15b	17-Sep-08	28	6	140.7	28.27	110.8	3920
C15c	17-Sep-08	28	6	140.7	28.27	112.0	3960
C15d							

Average 28 Day (psi): 3940



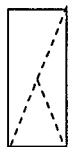
Cone

1



Cone and Split

2



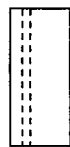
Cone and Shear

3



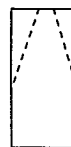
Shear

4



Columnar

5



Other

6

Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C16
 Placement Date: 22-Aug-08
 Lab Rec'd Date: 25-Aug-08
 Location: South Area Way and Loading Dock Footing

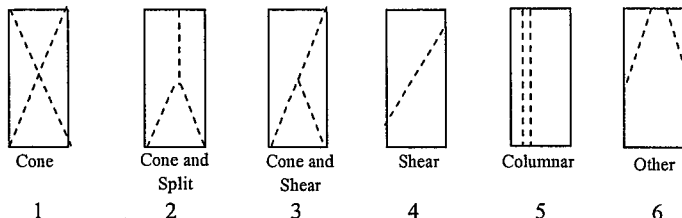
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 3 1/2 in.
 Air Content 4.7 %
 Conc Temp. 78.0 °F
 Air Temp. 65.0 °F
 Volume (yds) 10.0 of 48.5
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C16a	29-Aug-08	7	6	144.7	28.27	96.2	3400
C16b	19-Sep-08	28	6	144.8	28.27	115.1	4070
C16c	19-Sep-08	28	6	145.0	28.27	117.3	4150
C16d							

Average 28 Day (psi): 4110



Remarks: _____

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, Maine 04005

Field Test Data

Set No.: C17
Placement Date: 28-Aug-08
Lab Rec'd Date: 29-Aug-08
Location: First Floor Slab

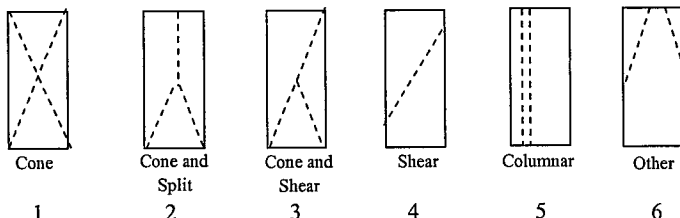
Technician: A. Boubacar
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) in.
Slump (placed) 6 1/2 in.
Air Content 2.6 %
Conc Temp. 77.0 °F
Air Temp. 65.0 °F
Volume (yds) 10.0 of 150.0
Admixture: Polyheed 997

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C17a	4-Sep-08	7	6	145.8	28.27	78.4	2770
C17b	25-Sep-08	28	6	146.2	28.27	115.4	4080
C17c	25-Sep-08	28	6	145.9	28.27	123.5	4370
C17d							

Average 28 Day (psi): 4225



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C18
 Placement Date: 28-Aug-08
 Lab Rec'd Date: 29-Aug-08
 Location: First Floor Slab

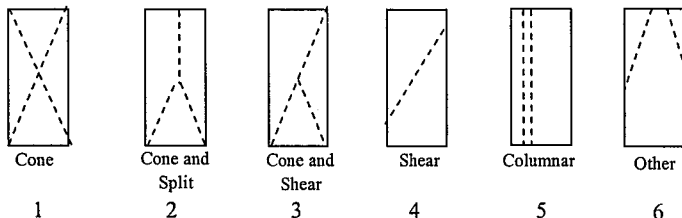
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 8 in.
 Air Content 2.9 %
 Conc Temp. 76.0 °F
 Air Temp. 70.0 °F
 Volume (yds) 10.0 of 150.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C18a	4-Sep-08	7	6	144.7	28.27	73.3	2590
C18b	25-Sep-08	28	5	145.9	28.27	115.2	4080
C18c	25-Sep-08	28	6	144.6	28.27	112.7	3990
C18d							

Average 28 Day (psi): 4035



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C19
 Placement Date: 28-Aug-08
 Lab Rec'd Date: 29-Aug-08
 Location: First Floor Slab

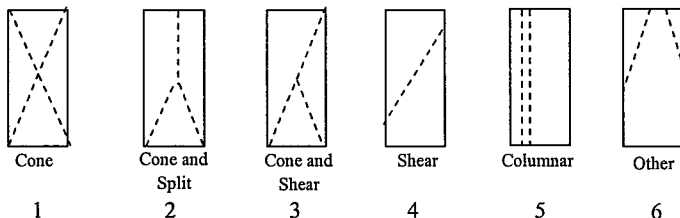
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 3/4 in.
 Air Content 3.0 %
 Conc Temp. 76.0 °F
 Air Temp. 75.0 °F
 Volume (yds) 10.0 of 150.0
 Admixture: Polyheed 997 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C19a	4-Sep-08	7	6	144.8	28.27	69.4	2460
C19b	25-Sep-08	28	6	146.3	28.27	103.2	3650
C19c	25-Sep-08	28	6	145.8	28.27	103.6	3660
C19d							

Average 28 Day (psi): 3655



Remarks: _____

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C20
 Placement Date: 9-Sep-08
 Lab Rec'd Date: 10-Sep-08
 Location: Second Floor Slab F-Line to G-Line from 4 to 3.5

Technician: N. Davis
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 2.1 %
 Conc Temp. 73.0 °F
 Air Temp. 73.0 °F
 Volume (yds) 30.0 of 150.0
 Admixture: Glenium (Mid-Range Water Reducer)

Laboratory Test Data

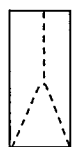
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C20a	16-Sep-08	7	6	145.3	28.27	71.4	2520
C20b	7-Oct-08	28	6	144.7	28.27	130.3	4610
C20c	7-Oct-08	28	6	144.6	28.27	129.1	4570
C20d							

Average 28 Day (psi): 4590



Cone

1



Cone and Split

2



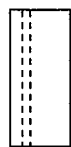
Cone and Shear

3



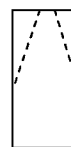
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C21
 Placement Date: 9-Sep-08
 Lab Rec'd Date: 10-Sep-08
 Location: Second Floor Slab; B-Line to C-Line from 1 to 1.5

Technician: N. Davis
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 7 1/2 in.
 Air Content 2.3 %
 Conc Temp. 73.0 °F
 Air Temp. 73.0 °F
 Volume (yds) of
 Admixture: Glenium (Mid-Range Water Reducer)

Laboratory Test Data

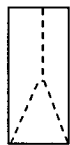
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C21a	16-Sep-08	7	4	144.8	28.27	73.7	2610
C21b	7-Oct-08	28	6	144.7	28.27	124.3	4400
C21c	7-Oct-08	28	6	144.4	28.27	121.6	4300
C21d							

Average 28 Day (psi): 4350



Cone

1



Cone and Split

2



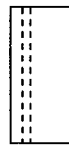
Cone and Shear

3



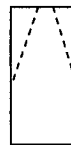
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C22
 Placement Date: 9-Sep-08
 Lab Rec'd Date: 10-Sep-08
 Location: Second Floor Slab ; A-Line to B-Line from 1 to 1.5

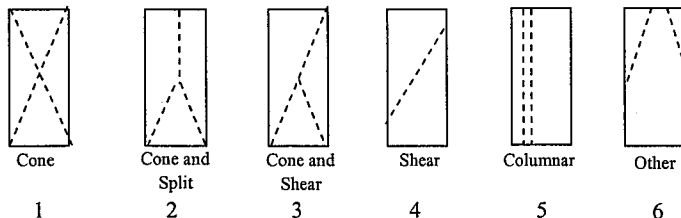
Technician: N. Davis
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 1/4 in.
 Air Content 2.1 %
 Conc Temp. 74.0 °F
 Air Temp. 75.0 °F
 Volume (yds) 140.0 of 150.0
 Admixture: Glenium (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C22a	16-Sep-08	7	6	144.4	28.27	78.1	2760
C22b	7-Oct-08	28	6	144.5	28.27	129.9	4590
C22c	7-Oct-08	28	6	144.9	28.27	137.0	4840
C22d							

Average 28 Day (psi): 4715



Remarks: _____

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Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
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 Biddeford, Maine 04005

Field Test Data

Set No.: C23
 Placement Date: 6-Sep-08
 Lab Rec'd Date: 7-Sep-08
 Location: Third Floor Slab

Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 7 1/4 in.
 Air Content 2.4 %
 Conc Temp. 73.0 °F
 Air Temp. 60.0 °F
 Volume (yds) 20.0 of 170.0
 Admixture:

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C23a	13-Sep-08	7	4	143.9	28.27	79.4	2810
C23b	4-Oct-08	28	6	143.8	28.27	130.9	4630
C23c	4-Oct-08	28	6	143.4	28.27	133.8	4730
C23d							

Average 28 Day (psi): 4680



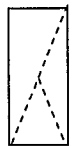
Cone

1



Cone and Split

2



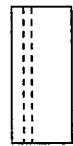
Cone and Shear

3



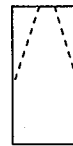
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C24
 Placement Date: 10-Sep-08
 Lab Rec'd Date: 11-Sep-08
 Location: Third Floor Slab

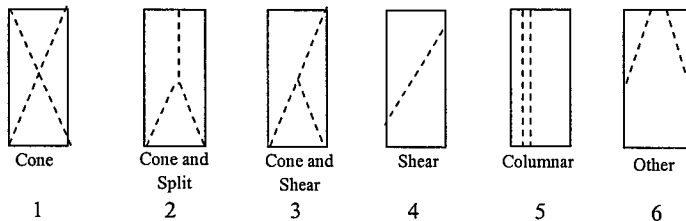
Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 3/4 in.
 Air Content 2.3 %
 Conc Temp. 72.0 °F
 Air Temp. 65.0 °F
 Volume (yds) 70.0 of 170.0
 Admixture:

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C24a	17-Sep-08	7	1	143.8	28.27	76.8	2720
C24b	8-Oct-08	28	4	144.4	28.27	140.6	4970
C24c	8-Oct-08	28	6	144.1	28.27	136.0	4810
C24d							

Average 28 Day (psi): 4890



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
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Field Test Data

Set No.: C25
Placement Date: 10-Sep-08
Lab Rec'd Date: 11-Sep-08
Location: Third Floor Slab

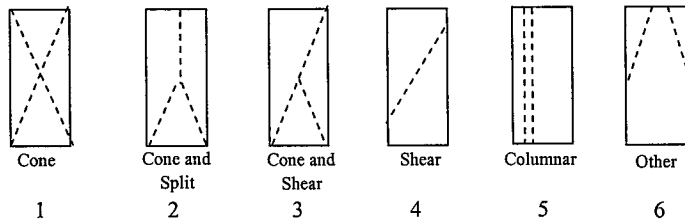
Technician: A. Boubacar
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) in.
Slump (placed) 7 in.
Air Content 3.0 %
Conc Temp. 74.0 °F
Air Temp. 70.0 °F
Volume (yds) 120.0 of 170.0
Admixture:

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C25a	17-Sep-08	7	6	143.8	28.27	78.7	2780
C25b	8-Oct-08	28	4	144.1	28.27	135.6	4800
C25c	8-Oct-08	28	6	144.4	28.27	136.6	4830
C25d							

Average 28 Day (psi): 4815



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C26
 Placement Date: 10-Sep-08
 Lab Rec'd Date: 11-Sep-08
 Location: Third Floor Slab

Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 7 1/4 in.
 Air Content 2.6 %
 Conc Temp. 72.0 °F
 Air Temp. 70.0 °F
 Volume (yds) 160.0 of 170.0
 Admixture:

Laboratory Test Data

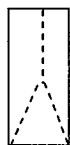
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C26a	17-Sep-08	7	6	144.8	28.27	77.0	2720
C26b	8-Oct-08	28	4	144.8	28.27	133.0	4700
C26c	8-Oct-08	28	6	144.1	28.27	140.8	4980
C26d							

Average 28 Day (psi): 4840



Cone

1



Cone and Split

2



Cone and Shear

3



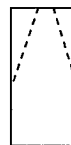
Shear

4



Columnar

5



Other

6

Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C27
 Placement Date: 15-Sep-08
 Lab Rec'd Date: 16-Sep-08
 Location: Attic Equipment Deck

Technician: A. Boubacar
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 1/2 in.
 Air Content 2.4 %
 Conc Temp. 81.0 °F
 Air Temp. 70.0 °F
 Volume (yds) 7.0 of 14.0
 Admixture: Glenium 7500 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C27a	22-Sep-08	7	5	144.9	28.27	73.4	2590
C27b	13-Oct-08	28	6	145.7	28.27	122.8	4340
C27c	13-Oct-08	28	6	145.8	28.27	117.9	4170
C27d							

Average 28 Day (psi): 4255



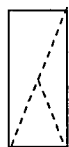
Cone

1



Cone and Split

2



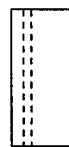
Cone and Shear

3



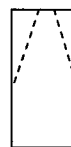
Shear

4



Columnar

5



Other

6

Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C28
 Placement Date: 11-Nov-08
 Lab Rec'd Date: 12-Nov-08
 Location: Basement Slab

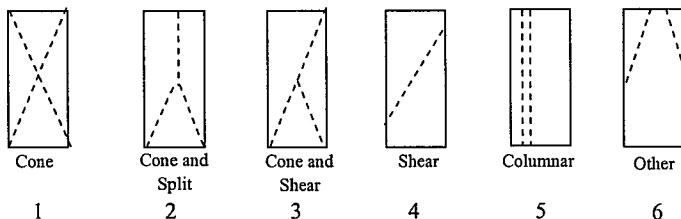
Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi.

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 8.0 %
 Conc Temp. 56.0 °F
 Air Temp. 35.0 °F
 Volume (yds) of 195.0
 Admixture: Glenium 7500 (Mid-Range Water Reducer), Fibermesh, 2%-Pozzutec 20

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C28a	18-Nov-08	7	2	137.3	28.27	56.2	1990
C28b	9-Dec-08	28	6	142.1	28.27	95.1	3360
C28c	9-Dec-08	28	6	137.2	28.27	99.4	3520
C28d							

Average 28 Day (psi): 3440



Remarks: _____

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C29
 Placement Date: 11-Nov-08
 Lab Rec'd Date: 12-Nov-08
 Location: Basement Slab

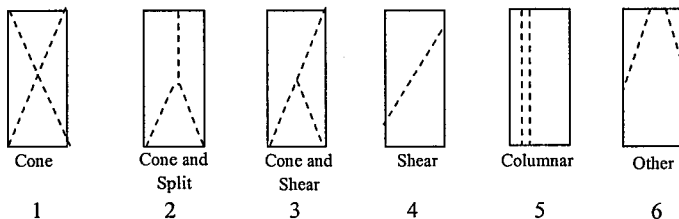
Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 3.2 %
 Conc Temp. 60.0 °F
 Air Temp. 35.0 °F
 Volume (yds) 80.0 of 195.0
 Admixture: Glenium 7500 (Mid-Range Water Reducer), Fibermesh, 2%-Pozzutec 20

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C29a	18-Nov-08	7	4	143.9	28.27	95.1	3360
C29b	9-Dec-08	28	4	144.8	28.27	129.1	4560
C29c	9-Dec-08	28	6	144.6	28.27	135.3	4780
C29d							

Average 28 Day (psi): 4670



Remarks: _____



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C30
 Placement Date: 11-Nov-08
 Lab Rec'd Date: 12-Nov-08
 Location: Basement Slab

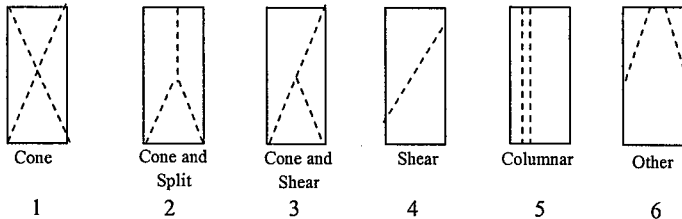
Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 3.4 %
 Conc Temp. 60.0 °F
 Air Temp. 35.0 °F
 Volume (yds) 140.0 of 195.0
 Admixture: Glenium 7500 (Mid-Range Water Reducer), Fibermesh, 2%-Pozzutec 20

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C30a	18-Nov-08	7	6	146.7	28.27	87.5	3100
C30b	9-Dec-08	28	4	144.3	28.27	142.1	5030
C30c	9-Dec-08	28	6	143.8	28.27	140.9	4980
C30d							

Average 28 Day (psi): 5005



Remarks:

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CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C31
 Placement Date: 5-May-09
 Lab Rec'd Date: 6-May-09
 Location: West Side South Sitting Wall

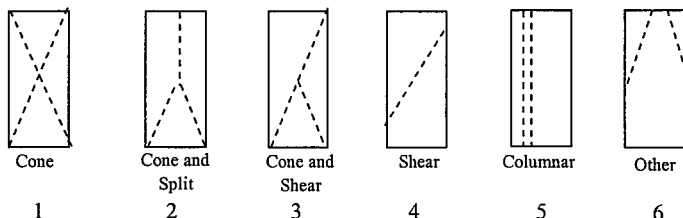
Technician: D. Gilman
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) 5 1/2 in.
 Slump (placed) 5 1/2 in.
 Air Content 5.8 %
 Conc Temp. 63.0 °F
 Air Temp. 55.0 °F
 Volume (yds) 8.5 of 8.5
 Admixture: Glenium 7500 (Mid-Range Water Reducer)

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C31a	12-May-09	7	6	143.3	28.27	95.1	3360
C31b	2-Jun-09	28	6	143.5	28.27	128.5	4550
C31c	2-Jun-09	28	6	144.2	28.09	121.1	4310
C31d							

Average 28 Day (psi): 4430



Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C32
 Placement Date: 7-May-09
 Lab Rec'd Date: 8-May-09
 Location: Basement Patch

Technician: M. Sullivan
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 6 in.
 Air Content 3.0 %
 Conc Temp. 55.0 °F
 Air Temp. 45.0 °F
 Volume (yds) of
 Admixture: Glenium 7500 (Mid-Range Water Reducer)

Laboratory Test Data

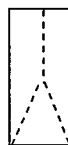
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C32a	14-May-09	7	3	142.7	28.27	97.9	3460
C32b	4-Jun-09	28	4	143.5	28.18	128.7	4570
C32c	4-Jun-09	28	6	141.5	28.27	124.5	4400
C32d							

Average 28 Day (psi): 4485



Cone

1



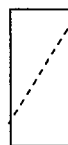
Cone and Split

2



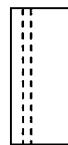
Cone and Shear

3



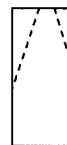
Shear

4



Columnar

5



Other

6

Remarks:

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621-8334 Fax: (207) 626-9094



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, Maine 04005

Field Test Data

Set No.: C33
Placement Date: 11-May-09
Lab Rec'd Date: 12-May-09
Location: Ramp In Basement

Technician: K. Bennett
Supplier: Dragon Products
Mix Designation: 3/4" Aggregate
Design Strength: 3000psi

Slump (initial) 1 1/2 in.
Slump (placed) 3 1/2 in.
Air Content 3.1 %
Conc Temp. 62.0 °F
Air Temp. 49.0 °F
Volume (yds) 1.0 of 1.5
Admixture: Glenium 7500 (Mid-Range Water Reducer) Fibermesh

Laboratory Test Data

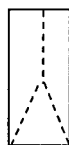
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C33a	18-May-09	7	6	143.5	28.27	87.3	3090
C33b	8-Jun-09	28	6	143.9	28.27	106.3	3760
C33c	8-Jun-09	28	4	143.7	28.27	110.5	3910
C33d							

Average 28 Day (psi): 3835



Cone

1



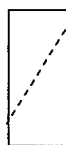
Cone and Split

2



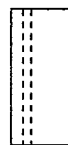
Cone and Shear

3



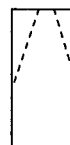
Shear

4



Columnar

5



Other

6

Remarks:



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C34
 Placement Date: 11-May-09
 Lab Rec'd Date: 12-May-09
 Location: Exterior Side Stairs

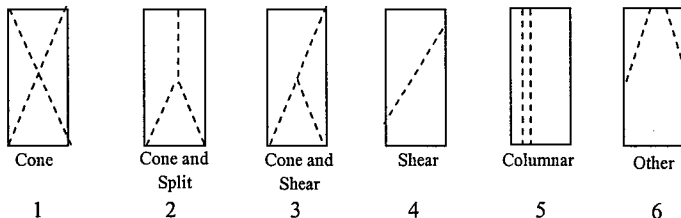
Technician: K. Bennett
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 4500psi

Slump (initial) 2 in.
 Slump (placed) 4 1/2 in.
 Air Content 6.0 %
 Conc Temp. 66.0 °F
 Air Temp. 56.0 °F
 Volume (yds) 2.0 of 3.5
 Admixture: Glenium 7500 (Mid-Range Water Reducer), Air Entrainer

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C34a	18-May-09	7	6	140.6	28.27	118.7	4200
C34b	8-Jun-09	28	6	141.8	28.27	127.1	4490
C34c	8-Jun-09	28	6	141.9	28.27	120.9	4280
C34d	6-Jul-09	56					

Average 28 Day (psi): 4385



Remarks: _____



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C35
 Placement Date: 11-May-09
 Lab Rec'd Date: 12-May-09
 Location: Rear Handicap Walls

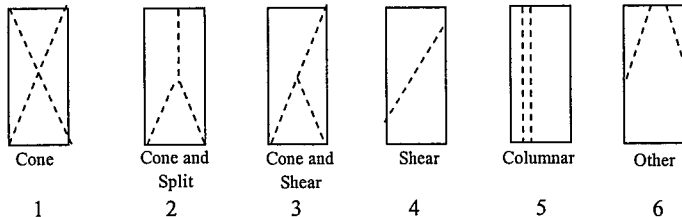
Technician: K. Bennett
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3000psi

Slump (initial) in.
 Slump (placed) 5 1/2 in.
 Air Content 6.5 %
 Conc Temp. 64.0 °F
 Air Temp. 65.0 °F
 Volume (yds) 3.0 of 7.5
 Admixture: Glenium 7500 (Mid-Range Water Reducer), Air Entrainer

Laboratory Test Data

Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C35a	18-May-09	7	6	143.5	28.27	105.3	3720
C35b	8-Jun-09	28	2	143.9	28.27	127.3	4500
C35c	8-Jun-09	28	2	144.0	28.27	119.8	4240
C35d							

Average 28 Day (psi): 4370



Remarks:

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
 Phone: (207) 621-8334 Fax: (207) 626-9094



CONCRETE COMPRESSIVE STRENGTH TEST RESULTS - ASTM C39

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, Maine 04005

Field Test Data

Set No.: C36
 Placement Date: 20-May-09
 Lab Rec'd Date: 21-May-09
 Location: Front Entrance Stoop

Technician: J. Rouillard
 Supplier: Dragon Products
 Mix Designation: 3/4" Aggregate
 Design Strength: 3500psi

Slump (initial) in.
 Slump (placed) 5 1/2 in.
 Air Content 8.0 %
 Conc Temp. 67.5 °F
 Air Temp. 60.0 °F
 Volume (yds) 5.5 of 5.5
 Admixture: Glenium 7500 (Mid-Range Water Reducer)

Laboratory Test Data

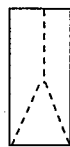
Sample No.	Test Date	Age	Type	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
C36a	27-May-09	7	4	138.9	28.27	89.8	3180
C36b	17-Jun-09	28	6	143.1	28.27	115.4	4080
C36c	17-Jun-09	28	6	138.6	28.27	109.2	3860
C36d							

Average 28 Day (psi): 3970



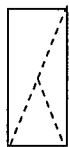
Cone

1



Cone and Split

2



Cone and Shear

3



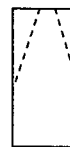
Shear

4



Columnar

5



Other

6

Remarks:

EXHIBIT B

04230 Masonry

**Schedule of Special Inspections – Exhibit B
MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY)**

©Becker Structural Engineers, Inc. 2005

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
IBC Section 1704.5							
1. As masonry construction begins, the following shall be verified to ensure compliance:							
a. Proportions of site-prepared mortar.	Y	P	ACI530.1, 2.6A	SII	PE/SE or EIT	10/08-12/08	MSJ
b. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	SII	PE/SE or EIT	10/08-12/08	MSJ
c. Location of reinforcement and connectors.	Y	P	ACI530.1, 3.4, 3.6A	SII	PE/SE or EIT	10/08-12/08	MSJ
d. Prestressing technique.	N	P	ACI530.1, 3.6B	SII	PE/SE or EIT		
e. Grade and size of prestressing tendons and anchorages.	N	P	ACI530.1, 2.4B, 2.4H	SII	PE/SE or EIT		
2. The inspection program shall verify:							
a. Size and location of structural elements.	Y	P	ACI530.1, 3.3G	SII	PE/SE or EIT	10/08-12/08	MSJ
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	Y	P	ACI530, 1.2.2(e), 2.1.4, 3.1.6	SII	PE/SE or EIT	10/08-12/08	MSJ
c. Specified size, grade and type of reinforcement.	Y	P	ACI530, 1.1.2, ACI530.1, 2.4, 3.4	SII	PE/SE or EIT	10/08-12/08	MSJ
d. Welding of reinforcing bars.	N	Welding of Reinf. Not permitted	AC530, 2.1.10.6.2, 3.2.4 (b)	AWS-CWI	PE/SE or EIT		
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	Y	P	IBC 2104.3, 2104.4; ACI530.1, 1.8C, 1.8D	SII	PE/SE or EIT	10/08-12/08	MSJ
f. Application and measurement of prestressing force.	N	P	ACI530.1, 3.6B	SII	PE/SE or EIT		
3. Prior to grouting, the following shall be verified to ensure compliance:							
a. Grout space is clean.	Y	P	ACI530.1, 3.2D	SII	PE/SE or EIT	10/08-12/08	MSJ
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.	Y	P	ACI530, 1.12, ACI530.1, 3.4	SII	PE/SE or EIT	10/08-12/08	MSJ

Masonry Construction has been reviewed in accordance with section 1704.5 of the IBC Code

Special Inspector *MSJ*

Date 7/15/09

Page 6 of 2


**Schedule of Special Inspections – Exhibit B
MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY)**

©Becker Structural Engineers, Inc. 2005

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
IBC Section 1704.5							
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	Y	P	ACI530.1, 2.6B	SII	PE/SE or EIT	10/08-12/08	YSA
d. Construction of mortar joints.	Y	P	ACI530.1, 3.3B	SII	PE/SE or EIT	10/08-12/08	YSA
4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	Y	C	ACI530.1, 3.5	SII	PE/SE or EIT	10/08-12/08	YSA
a. Grouting of prestressing bonded tendons.	N	C	ACI530.1, 3.6C	SII	PE/SE or EIT		
5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	Y	C	IBC 2105.2.2, 2105.3; ACI530.1, 1.4	TA SII	PE/SE or EIT	10/08-12/08	YSA
6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	Y	P	ACI530.1, 1.5	SII	PE/SE or EIT	10/08-12/08	YSA

Masonry Construction has been reviewed in accordance with section 1704.5 of the IBC Code

Special Inspector 

Date 7/5/07

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT
CMU

Date:	9-26-08
Time:	3:00 pm
Temp:	60 F
Weather:	Rain

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Stair #1, Stair #2 and elevator shaft walls in basement

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See note below
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Bars missing at free ends of cmu wall in two locations, bars also missing at corners of walls. Gary Kibler of Allied Construction ensured that the bars would be in place prior to grouting. Bars will be inspected prior to next placement.

Signed: Nathan Merrill, E.I.

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT

CMU

Date:	10-1-08
Time:	3:00 pm
Temp:	60 F
Weather:	Rain

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Stair #1, Stair #2 and elevator shaft walls in basement - In Progress
--

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Noted that closure pl was needed at attic decking at elevator perimeter - notified Superintendent

Signed: Dan S. Burne, P.E.

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT

CMU

Date:	10-16-08
Time:	3:00 pm
Temp:	60 F
Weather:	Rain

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Stair #1 shaft walls in 3 rd floor - In Progress
--

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Signed: Nathan Merrill, E.I.

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT
CMU

Date:	10-24-08
Time:	1:30 pm
Temp:	60 F
Weather:	Sunny

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Stair #2 shaft walls to 2nd floor - In Progress

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Signed: Dan S. Burne, P.E.

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT
CMU

Date:	10-31-08
Time:	12:30 pm
Temp:	55 F
Weather:	Sunny

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Stair #2 shaft walls midway between second and third floors - In Progress

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Signed: Dan S. Burne, P.E.

B E C K E R

04230

structural engineers, inc.

OBSERVATION REPORT

CMU

Date:	12-3-08
Time:	2:30 pm
Temp:	40 F
Weather:	Sunny

Project:	U.N.E. College of Pharmacy
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Elevator shaft walls, near top of shaft - In Progress
--

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CMU Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Layout/Fit-up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mortar/Grouting Procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lift Height	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clean Outs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Notes:

Signed: Dan S. Burne, P.E.

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621.8334 Fax: (207) 626.9094

MORTAR COMPRESSIVE STRENGTH TEST RESULTS

Project No: 14063
Project: UNE Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, ME 04005

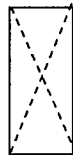
Field Test Data

Set No.: M1
Placement Date: 29-Sep-08
Lab Rec'd Date: 30-Sep-08
Location: Basement Stair A and B
Techician: A. Boubacar
Supplier: Contractor
Mix Designation: Block Mortar
Design Strength: 1800psi

Laboratory Test Data

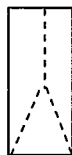
Sample No.	Test Date	Age	Type	Wt. (lb.)	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
M1a	6-Oct-08	7	4	0.58	125.3	4.00	9.4	2350
M1b	27-Oct-08	28	4	0.58	125.3	4.00	10.7	2670
M1c	27-Oct-08	28	4	0.58	125.3	4.00	10.7	2680

Average 28 Day (psi): _____



Cone

1



Cone and Split

2



Cone and Shear

3



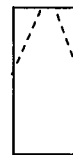
Shear

4



Columnar

5



Other

6

Remarks:

Reviewed: Darrell Gilman, CMT Manager
Sent: 10/28/08

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621.8334 Fax: (207) 626.9094

MORTAR COMPRESSIVE STRENGTH TEST RESULTS

Project No: 14063
Project: UNE Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, ME 04005

Field Test Data

Set No.: M2
Placement Date: 26-Nov-08
Lab Rec'd Date: 1-Dec-08
Location: Second Floor Elevator
Techician: A. Boubacar
Supplier: Contractor
Mix Designation: CMU Block
Design Strength: 1800psi

Laboratory Test Data

Sample No.	Test Date	Age	Type	Wt. (lb.)	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
M2a	3-Dec-08	7	2	0.58	125.3	4.00	7.8	1950
M2b	24-Dec-08	28	3	0.58	125.3	4.00	13.6	3400
M2c	24-Dec-08	28	3	0.58	125.3	4.00	13.7	3410

Average 28 Day (psi): _____



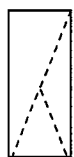
Cone

1



Cone and Split

2



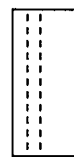
Cone and Shear

3



Shear

4



Columnar

5



Other

6

Remarks:

Reviewed: Darrell Gilman, CMT Manager
Sent: 12/24/08

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
 Phone: (207) 621.8334 Fax: (207) 626.9094



GROUT COMPRESSIVE STRENGTH TEST RESULTS - ASTM C1019

Project No: 14063
 Project: UNE College of Pharmacy
 Client: University of New England
 11 Hills Beach Road
 Biddeford, ME 04005

Field Test Data

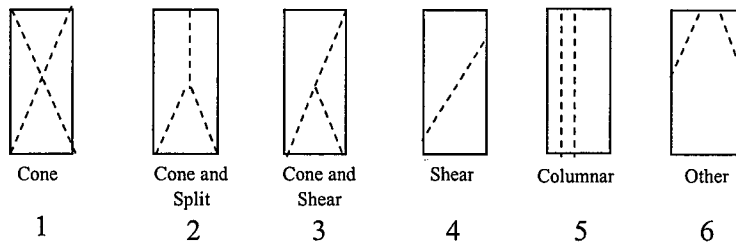
Set No.: G1
 Placement Date: 29-Sep-08
 Lab Rec'd Date: 30-Sep-08
 Location: Basement Stair A
 Technician: A. Boubacar
 Supplier: Contractor
 Mix Designation: CMU Block Mortar
 Design Strength: 2500psi

 Slump (inches) 8 3/4
 Grout Temp. (°F) 66.0
 Air Temp. (°F) 63.0

Laboratory Test Data

Sample No.	Test Date	Age	Type	Wt. (lb.)	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
G1a	6-Oct-08	7	3	5.32	137.0	11.04	23.7	2150
G1b	27-Oct-08	28	3	5.54	135.2	11.06	32.0	2900
G1c	27-Oct-08	28	3	5.52	132.1	11.18	30.7	2750
G1d								

Average 28 Day (psi):



Remarks:

SUMMIT GEOENGINEERING SERVICES

434 Cony Road, Augusta, Maine 04330
Phone: (207) 621.8334 Fax: (207) 626.9094



GROUT COMPRESSIVE STRENGTH TEST RESULTS - ASTM C1019

Project No: 14063
Project: UNE College of Pharmacy
Client: University of New England
11 Hills Beach Road
Biddeford, ME 04005

Field Test Data

Set No.: G2
Placement Date: 26-Nov-08
Lab Rec'd Date: 1-Dec-08
Location: Second Floor Elevator Wall
Technician: A. Boubacar
Supplier: Contractor
Mix Designation: CMU Block Grout
Design Strength: 2500psi

Slump (inches) 8 1/2
Grout Temp. (°F) 58.0
Air Temp. (°F) 35.0

Laboratory Test Data

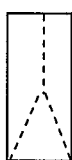
Sample No.	Test Date	Age	Type	Wt. (lb.)	Unit Wt.	Area (in ²)	Load (K)	Strength (psi)
G2a	3-Dec-08	7	2	5.76	145.3	21.13	42.1	1990
G2b	24-Dec-08	28	2	5.88	138.9	21.81	52.2	2390
G2c	24-Dec-08	28	2	5.78	143.3	21.38	51.9	2430
G2d	21-Jan-09	56	2	6.00	137.8	22.18	64.1	2890

Average 28 Day (psi): _____



Cone

1



Cone and Split

2



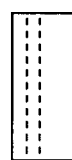
Cone and Shear

3



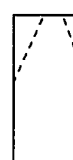
Shear

4



Columnar

5



Other

6

Remarks:

Reviewed: Darrell Gilman, CMT Manager
Sent: 1/22/09

EXHIBIT B

05120 Structural Steel

Schedule of Special Inspections – Exhibit B STEEL CONSTRUCTION

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
1. Material verification of high-strength bolts, nuts and washers:							
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3	SII	PE/SE or EIT	7/08-8/08	MSJ
b. Manufacturer's certificate of compliance required.	Y	S		SII	PE/SE or EIT	7/08-8/08	MSJ
2. Inspection of high-strength bolting							
a. Bearing-type connections.	Y	P	AISC LRFD Section M2.5 IBC Sect 1704.3.3	TA1	AWS/AISC-SSI	8/08	MSJ
b. Slip-critical connections.	Y	C or P (method dependent)		TA1	AWS/AISC-SSI	8/08	MSJ
3. Material verification of structural steel (IBC Sect 1708.4):							
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SII	PE/SE or EIT	7/08-8/08	MSJ
b. Manufacturers' certified mill test reports.	Y	S	ASTM A 6 or ASTM A 568 IBC Sect 1708.4	SII	PE/SE or EIT	7/08-8/08	MSJ
4. Material verification of weld filler materials:							
a. Identification markings to conform to AWS specification in the approved construction documents.	Y	S	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5	SII	PE/SE or EIT	7/08-8/08	MSJ
b. Manufacturer's certificate of compliance required.	Y	S		SII	PE/SE or EIT	7/08-8/08	MSJ

Steel Construction has been reviewed in accordance with section 1704.3 of the IBC Code

Special Inspector *MSJ*

Date *7/15/09*

Schedule of Special Inspections – Exhibit B STEEL CONSTRUCTION

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS	AGENT	AGENT QUALIFICATION	DATE	INITIAL
5. Submit current AWS D1.1 welder certificate for all field welders who will be welding on this project.	Y	S	AWS D1.1	SII	PE/SE or EIT	7/08-8/08	MS
6. Inspection of welding (IBC 1704.3.1): a. Structural steel:							
1) Complete and partial penetration groove welds.	Y	C		TAI	AWS-CWI	} 8/08	
2) Multipass fillet welds.	Y	C	AWS D1.1	TAI	AWS-CWI		
3) Single-pass fillet welds > 5/16"	Y	C		TAI	AWS-CWI		MS
4) Single-pass fillet welds < 5/16"	Y	P		TAI	AWS-CWI		
5) Floor and Roof deck welds.	Y	P	AWS D1.3	TAI	AWS-CWI		
b. Reinforcing steel (IBC Sect 1903.5.2):							
1) Verification of weldability of reinforcing steel other than ASTM A706.	N		Welding of Reinforcement not permitted	N/A			
2) 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.	N	C	AWS D1.4 ACI 318: 3.5.2	TAI	AWS-CWI		
3) Shear reinforcement.	N	C		TAI	AWS-CWI		
4) Other reinforcing steel.	N	P		TAI	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.	Y	P		SII	PE/SE or EIT	7/08-8/08	MS
b. Member locations.	Y	P		SII	PE/SE or EIT	7/08-8/08	MS
c. Application of joint details at each connection.	Y	P		SII	PE/SE or EIT	7/08-8/08	MS

Steel Construction has been reviewed in accordance with section 1704.3 of the IBC Code

Special Inspector *MS*

Date 7/15/09

**Schedule of Special Inspection Services – Exhibit B
FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL**

©Becker Structural Engineers, Inc. 2005

Project: University of New England – College of Pharmacy, Portland, ME
Date Prepared: 03/13/2008

VERIFICATION AND INSPECTION	Y/N	EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE	COMMENTS/AGENT	AGENT QUALIFICATION	DATE	INITIAL
<p>IBC Section 1704.2</p> <p>1. 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.</p> <p align="center">-OR-</p> <p>2. AISC or SSFNE Certification ← <i>AISC</i></p> <p>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.</p>	Y	S	<p>Fabricator shall submit one of the two qualifications</p> <p align="center"><i>CERTIFIED</i></p>	PE/SE or EIT	<i>8/08</i>	<i>DG</i>
	Y	S	IBC 1704.2.2	PE/SE or EIT	<i>8/08</i>	<i>MSJ</i>

Fabricator Qualifications have been reviewed in accordance with section 1704.2 of the IBC Code

Special Inspector *MSJ*

Date *7/15/09*

Page *2* of *3*

B E C K E R

05120

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	7-22-08
Time:	8:30 AM
Temp:	72 F
Weather:	Sunny

Project:	UNE - COP
Location:	Portland, ME
Becker Job No:	1889

Observation Location: Steel erection in progress: first floor complete, second floor in progress.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not accessible this visit
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not accessible this visit
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Dan S. Burne, P.E.

BECKER

05120

structural engineers, inc.

OBSERVATION REPORT

Structural Steel

Date: 7-30-08

Time: 2:00 PM

Temp: 80 F

Weather: Sunny

Project: UNE - COP

Location: Portland, ME

Becker Job No: 1889

Observation Location:

Steel erection in progress: roof framing in progress

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test report required
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test report required
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	several areas not yet grouted
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	test report required
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Hanger conn plate at truss bottom chord not in proper location. Advised GC that field weld at relocated plate must be full penetration and be scanned as such per project specifications.

Signed: Dan S. Burne, P.E.

BECKER

05120

structural engineers, inc.

OBSERVATION REPORT

Structural Steel

Date: 8-7-08

Time: 3:30 PM

Temp: 65 F

Weather: Rain

Project: UNE - COP

Location: Portland, ME

Becker Job No: 1889

Observation Location:

Steel erection in progress: roof deck installation in progress

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test report required
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test report required
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	several areas not yet grouted
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	test report required
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Column splices observed with gap in three locations. Advised GC splices need to be repaired to have full bearing.

Signed: Dan S. Burne, P.E.

BECKER

05120

structural engineers, inc.

OBSERVATION REPORT

Structural Steel

Date: 8-19-08

Time: 2:00 PM

Temp: 80 F

Weather: Sunny

Project: UNE - COP

Location: Portland, ME

Becker Job No: 1889

Observation Location:

Steel erection complete: welded wire mesh and deck placement at attic mezzanine

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Metal Deck Welds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test report required
Pour Stops	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Column bearing unsatisfactory at splice location for three columns. Issue brought to the attention of Gary Kibler of Allied Cook, we recommended that the columns were shimmed or fixed prior to concrete pour at mezzanine level scheduled for 8/20.

Signed: James D. Hughes, E.I.

B E C K E R

05120

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	8-20-08
Time:	3:30 PM
Temp:	75 F
Weather:	sunny

Project:	UNE - COP
Location:	Portland, ME
Becker Job No:	1889

Observation Location:
 Steel erection near completion, decks being prepped for slab placements, mezz slab placed, initial steel inspection apparently complete-repairs underway, test reports forthcoming.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test report required
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test report required
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	test report required
Pour Stops	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Column splices previously observed with gaps have temporary shim at one location, no repair at others. Cautioned GC about proceeding without splices repaired. Noted full penetration weld at truss eaves not completed, advised GC to complete prior to adding more load. Advised GC to keep beam at 2.5 line connected to truss when installing one remaining beam.

Signed: Dan S. Burne, P.E.

** COL SPLICES LATER REPAIRED TO SATISFACTION - DSB*

B E C K E R

05120

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	8-21-08
Time:	3:30 PM
Temp:	75 F
Weather:	Sunny

Project:	UNE - COP
Location:	Portland, ME
Becker Job No:	1889

Observation Location:	On site to re-review areaway concrete, walked though building with GC
------------------------------	---

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test report required
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test report required
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	test report required
Pour Stops	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Below
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Noted beam bearing pl at first floor between A2 & A3 not yet grouted. All shear keys at first floor fully grouted.

Signed: Dan S. Burne, P.E.

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8811 • FAX: (207) 799-7251

INSPECTION REPORT

CUSTOMER: SUMMIT GEO TECH		PAGE 1 OF 1	
ADDRESS: AUGUSTA, ME.			
ATTENTION: DARREL GILMAN			
COPIES:			
PROJECT: U. N. E. COLLEGE OF PHARMACY			
OWNER: U. N. E.			
CONTRACTOR: ALLIED COOK			
JOB No.: 14063	REPORT No.: QAL-08-1609	P. O. NUMBER:	DATE INSPECTED: 08-08-08

REMARKS

>>>> SITE VISIT TO PERFORM VISUAL INSPECTION OF STRUCTURAL STEEL CONNECTIONS; ALL LEVELS TO GRID LOCATIONS 1-4, A-G.

> BASEMENT / FIRST LEVEL FRAMING PLAN:

- A) ALL ANCHOR POINTS COMPLETE.
- B) ALL BEAM TO EMBEDDED CONNECTIONS COMPLETE. ALL BEAM TO BEAM AND BEAM TO COLUMN HIGH STRENGTH A325 BOLTED CONNECTIONS COMPLETE.
- C) DIAGONAL BRACE CONNECTIONS COMPLETE.

> SECOND LEVEL FRAMING PLAN:

- A) COLUMN TO BEAM AND BEAM TO BEAM HIGH STRENGTH A325 BOLTED CONNECTIONS COMPLETE.
- B) DIAGONAL BRACE CONNECTIONS ALL COMPLETE EXCEPT ONE LOCATION MARKED WITH BLUE FLAG TAPE FOR INCOMPLETE TOP CONNECTION.
- C) DECKING ATTACHMENTS COMPLETE.

> THIRD, PENTHOUSE, AND ROOF FRAMING PLAN:

- A) LOCATIONS MARKED WITH BLUE FLAG TAPE FOR UN-TORQUED T/C BOLTS AND INCOMPLETE DIAGONAL BRACE CONNECTIONS.
- B) DECKING ATTACHMENTS SHOW UPPER LEVELS APPROX. 95% PLUS COMPLETE. ALL SHEAR STUDS YET TO BE WELDED AT ALL LEVELS.
- C) ROOF AREA DECKING APPROX. 70% COMPLETE.

NOTE: FULL-PEN MOMENT WELDS ARE NOT TO DRAWING S3.1 REQUIREMENTS FOR TOP AND BOTTOM 5/16" FILLET WELDS. BOTTOM BACKING BARS TO BE REMOVED.

COMPLETED ITEMS COMPLY WITH SITE DOCUMENTS AND AWS D1.1, D1.3 REQUIREMENTS FOR VISUAL ACCEPTANCE. FIELD WELD QUALITY IS VERY GOOD!

FAA REPAIR STATION NUMBER RX5R187N
METHOD(S), PROCESS(ES), PROCEDURE(S) MERCURY FREE

ADDITIONAL INFORMATION - SEE ATTACHED: SKETCH(ES) SUPPLEMENTARY SHEET(S) NOT REPORTS VIDEO

SIGNATURES		CERTIFICATION	DATE
INSPECTOR	MICHAEL DREW CWI # 99050211 <i>Michael Drew</i>	ASNT	11 08 08 08
SUPERVISOR			

DAC 8-12-08

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

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INSPECTION REPORT

CUSTOMER: SUMMIT GEO TECH		PAGE 1 OF 1	
ADDRESS: AUGUSTA, ME.			
ATTENTION: DARREL GILMAN			
COPIES:			
PROJECT: U N E. PORTLAND CAMPUS - PHARMACY			
OWNER: U. N. E.			
CONTRACTOR: ALLIED / COOK			
JOB No.: 14063	REPORT No.: QAL-08-1683	P. O. NUMBER:	DATES INSPECTED: 08-14-08, 08-15-08

REMARKS

>>>> SITE VISIT TO PERFORM VISUAL INSPECTION OF STRUCTURAL STEEL CONNECTIONS: REF. PREVIOUS FIELD REPORT DATED 08-08-08 FOR MARKED ITEMS IDENTIFIED FOR ADDITIONAL WORK. GRID LOCATIONS 1-4, A-G TO INCLUDE ALL LEVELS.

> RE-INSPECTION OF ALL PREVIOUSLY IDENTIFIED ITEMS MARKED FOR ADDITIONAL WORK NOW COMPLETE. IE: BOLTED AND WELDED CONNECTIONS EXCEPT MOMENT CONNECTIONS.

> FIRST AND SECOND LEVEL SHEAR STUD INSPECTION REVEALED FAILED STUDS WHICH WERE RE-WELDED AND ACCEPTABLE.

> THIRD LEVEL SHEAR STUDS REVEALED (14) FAILED STUDS TO BE RE-WELDED.

COMPLETED ITEMS COMPLY WITH SITE DOCUMENTS AND AWS D1.1 REQUIREMENTS FOR VISUAL ACCEPTANCE.

END ITEMS ////

FAA REPAIR STATION NUMBER RX5R187N
METHOD(S), PROCESS(ES), PROCEDURE(S) MERCURY FREE

ADDITIONAL INFORMATION - SEE ATTACHED:			
<input type="checkbox"/> SKETCHES	<input type="checkbox"/> SUPPLEMENTARY EXPLANS	<input type="checkbox"/> NDT REPORTS	<input type="checkbox"/> VIDEO
SIGNATURES		CERTIFICATION	
		DATE	M D Y
INSPECTOR MICHAEL DREW CWI # 99030211 <i>Michael Drew</i>		ASNT	II 08 18 08
SUPERVISOR			

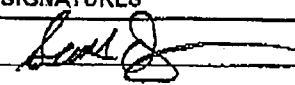
DRG
8-18-08

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

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ULTRASONIC INSPECTION REPORT

CUSTOMER: SUMMIT GEOENGINEERING SERVICE		DATE OF INSPECTION		M	D	Y
ATTENTION: GARY KIBLER		REPORT No.		08	26	08
PROJECT: UNE PHARMACY BUILDING		PAGE		2	OF	2
COMPONENT INSPECTED: MOMENT CONNECTIONS		JOB No.		14063		
AREA OF INTEREST: WELD AREA		P.O. No.		14063		
COMPONENT LOCATION: PORTLAND, ME		INSTRUMENT				
CUSTOMER WORK ORDER No: N/A		PART No.: N/A		MAKE: PANAMETRICS		
MATERIAL: CARBON STEEL		HEAT No.: N/A		MODEL: LTC		
COMPONENT SURFACE CONDITION: AS WELDED		EQUIPMENT No.:		35403		
EXAMINATION DATA					MATERIAL THICKNESS: 12.7 mm (0.500 in.)	
Project Code/Spec		U.T. Procedure No.		U.T. Technique No.		SCREEN RANGE: 5"
AWS D1.1						COUPLANT: SONO-CLEAR
RESULTS: AS NOTED		INDICATIONS:		TRANSDUCERS		
REMARKS:					MAKE: PANAMETRICS	
PERFORMED ULTRASONIC INSPECTION ON THE FOLLOWING ATTIC FRAMING MOMENT CONNECTION IAW AWS D1.1.					FREQ.: 2.25 MHz	
					ANGLE: 70°	
GRID LINES:					SIZE: 6.35 mm (0.250 in.)	
B-2 W10 HANGER WELD ACCEPTED					STYLE: SINGLE	
RESULTS OF INSPECTION:					SHAPE: SQUARE	
ACCPTED, NO CRACKS, CRACKLIKE, OR RELIVANT INDICATIONS NOTED AT TIME OF INSPECTION.					EQUIPMENT No.:	
///LAST ITEM///					MAKE: PANAMETRICS	
					FREQ.: 2.25 MHz	
					ANGLE: 0°	
					SIZE: 25.4 mm (1.000 in.)	
					STYLE: SINGLE	
					SHAPE: ROUND	
					EQUIPMENT No.:	
					MAKE:	
					FREQ.:	
					ANGLE:	
					SIZE:	
					STYLE:	
					SHAPE:	
					EQUIPMENT No.:	
FAA REPAIR STATION NUMBER RX5R187N					REFERENCE BLOCKS:	
METHOD(S), PROCESS(ES), PROCEDURE(S) MERCURY FREE					MAKE: PANAMETRICS	
					TYPE: IIW BLOCK	
					MATERIAL: CARBON STEEL	
ADDITIONAL INFORMATION - SEE ATTACHED: <input type="checkbox"/> SKETCH(ES) <input checked="" type="checkbox"/> SUPPLEMENTARY SHEET(S) <input type="checkbox"/> VIDEO					EQUIPMENT No.:	
SIGNATURES					CERTIFICATION	
					DATE	
INSPECTOR S. Dyer 					M D Y	
					ASNT II 08 26 08	
SUPERVISOR						
AUTHORIZED INSPECTOR						
CUSTOMER REPRESENTATIVE						
					SENSITIVITY: 50db	
					TRANSFER VALUE:	

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES
 80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04108 • TEL: (207) 799-8911 • FAX: (207) 799-7251

ULTRASONIC INSPECTION REPORT

CUSTOMER: SUMMITT GEENGINEERING SERVICE		DATE OF INSPECTION	M	D	Y
ATTENTION: GARY KIBLER		REPORT No.	08	26	08
PROJECT: UNE PHARMACY BUILDING		PAGE	1	OF	2
COMPONENT INSPECTED: MOMENT CONNECTIONS		JOB No.	14063		
AREA OF INTEREST: WELD AREA		P.O. No.	14063		
COMPONENT LOCATION: PORTLAND, ME		INSTRUMENT			
CUSTOMER WORK ORDER No: N/A	PART No.: N/A	MAKE: PANAMETRICS			
MATERIAL: CARBON STEEL	HEAT No.: N/A	MODEL: LTC			
COMPONENT SURFACE CONDITION: AS WELDED		EQUIPMENT No.:		35403	
EXAMINATION DATA		MATERIAL THICKNESS: 12.7 mm (0.500 in.)			
		SCREEN RANGE: 5"			
Project Code/Spec	AWS D1.1	U.T. Technique No.	COUPLANT: SONO-CLEAR		
U.T. Procedure No.			TRANSducers:		
RESULTS: AS NOTED	INDICATIONS:		MAKE: PANAMETRICS		
REMARKS:		FREQ.: 2.25 MHz		ANGLE: 70°	
PERFORMED ULTRASONIC INSPECTION ON THE FOLLOWING SECOND FLOOR MOMENT CONNECTION IAW AWS D1.1.		SIZE: 6.35 mm (0.250 in.)		STYLE: SINGLE	
GRID LINES:		EQUIPMENT No.:		SHAPE: SQUARE	
CANOPY		MAKE: PANAMETRICS		FREQ.: 2.25 MHz	
A-3.8 INSIDE BUILDING TOP & BOTTOM NOTE: BOTTOM REJECT 2" LONG .200" DEEP		SIZE: 25.4 mm (1.000 in.)		ANGLE: 0°	
A-3 INSIDE BUILDING TOP & BOTTOM WELD ACCEPTED		STYLE: SINGLE		SHAPE: ROUND	
G-3 INSIDE BUILDING TOP & BOTTOM WELD ACCEPTED		EQUIPMENT No.:			
G-2 INSIDE BUILDING TOP & BOTTOM WELD ACCEPTED		MAKE:			
A-3.6 OUTSIDE BUILDING TOP WELD ACCEPTED		FREQ.:		ANGLE:	
A-3 OUTSIDE BUILDING TOP WELD ACCEPTED		SIZE:		STYLE:	
G-3 OUTSIDE BUILDING TOP WELD ACCEPTED		EQUIPMENT No.:		SHAPE:	
G-2 OUTSIDE BUILDING TOP WELD ACCEPTED		EQUIPMENT No.:			
NOTE: ALL INSIDE TOP WELDS WERE INSPECTED FROM UNDERNEATH THE BOTTOM OF THE I-BEAM DUE TO N/A OF DECKING ON IT. ALSO ALL OUTSIDE MOMENTS HAD NO ACCESS TO BOTTOM MOMENTS DUE TO A TUBE BEAM IN WAY.		REFERENCE BLOCKS:			
///LAST ITEM///		MAKE: PANAMETRICS		TYPE: IIW BLOCK	
FAA REPAIR STATION NUMBER RX6R187N		MATERIAL: CARBON STEEL		EQUIPMENT No.:	
METHOD(S), PROCESS(ES), PROCEDURE(S) MERCURY FREE		EQUIPMENT No.:			
ADDITIONAL INFORMATION - SEE ATTACHED: <input type="checkbox"/> SKETCH(ES) <input checked="" type="checkbox"/> SUPPLEMENTARY SHEET(S) <input type="checkbox"/> VIDEO		SENSITIVITY: 50db		TRANSFER VALUE:	
SIGNATURES		CERTIFICATION		DATE	
INSPECTOR S. Dyer		ASNT II		M D Y	
SUPERVISOR					
AUTHORIZED INSPECTOR					
CUSTOMER REPRESENTATIVE					



DAILY FIELD REPORT

Date: 1/9/2009

Project: UNE Pharmacy Building

Project #: 14063

Site Contacts: Gary Kibler - Allied Cook

Purpose of Visit: Inspection of the Sprayed Fire Resistive Material (SFRM) for the basement level structural members.

Work Activities:
A crew from New England Fire Proofing is placing Grace product Monokote Z-106/HY medium density SFRM for the required structural members and assemblies as shown on drawings S1.2 (beams & decking), and S1.7 & S1.8 (Columns & Braces) of the structural drawings.
UL fire resistive design thicknesses for columns, beams, braces, and decking are supplied by the approved submittal information from New England Fireproofing dated 12-9-08.
Application is rated for 2 hours areas with 1/2 flange tip thickness. SFRM is being applied to unprimed structural steel.
The SFRM is being inspected for proper thickness, density, and bond strength as required in project specification section 078100 part 3.5C.

Test Results:
Thickness:
SFRM has checked at the rate of not less than 25% of the rated beams and columns, and decking at one check per 1,000 sq.ft. of area.
All areas tested met the require thickness.
Density and bond strength are to be completed on 1-12-09.

Remarks: The SFRM is being allowed to dry prior to bond strength testing on Monday.

Portal to Portal

Leave:	9:00	<u>Expenses</u>	
Return:	3:00	Mileage:	120
TOTAL:	6.75	Density Gauge:	
		Other:	

Signed: Darrell Gilman
cc: Scott Sullivan, John B. Sullivan Corp.
Tom Melican, John B. Sullivan Corp.

Reviewed: Darrell A. Gilman, CMT Manager
Sent: 1/16/2009



DAILY FIELD REPORT

Date: 1/12/2009

Project: UNE Pharmacy Building

Project #: 14063

Site Contacts: Gary Kibler - Allied Cook

Purpose of Visit: Inspection of the Sprayed Fire Resistive Material (SFRM) for the basement level structural members.

Work Activities:

A crew from New England Fire Proofing is placing Grace product Monokote Z-106/HY medium density SFRM for the required structural members and assemblies as shown on drawings S1.2 (beams & decking), and S1.7 & S1.8 (Columns & Braces) of the structural drawings.

UL fire resistive design thicknesses for columns, beams, braces, and decking are supplied by the approved submittal information from New England Fireproofing dated 12-9-08.

Application is rated for 2 hours areas with 1/2 flange tip thickness. SFRM is being applied to unprimed structural steel.

The SFRM is being inspected for proper thickness, density, and bond strength as required in project specification section 078100 part 3.5C.

Test Results:

Bond Strength:
 SFRM has checked at the rate of one test per 10,000 sq. ft. of area for the rated beams, columns, and decking.
 Results: 805psf to 1059psf
 Required: 434psf

Density:
 Wet Density: 46.6pcf, (38-43 pcf recommended)
 Dry Density: 30.5pcf (22 pcf minimum required)

Remarks:

Portal to Portal

Leave:	9:00	<u>Expenses</u>	
Return:	11:15	Mileage:	120
TOTAL:	2.25	Density Gauge:	_____
		Other:	_____

Signed: Darrell Gilman
cc: Scott Sullivan, John B. Sullivan Corp.
 Tom Melican, John B. Sullivan Corp.

Reviewed: Darrell A. Gilman, CMT Manager
 Sent: 1/16/2009

Project No.: 14063

Date: 1/9/09

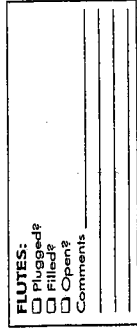
Product Name/Mfg: Grace Z-106/HY Medium Density SFRM

Project Name: UNE Pharmacy

Client: UNE

Location: Portland, Maine

Data Sheet for Thickness of Material



A.2 Thickness of SFRM on Beam.

Take 9 measurements at each end of 12-in. length.

SFRM on Beam	1	2	3	4	5	6	7	8	9	Ave	Rec'd	Min	Max	1/2 Fl.	Notes
W18x35 Line F.5 from 3 to 4	1 3/8	1 3/8	7/8	7/8	1 1/4	7/8	1 1/4	1 1/8	1 1/8	1 4/16	1 1/8	7/8	1 3/8		Pass
W18x40 Line D from 3 to 4	1 5/16	1 5/16	1 5/16	1 5/16	1 1/4	1 5/16	1 5/16	1 5/16	1 5/16	1 3/16	1 1/16	1 3/16	1 5/16		Pass
W24x68 Line B from 3 to 4	1 3/16	1 3/16	1 3/16	1 3/16	1 3/16	1 3/16	1 1/8	1 3/16	1 3/16	1 2/16	1 5/16	1 1/16	1 3/16		Pass
W14x22 Line F from 2 to 3	1 1/4	1 1/8	1 3/8	1 3/8	1 3/8	1 1/4	1 3/8	1 3/16	1 3/16	1 3/16	1 1/4	1 1/2	1 1/2		Pass
W8x15 Line D from 2.4 to 3	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 8/16	1 1/4	1 1/2	1 1/2		Pass
W12x19 Line C from 2.4 to 3	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 7/16	1 1/4	1 1/2	1 1/2		Pass
W12x19 Line B from 1.6 to 2.4	1 1/16	1 5/16	1 1/4	1 1/4	1 1/4	1 1/4	1 7/16	1 3/8	1 1/4	1 5/16	1 1/4	1 1/2	1 1/2		Pass
W18x35 Line E from 1 to 2	1 1/8	1 1/4	1 1/8	1 1/8	1 1/8	1 1/8	1 1/2	1 1/2	1 1/2	1 3/16	1 1/8	7/8	1 3/8		Pass
W12x19 Line C.5 from 1 to 1.6	1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 1/8	1 1/8	1 1/8	1 3/16	1 1/4	1 1/2	1 1/2		Pass
W12x19 Line A.5 from 1 to 1.6	1 1/2	1 1/2	1 1/4	1 3/8	1 3/8	1 1/2	1 3/8	1 1/4	1 1/2	1 6/16	1 1/4	1 1/2	1 1/2		Pass
W18x35 Line 2 from D to E	7/8	1 5/16	1 3/8	1 3/8	1 3/8	1 5/16	1 3/8	1 1/8	1 3/8	1 3/16	1 1/8	7/8	1 3/8		Pass
W18x36 Line 3 from D to E	1 5/16	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 3/8	1 1/4	1 3/8	1 1/5	1 1/8	7/8	1 3/8		Pass
W16x26 Line 2.4 from A to B	1 1/16	1 1/2	1 3/8	1 3/8	1 1/8	5/8	1 1/16	1 1/16	1 3/16	1 4/16	1 1/4	1 1/2	1 1/2		Pass
W16x31 Line -3.4 from B to C	1 1/8	1 3/16	1 1/16	1 1/8	1 1/8	1 1/16	1 1/4	1 1/16	1 1/16	1 1/16	1 1/8	7/8	1 3/8		Pass



Project Name: UNE Pharmacy
 Client: UNE
 Location: Portland, Maine

Project No.: 14063
 Date: 1/9/09
 Product Name/Qty: Grace Z-106/HY Medium Density SFRM

Data Sheet for Thickness of Material

A.2 Thickness of SFRM on Beam

Take 9 measurements at each end of 12-in. length.

FLUTES:
<input type="checkbox"/> Flange?
<input type="checkbox"/> Flange?
<input type="checkbox"/> Open?
Comments

SFRM on Beam

LOCATION	1	2	3	4	5	6	7	8	9	Ave	Req'd	Min	Max	1/2 FI. Notes:
W14x22 Line -3.4 From E to F	1 1/2	1 5/16	1 1/2	1 5/16	1 5/16	1 5/16	1 1/8	1 1/16	1 1/8	1 4/16	1 1/4	1	1 1/2	5/8
W16x26 Line 3.6 from A to B	1 3/8	1 1/4	1 3/8	1 3/8	1 3/8	1 1/4	1 3/16	1 1/8	1 1/8	1 4/16	1 1/4	1	1 1/2	5/8
W12x19 Line B.5 from 1.6 to 2.4	1 3/16	1 1/4	1 1/16	1 1/8	1 3/16	1 3/16	1 3/16	1 1/2	1 1/2	1 3/8	1 1/4	1	1 1/2	5/8
	1 1/2	1	1 1/2	1 3/8	1 7/16	1 3/16	1 1/2	1 1/2	1 1/2	1 3/8	1 1/4	1	1 1/2	5/8
	1 1/16	1 1/16	1 1/2	1 1/4	1 3/16	1 1/2	1 1/2	1 1/2	1 1/2	1 3/8	1 1/4	1	1 1/2	5/8

Note: Take 9 measurements at each end of 12in. Length.
 Average the Flange Tip thickness separately where reduced thicknesses are applied.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness: for thicknesses greater than 1" no less than 1/4".

Remarks:

Signed: _____
 D. Gilman



Project No.: 14063

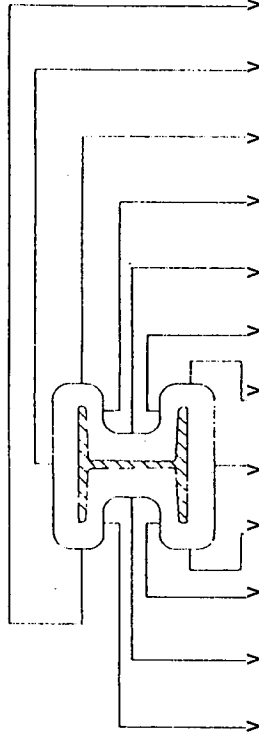
Date: 1/9/09

Project Name: UNE Pharmacy

Product Name/Mftg: Grace Z-106/HY Medium Density SFRM

Client: UNE

Data Sheet for Thickness of Material



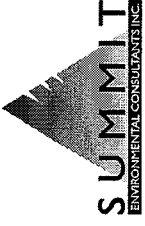
SFRM on Column

LOCATION	1	2	3	4	5	6	7	8	9	10"	11"	12"	Ave.	Req'd	Min	Max	1/2 Ft.	Notes
W12x65 at F-3	1 13/16	1 5/8	1 7/8	1 5/8	1 9/16	1 15/16	1 9/16	1 9/16	1 3/4	1 13/16	1 11/16	1 1/8	1 10/16	1 5/16	1 1/16	1 9/16	1 11/16	
W10x39 at F-4	1 13/16	1 7/16	1 13/16	1 11/16	1 11/16	1 1/8	1 3/8	1 7/16	1 5/8	1	1 9/16	1 1/8	1 8/16	1 7/16	1 3/16	1 11/16	1 12/16	Pass
W10x39 at E-4	1 3/16	1 3/8	1 13/16	1	1 11/16	7/8	1 3/16	1 11/16	1 3/8	1 3/16	1 3/16	1 1/8	1 8/16	1 7/16	1 3/16	1 11/16	1 12/16	Pass
W10x33 at D-4	1 1/2	1 1/2	1 11/16	1 11/16	1 11/16	7/8	1 3/16	1 11/16	1 3/8	1 1/8	1 11/16	1	1 3/16	1 7/16	1 3/16	1 11/16	1 12/16	Failed initially, Repaired & Passed
W10x54 at D-2.4	1 1/4	1 9/16	1 5/8	1 3/8	1 3/4	7/8	1 7/16	1 1/2	1 13/16	1 1/2	5/8	1 1/16	1 6/16	1 9/16	1 5/16	1 13/16	1 13/16	Failed initially, Repaired & Passed
W10x49 at C-1	1 5/8	1 1/2	1 3/8	1 3/16	1 3/16	1 13/16	1 3/16	1 3/16	1 13/16	1 13/16	3/4	3/4	1 11/16	1 5/16	1 1/16	1 9/16	1 11/16	Pass
W8x31 at B-1.6	1 5/16	1 13/16	1 7/16	1 1/8	1 13/16	1 5/8	1 13/16	1 13/16	1 3/8	1 13/16	1 3/8	1 3/8	1 11/16	1 5/16	1 1/16	1 5/8	1 11/16	Pass
W12x72 at B-3	1 3/8	1 13/16	1 1/2	13/16	1 1/2	5/8	1 13/16	1 13/16	1 9/16	13/16	1 5/16	13/16	1 10/16	1 1/4	1	1 1/2	10/16	Failed initially, Repaired & Passed
W10x54 at B-2.4	1 1/2	1 13/16	1 1/2	15/16	1 9/16	5/8	1 13/16	1 13/16	1 13/16	1	1 5/16	13/16	1 9/16	1 5/16	1 1/16	1 9/16	1 11/16	Pass

Notes:
 Take 12 measurements at each end of a twelve inch length.
 Average the Flange Tip thickness separately where reduced thicknesses are applied.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than the design thickness; for thicknesses greater than 1" no less than 1/4".

Remarks:

SUMMIT GEOENGINEERING SERVICES

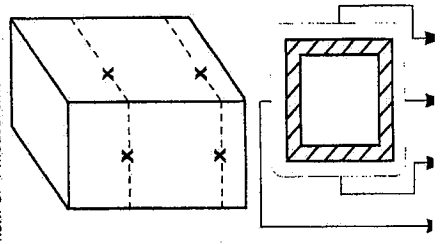


Project No.: 14063 Project No.: _____
 Project Name: UNE Pharmacy Date: 1/9/09
 Client: UNE Product Name/Mfg: Grace Z-106/HY Medium Density SFRM
Data Sheet for Thickness of Material

SFRM on Tube Column

LOCATION	1				2				3				4				Req'd	Note		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Brace HSS 6x6x3/8 at Line 3 from E to F	1	1/2	1	1/2	1	1/2	1	1/2	1	1/8	1	3/8	1	6/16	1	1/4	1	1/4	Passed	Min 1", Max. 1 1/2"

A.4.2 Thickness of SFRM on Tube & Pipe Columns
 Take a minimum of 4 measurements at each end of 12-in. length.



- 1
- 2
- 3
- 4

Notes: Take 4 measurements at each end of a 12 in. length.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness; for thicknesses greater than 1" no less than 1/4".

Remarks:

Signed: _____ D. Gilman

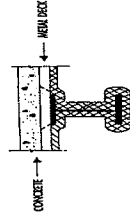
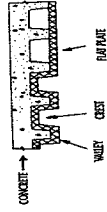


Project No.: 14063
 Project Name: UNE Pharmacy
 Date: 1/9/09
 Product Name/Mfg: Grace Z-106/HY Medium Density SFRM

Client: UNE
 Data Sheet for
 Thickness of Material

SFRM on Floor (Deck) Section

LOCATION	Crest	Sides	Sides	Valley	Flat	Ave.	Regr'd	Note
Line F to G from 3 to 4	5/8	5/16	5/16	9/16		7/16	3/8	
	7/16	3/8	3/8	7/16				Min=5/16, Max = 5/8
Line F to G from Line 2 to 3	5/8	3/8	3/8	1/2			3/8	
	5/16	5/16	5/16	5/16		6/16		
	1/2	3/8	5/16	3/8				Min=5/16, Max = 5/8
Line F to G from Line 1 to 2	1/2	9/16	5/16	7/16				
	1/2	3/8	1/2	7/16		7/16	3/8	
Line D to E from 3 to 4	5/8	5/16	1/2	1/2		7/16	3/8	
	3/8	5/16	5/16	3/8				Min=5/16, Max = 5/8
	3/8	3/8	3/8	7/16				
Line D to E from 2 to 3	7/16	5/16	3/8	3/8		6/16	3/8	
	1/2	3/8	5/16	7/16				Min=5/16, Max = 5/8
	3/8	5/16	3/8	3/8				
Line D to E from Line 1 to 2	9/16	5/16	7/16	7/16		6/16	3/8	
	3/8	3/8	3/8	3/8				Min=5/16, Max = 5/8
	3/8	3/8	5/16	5/16				
Line B to C from 3 to 4	5/16	1/2	5/16	3/8		6/16	3/8	
	3/8	5/16	5/16	3/8				Min=5/16, Max = 5/8
	5/16	5/16	5/16	1/2				
Line B to C from 2 to 3	3/8	5/16	5/16	5/16		6/16	3/8	
	1/2	5/16	7/16	3/8				Min=5/16, Max = 5/8
	3/8	7/16	1/2	3/8				
Line B to C from 1 to 3	5/16	1/2	1/2	7/16		6/16	3/8	
	3/8	5/16	7/16	9/16				Min=5/16, Max = 5/8
	3/8	5/16	5/16	5/16				
Line A to B from 3 to 4	1/2	9/16	7/16	5/8		9/16	3/8	
	5/8	7/16	1/2	5/8				Min=5/16, Max = 5/8
	5/8	5/8	5/8	5/8				
Line A to B from 1 to 3	3/8	5/16	3/8	5/16		6/16	3/8	
	3/8	3/8	3/8	3/8				Min=5/16, Max = 5/8
	5/16	3/8	5/16	3/8				



Notes: Layout 12in. X 12in. Square and take 4 random symmetrical measurements on each of the following: Valley, crest and sides for a total of 12 measurements.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness; for thicknesses greater than 1" no less than 1/4".

Remarks:

Signed: D. Gilman

Summit Environmental

Project Name: UNE Pharmacy
Location: Portland Campus
Client: UNE Pharmacy

Project No.: 14063
Date: 1/9/2009
Product Name/Mftg: Grace Z-106/HY Medium Density

Density of SFRM (Sprayed Fire-Resistant Material)

Requirement: Dry Unit Weight: 22 pcf
 Reccommended Wet Unit Weight: 38-43 pcf

<u>Location:</u>	<u>Wet + Tare</u>	<u>Dry + Tare</u>	<u>Tare</u>	<u>Wet SFRM</u>	<u>Dry SFRM</u>	<u>Tare Vol.</u>	<u>Wet Densit</u>	<u>Dry Density</u>	<u>Note:</u>
Column at C-2.4	4.4335	3.5695	1.9325	2.501	1.637	0.05371	46.6	30.5	Pass

Signed: D. Gilman

Project Name: UNE Pharmacy
Location: Portland Campus
Client: UNE Pharmacy

Project No.: 14063

Date: 1/9/2009

Product Name/Mftg: Grace Z-106/HY Medium Density

Bond Strength of SFRM (Sprayed Fire-Resistant Material)

Required Strength: 434 PSF

<u>Location</u>	<u>Lbs. at failure</u>	<u>Cap Vol.</u>	<u>Bond Strength PSF</u>	<u>Notes</u>
Column at F-3	50	0.0472	1059	Maximum scale pull
Beam C.5 from 3.3 to 4	38	0.0472	805	Bond at Test cap failed before SFRM
Deck C to D from 3 to 4	48	0.0472	1017	Bond at Test cap failed before SFRM

Signed: D. Gilman

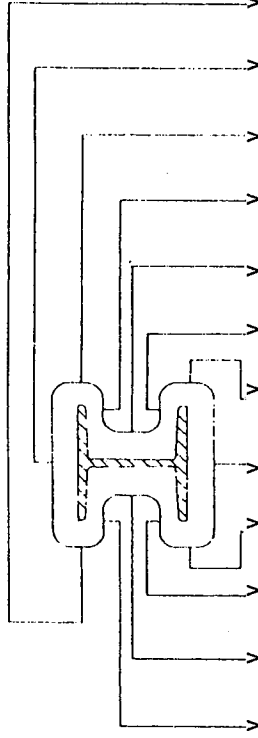


Project No.: 14063

Date: 1/9/09

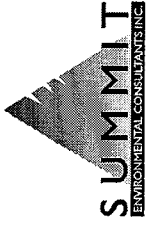
Product Name/Mfg: Grace Z-106/HY Medium Density SFRM

Data Sheet for Thickness of Material



LOCATION	SFRM on Column												Notes						
	1	2	3	4	5	6	7	8	9	10"	11"	12"							
W12x65 at F-3	1 13/16	1 5/8	1 7/8	1 5/8	1 9/16	15/16	1 9/16	1 9/16	1 3/4	13/16	1 11/16	1 1/8	1 10/16	1 5/16	1 1/16	1 9/16	1 11/16	1 1/16	
W10x39 at F-4	1 13/16	1 7/16	1 13/16	1 11/16	1 11/16	1 1/8	1 3/8	1 7/16	1 5/8	1	1 9/16	1 1/8	1 8/16	1 7/16	1 3/16	1 11/16	1 11/16	1 11/16	Pass
W10x39 at E-4	1 3/16	1 3/8	1 13/16	1	1 11/16	7/8	1 3/16	1 11/16	1 3/8	1 3/16	1 3/16	1 3/8	1 8/16	1 7/16	1 3/16	1 11/16	1 11/16	1 11/16	Pass
W10x33 at D-4	1 1/2	1 1/2	1 11/16	1 11/16	1 11/16	7/8	1 3/16	1 11/16	1 3/8	1 1/8	1 11/16	1	1 3/16	1 7/16	1 3/16	1 11/16	1 11/16	1 11/16	Failed initially, Repaired & Passed
W10x54 at D-2.4	1 1/4	1 9/16	1 5/8	1 3/8	1 3/4	7/8	1 7/16	1 1/2	1 13/16	1 13/16	5/8	5/8	1 6/16	1 9/16	1 5/16	1 13/16	1 13/16	1 13/16	Failed initially, Repaired & Passed
W10x49 at C-1	1 5/8	1 1/2	1 3/8	1 3/16	1 3/16	1 13/16	1 3/16	1 3/16	1 13/16	1 13/16	3/4	3/4	1 11/16	1 5/16	1 1/16	1 9/16	1 9/16	1 11/16	Pass
W8x31 at B-1.6	1 5/16	1 13/16	1 13/16	7/8	1 13/16	1 5/16	1 13/16	1 13/16	1 13/16	1 1/8	1 13/16	1 5/16	1 13/16	1 9/16	1 5/16	1 13/16	1 13/16	1 13/16	Pass
W12x72 at B-3	1 3/8	1 13/16	1 1/2	13/16	1 1/2	5/8	1 13/16	1 13/16	1 9/16	13/16	1 5/16	13/16	1 10/16	1 1/4	1	1 1/2	1 1/2	1 1/2	Pass
W10x54 at B-2.4	1 1/2	1 13/16	1 1/2	15/16	1 9/16	5/8	1 13/16	1 13/16	1 13/16	1	1 5/16	13/16	1 10/16	1 1/4	1	1 1/2	1 1/2	1 1/2	Failed initially, Repaired & Passed
	1 9/16	1 9/16	1 9/16	1 1/16	1 9/16	1 3/16	1 9/16	1 9/16	1 9/16	1 9/16	1 3/16	1 5/16	1 9/16	1 5/16	1 1/16	1 9/16	1 9/16	1 11/16	Pass
	1 9/16	1 9/16	1 9/16	1 3/16	1 9/16	1	1 9/16	1 9/16	1 9/16	1 3/16	1 9/16	1 5/16	1 9/16	1 5/16	1 1/16	1 9/16	1 9/16	1 11/16	Pass

Notes:
 Take 12 measurements at each end of a twelve inch length.
 Average the Flange Tip thickness separately where reduced thicknesses are applied.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness; for thicknesses greater than 1" no less than 1/4".
 Remarks:



Project No.: 14063

Date: 1/9/09

Product Name/Mftg: UNE Pharmacy Grace Z-106/HY Medium Density SFRM

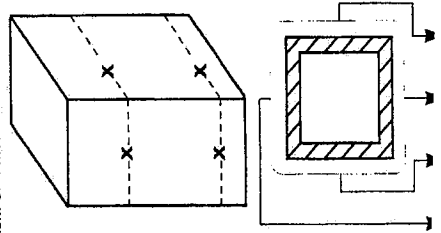
Client: UNE

Data Sheet for Thickness of Material

SFRM on Tube Column

LOCATION	1	2	3	4	Ave	Req'd	Note
Brace HSS 6x6x3/8 at Line 3 from E to F	1 1/2	1 1/8	1 3/8		1 6/16	1 1/4	Passed
	1 1/2	1 1/4	1 3/8				Min. 1", Max. 1 1/2"

A.4.2 Thickness of SFRM on Tube & Pipe Columns
 Take a minimum of 4 measurements of each end of 12-in. length.

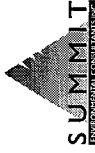


- 1
- 2
- 3
- 4

Notes: Take 4 measurements at each end of a 12 in. length.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness; for thicknesses greater than 1" no less than 1/4".

Remarks:

Signed: D. Gilman

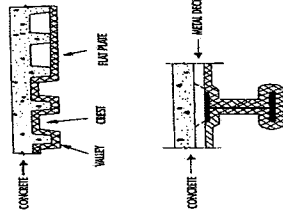


Project No.: 14063
 Project Name: UNE Pharmacy
 Date: 1/9/09
 Product Name/Mfg: Grace Z-106/HY Medium Density SFRM

Client: UNE
 Data Sheet for
 Thickness of Material

SFRM on Floor (Deck) Section

LOCATION	Crest	Sides	Sides	Valley	Flat	Ave.	Req'd	Note
Line F to G from 3 to 4	5/8	5/16	5/16	9/16		7/16	3/8	
	7/16	3/8	3/8	7/16				Min=5/16, Max. = 5/8
	5/8	3/8	3/8	1/2				
Line F to G from Line 2 to 3	5/16	5/16	5/16	5/16		6/16	3/8	
	1/2	3/8	5/16	3/8				Min=5/16, Max. = 5/8
	1/2	9/16	5/16	7/16				
Line F to G from Line 1 to 2	1/2	3/8	1/2	7/16		7/16	3/8	
	9/16	1/2	1/2	3/8				
	5/16	3/8	3/8	7/16				Min=5/16, Max. = 5/8
Line D to E from 3 to 4	5/8	5/16	1/2	1/2		7/16	3/8	
	3/8	5/16	5/16	3/8				
	3/8	3/8	3/8	7/16				Min=5/16, Max. = 5/8
Line D to E from 2 to 3	7/16	5/16	3/8	3/8		6/16	3/8	
	1/2	3/8	5/16	7/16				
	3/8	5/16	3/8	3/8				Min=5/16, Max. = 5/8
Line D to E from Line 1 to 2	9/16	5/16	7/16	7/16		6/16	3/8	
	3/8	3/8	3/8	3/8				
	3/8	3/8	5/16	5/16				Min=5/16, Max. = 5/8
Line B to C from 3 to 4	5/16	1/2	5/16	3/8		6/16	3/8	
	3/8	5/16	5/16	3/8				
	5/16	5/16	5/16	1/2				Min=5/16, Max. = 5/8
Line B to C from 2 to 3	3/8	5/16	5/16	5/16		6/16	3/8	
	1/2	5/16	7/16	3/8				
	3/8	7/16	1/2	3/8				Min=5/16, Max. = 5/8
Line B to C from 1 to 3	5/16	1/2	1/2	7/16		6/16	3/8	
	3/8	5/16	7/16	9/16				
	3/8	5/16	5/16	5/16				Min=5/16, Max. = 5/8
Line A to B from 3 to 4	1/2	9/16	7/16	5/8		9/16	3/8	
	5/8	7/16	1/2	5/8				
	5/8	5/8	5/8	5/8				Min=5/16, Max. = 5/8
Line A to B from 1 to 3	3/8	5/16	3/8	5/16		6/16	3/8	
	3/8	3/8	3/8	3/8				
	5/16	3/8	5/16	3/8				Min=5/16, Max. = 5/8



Notes: Layout 12in. X 12in. Square and take 4 random symmetrical measurements on each of the following: Valley, crest and sides for a total of 12 measurements.
 Thickness Maximum: Thicknesses that exceed the thickness by 1/4" or more shall be recorded as the design thickness plus 1/4"
 Thickness Minimum: No individual thickness shall be less than 25% less than the design thickness; for thicknesses greater than 1" no less than 1/4".

Remarks:

Summit Environmental

Project Name: UNE Pharmacy
Location: Portland Campus
Client: UNE Pharmacy

Project No.: 14063
Date: 1/9/2009
Product Name/Mfg: Grace Z-106/HY Medium Density

Density of SFRM (Sprayed Fire-Resistant Material)

Requirement: Dry Unit Weight: 22 pcf
Reccommended Wet Unit Weight: 38-43 pcf

<u>Location:</u>	<u>Wet + Tare</u>	<u>Dry + Tare</u>	<u>Tare</u>	<u>Wet SFRM</u>	<u>Dry SFRM</u>	<u>Tare Vol.</u>	<u>Wet Densit</u>	<u>Dry Density</u>	<u>Note:</u>
Column at C-2.4	4.4335	3.5695	1.9325	2.501	1.637	0.05371	46.6	30.5	Pass

Signed: D. Gilman

Project Name: UNE Pharmacy
Location: Portland Campus
Client: UNE Pharmacy
Project No.: 14063
Date: 1/9/2009
Product Name/Mftg: Grace Z-106/HY Medium Density

Bond Strength of SFRM (Sprayed Fire-Resistant Material)

Location	Lbs. at failure	Cap Vol.	Bond Strength PSF	Notes
Column at F-3	50	0.0472	1059	Maximum scale pull
Beam C.5 from 3.3 to 4	38	0.0472	805	Bond at Test cap failed before SFRM
Deck C to D from 3 to 4	48	0.0472	1017	Bond at Test cap failed before SFRM

Required Strength: 434 PSF

Signed: D. Gilman

American Institute of Steel Construction, Inc.

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Novel Iron Works, Inc.

Greenland, NH

for successfully meeting the quality certification requirements for

Standard for Steel Building Structures, Simple Steel Bridges

Sophisticated Paint Coating Endorsement-
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Roger E. Ferch

Roger E. Ferch

Bobbi Marsteller

Bobbi Marsteller

Certification valid through April 2009

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder Paul Berry
 Name American Aerial Identification No. [REDACTED]
 Welding Procedure Specification No. 1 Rev. N/A Date July 5, 2001

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	<u>SMAW</u>	
Electrode (single or multiple) [Table 4.10, Item (6)]	<u>1/8 E7018</u>	<u>ALL</u>
Current Polarity	<u>105 A DC+</u>	
Position [Table 4.10, Item (6)]	<u>1G, 2G, 3G</u>	<u>1G, 2G, 3G</u>
Weld Progression [Table 4.10, Item (6)]	<u>UP</u>	<u>UP</u>
Backing (YES or NO) [Table 4.10 Item (7)]	<u>YES</u>	<u>YES</u>
Material/Spec.	<u>Group 1 to Group 1</u>	
Base Metal		
Thickness: (Plate)		
Groove	<u>3/8 inch</u>	<u>1/8" to 3/4"</u>
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Thickness: (Pipe/Tube)		
Groove	<u>N/A</u>	<u>1/8" to 3/4"</u>
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Diameter (Pipe) PJP		
Groove	<u>N/A</u>	<u>1/8" to 3/4 OVER 24" DIA.</u>
Fillet	<u>N/A</u>	<u>OVER 24" DIA.</u>
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	<u>A5.1</u>	
Class	<u>E7018</u>	
F-No. [Table 4.10, Item (2)]	<u>F 4</u>	<u>F4, F3, F2, F1</u>
Gas/Flux Type [Table 4.10 item (3)]	<u>N/A</u>	
Other	<u>N/A</u>	<u>N/A</u>

VISUAL INSPECTION (4.8.1)			
Acceptable YES or NO		YES	
Guided Bend Test Results (4.30.5)			
Type	Result	Type	Result
<u>3G FACE BEND</u>	<u>ACCEPTABLE</u>	<u>3G ROOT BEND</u>	<u>ACCEPTABLE</u>

Fillet Test Results (4.30.2.3 and 4.30.4.1)			
Appearance	Result	Fillet Size	Result
<u>Fracture Test Root Penetration</u>	<u>N/A</u>	<u>Macroetch</u>	<u>N/A</u>
<u>(Describe the location, nature, and size of any crack or tearing of the specimen.)</u>			

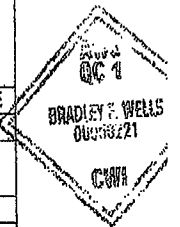
Inspected by Brad Wells CWI # 00060221 Test Number N/A
 Organization Maine Oxy Date July 5, 2001

RADIOGRAPHIC TEST RESULTS (4.30.3.1)					
Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Interpreted by N/A Test Number N/A
 Organization N/A Date N/A

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, () Structural Welding Code --- Steel.

Manufacturer or Contractor American Aerial Serv. Authorized By [Signature]
 Date 7/24/01



AWS QC-3

PERFORMANCE QUALIFICATION TEST RECORD

Eye correction required Yes No

Type of Eye Correction: Eye glasses
Contact lenses
Magnifiers

Name BERRY, SCOTT A. Social Security # ~~000-00-0000~~

Welder Operator

Qualified with AWS WPS No. 1-QC-W1 Supplement No. G Test No. D1-SM-F4-P-A-U

Process(es) SMAW Manual Semi-Automatic Automatic Machine

Test base metal specification SA 36 To SA 36

Material number (M or P Number) P1 To P1

Shielding Gas NA Flow Rate NA

AWS Filler metal classification E7018 F no 4 Size 1/8" & 5/32"

Backing Yes No Consumable Insert Yes No
Double Welded or Single Welded Short Circuiting arc (GMAW) Yes No
Current AC DC Back Purging Yes No

Test results

Visual test results Pass Fail Radiographic test results NA Pass Fail
Bend test results NA Pass Fail

PROCESS(es) QUALIFIED FOR SMAW

POSITION(s) QUALIFIED FOR:

Groove:

Pipe 1G 2G 5G 6G 6GR (T)Min 1/8" Max * Diameter 24" Range 24" and greater
Plate 1G 2G 3G 4G (T)Min 1/8" Max Unlimited
Consumable Insert Backing type * Unlimited

Fillet:

Pipe 1F 2F 4F 5F (T)Min 1/8" Max Unlimited
Plate 1F 2F 3F 4F (T)Min 1/8" Max Unlimited

Vertical Up Down Weld Deposit Min 1/8" Max Unlimited
Single Side Double Side

The above named person qualified for the welding process(es) used in this test within the limits of essential variables shown above, including materials and filler metal variables of the AWS Standard for welder certification and ANSI/AWS D1.1 Code or Standard. I hereby certify that I was not involved in the training of the above named individual as a welder.

Date Tested 1/29/98

Signed by Thomas E. Giles
Test Supervisor

AWS CWI No. 88070281

Signed by Thomas E. Giles
Corporate Representative

Director - Welding Test Center, Eastern Maine Technical College
Title

Welder Performance Qualification Record AWS D1.1 Structural Welding Code - Steel

Welder's Name Bill Britting ID Number _____
 Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
 Material Specification, Type or Grade A36 > 3/4" to Material Specification, Type or Grade A36 > 3/4"
 Test Thickness 1" Groove
 Thickness Qualified Plate Groove: 1/8" - Unlimited Filletts: Unlimited
 Thickness Qualified Pipe _____
Groove 1/8 - unlimited on pipe equal to or greater than 24" diameter
Filletts: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>3G and 4G</u>	<u>All Positions</u>
Vertical Progression (up or down)	<u>Up</u>	<u>Up Only</u>
Inert Gas Backing	_____	_____
Transfer Mode (GMAW)	_____	_____
Current / Polarity	<u>115 - 120 amps DC+</u>	_____

RESULTS

Visual Examination of Completed Weld Passed Date 12/18/07
 Bend Test Results: Side Bend Passed Side Bend Passed Date 12/18/07
 Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
 Affiliation New England School of Metalwork
 Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
 CWI 04050361
 QC1 EXP. 5/01/10

Warren G. Swan

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder WELDER
 Name BILL BRITTING Identification No. _____
 Welding Procedure Specification No. AA-001 Rev _____ Date 12/18/07

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	<u>SMAW</u>	<u>SMAW ONLY</u>
Electrode (single or multiple) [Table 4.10, Item (8)]	<u>SINGLE</u>	
Current/Polarity	<u>DC+</u>	
Position [Table 4.10, Item (4)]	<u>3G + 4G</u>	<u>ALL POSITIONS</u>
Weld Progression [Table 4.10, Item (8)]	<u>VERTICAL UP</u>	
Backing (YES or NO) [Table 4.10, Item (7)]	<u>YES</u>	<u>1/8" - UNLIMITED</u>
Material/Spec.	<u>A36 to A36</u>	
Base Metal	<u>1" GROOVE</u>	
Thickness: (Plate)		
Groove		
Fillet		
Thickness: (Pipe/tube)		
Groove		
Fillet		
Diameter: (Pipe)		
Groove		
Fillet		
Filler Metal [Table 4.10, Item (3)]	<u>A5.1</u>	<u>E1-84</u>
Spec. No.	<u>E7018</u>	
Class	<u>F4</u>	
F-No. [Table 4.10, Item (2)]		
Gas/Flux Type [Table 4.10, Item (3)]		
Other		

VISUAL INSPECTION (4.8.1)			
Acceptable YES or NO <u>YES</u> 12/18/07			
Guided Bend Test Results (4.30.5)			
Type	Result	Type	Result
<u>SIDE BEND 3G</u>	<u>ACCEPTABLE</u>	<u>SIDE BEND 4G</u>	<u>ACCEPTABLE</u>
<u>SIDE BEND 3G</u>	<u>ACCEPTABLE</u>	<u>SIDE BEND 4G</u>	<u>ACCEPTABLE</u>
Fillet Test Results (4.30.2.3 and 4.30.4.1)			
Appearance _____		Fillet Size _____	
Fracture Test Root Penetration _____		Macroetch _____	
(Describe the location, nature, and size of any crack or tearing of the specimen.)			

Inspected by WARREN G SWAN JR Test Number AA-1
 Organization NEW ENGLAND SCHOOL OF METALLURGY Date 12/18/07

RADIOGRAPHIC TEST RESULTS (4.30.3.1)					
Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by _____ Test Number _____
 Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1, (2006) Structural Welding Code—Steel. (year)

Manufacturer or Contractor _____ Authorized By _____
 Form E-4 Date _____


 WARREN SWAN
 CWI 04050361
 QC1 EXP. 5/01/10

Warren Swann

WELDING PROCEDURE SPECIFICATION (WPS) Yes
PREQUALIFIED YES QUALIFIED BY TESTING
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Company Name AMERICAN AERMAC
 Welding Process(es) SMAW
 Supporting PQR No.(s) PREQUALIFIED

Identification # AA-001
 Revision _____ Date 12/18/07 By W. SWAN
 Authorized by _____ Date _____
 Type—Manual Semi-Automatic
 Machine Automatic

JOINT DESIGN USED
 Type: BUTT
 Single Double Weld
 Backing: Yes No
 Backing Material: A36
 Root Opening 1/4" Root Face Dimension _____
 Groove Angle: 45° Radius (J-U) _____
 Back Gouging: Yes No Method _____

POSITION
 Position of Groove: 3G+4G Fillet: _____
 Vertical Progression: Up Down

BASE METALS
 Material Spec. A36
 Type or Grade > 3/4"
 Thickness: Groove 1" Fillet _____
 Diameter (Pipe) _____

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

FILLER METALS
 AWS Specification A5.1
 AWS Classification E7018

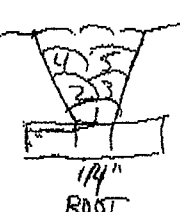
TECHNIQUE
 Stringer or Weave Bead: STRINGER
 Multi-pass or Single Pass (per side) MULTI-PASS
 Number of Electrodes SINGLE
 Electrode Spacing Longitudinal _____
 Lateral _____
 Angle _____

SHIELDING
 Flux _____ Gas _____
 Composition _____
 Electrode-Flux (Class) _____ Flow Rate _____
 Gas Cup Size _____

Contact Tube to Work Distance _____
 Peening _____
 Interpass Cleaning: CHIPPING GROUND, BRUSHING
POSTWELD HEAT TREATMENT
 Temp. _____
 Time _____

PREHEAT
 Preheat Temp., Min AMBIENT
 Interpass Temp., Min _____ Max _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
12-14	SMAW	E7018	1/8"	DC+	115-120	21-22	6"/min	B-02A AWS JOINT DESIGNATION  1/4" ROOT
		WARRENSWAN CWI 04050361 QC1 EIP/501/0						

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder Jon Curt
 Name American Aerial Identification No. ~~000000~~
 Welding Procedure Specification No. 1 Rev. N/A Date Dec. 12, 2007

Variables	Record Actual Values		Qualification Range
	Used in Qualification		
Process/Type [Table 4.10, Item (1)]	SMAW		ALL
Electrode (single or multiple) [Table 4.10, Item (2)]	<u>1/8 E7018</u>		
Current Polarity	<u>115 A DC+</u>		
Position [Table 4.10, Item (6)]	<u>4G</u>	<u>1G, 4G</u>	N/A
Weld Progression [Table 4.10, Item (6)]	<u>N/A</u>	<u>N/A</u>	
Backing (YES or NO) [Table 4.10 Item (7)]	<u>YES</u>	<u>YES</u>	
Material/Spec. Base Metal	Group 1 to Group 1		
Thickness: (Plate)			
Groove	<u>3/8 "</u>	<u>1/8 to 3/4 "</u>	UNLIMITED
Fillet	<u>N/A</u>	<u>N/A</u>	
Thickness: (Pipe/Tube)			
Groove	<u>N/A</u>	<u>1/8 " to 3/4 "</u>	UNLIMITED
Fillet	<u>N/A</u>	<u>N/A</u>	
Diameter : (Pipe)PJP			
Groove	<u>N/A</u>	<u>1/8" to 3/4 OVER 24" DIA.</u>	OVER 24" DIA.
Fillet	<u>N/A</u>	<u>N/A</u>	
Filler Metal [Table 4.10, Item (3)]			
Spec. No.	<u>A5.1</u>		
Class	<u>E7018</u>		
F-No. [Table 4.10, Item (2)]	<u>F 4</u>	<u>F4, F3, F2, F1</u>	
Gas/Flux Type [Table 4.10 Item (3)]	<u>N/A</u>		
Other	<u>N/A</u>	<u>N/A</u>	

VISUAL INSPECTION (4.8.1)			
Acceptable YES or NO		YES	
Type	Result	Type	Result
Guided Bend Test Results (4.30.5)			

Fillet Test Results (4.30.2.3 and 4.30.4.1)			
Appearance	<u>N/A</u>	Fillet Size	<u>N/A</u>
Fracture Test Root Penetration	<u>N/A</u>	Macroetch	<u>N/A</u>
(Describe the location, nature, and size of any crack or tearing of the specimen.)			

Inspected by Brad Wells CWI # 00050221 Test Number N/A
 Organization Maine Oxy Date Dec. 12, 2007

RADIOGRAPHIC TEST RESULTS (4.30.3.1)					
Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
	<u>Pass</u>				

Interpreted by Raymond Pancham Test Number QAL-07-0347
 Organization QAL Date 12/13/07

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, () Structural Welding Code — Steel.

Manufacturer or Contractor _____ Authorized By _____
 Date _____

BR
 00050221
 CWI

**Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel**

Welder's Name Carl Cooper ID Number 6686
 Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
 Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 > 3/4"
 Test Thickness 1" Groove
 Thickness Qualified Plate Groove: 1/8" - Unlimited Fillets: Unlimited
 Thickness Qualified Pipe _____
Groove 1/8 - unlimited on structural pipe equal to or greater than 24" diameter
Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>4G</u>	<u>Flat, Overhead groove welds Flat, Overhead, Horizontal fillets</u>
Vertical Progression (up or down)	_____	_____
Inert Gas Backing	_____	_____
Transfer Mode (GMAW)	_____	_____
Current / Polarity	<u>115 - 120 amps DC+</u>	_____

RESULTS

Visual Examination of Completed Weld Passed Date 2/7/08
 Bend Test Results: Side Bend Passed Side Bend Passed Date 2/7/08
 Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
 Affiliation New England School of Metalwork
 Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN

CWI 04060361

QC1 EXP. 5/01/10

Warren G. Swan

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder Brian Furrow
 Name American Aerial Identification No. 5315
 Welding Procedure Specification No. 1 Rev. N/A Date Dec. 12, 2007

Variables	Record Actual Values		Qualification Range
	Used in Qualification		
Process/Type [Table 4.10, Item (1)]	SMAW		ALL
Electrode (single or multiple) [Table 4.10, Item (2)]	<u>1/8 E7018</u>		
Current Polarity	<u>115 A DC+</u>		
Position [Table 4.10, Item (6)]	<u>4G</u>	<u>1G, 4G</u>	N/A
Weld Progression [Table 4.10, Item (6)]	<u>N/A</u>	<u>N/A</u>	
Backing (YES or NO) [Table 4.10 Item (7)]	<u>YES</u>	<u>YES</u>	N/A
Material/Spec. Base Metal	<u>Group 1 to Group 1</u>		
Thickness: (Plate)			
Groove	<u>3/8 "</u>	<u>1/8 to 3/4 "</u>	
Fillet	<u>N/A</u>	<u>UNLIMITED</u>	
Thickness: (Pipe/Tube)			
Groove	<u>N/A</u>	<u>1/8 " to 3/4 "</u>	
Fillet	<u>N/A</u>	<u>UNLIMITED</u>	
Diameter: (Pipe)PJP			
Groove	<u>N/A</u>	<u>1/8" to 3/4 OVER 24" DIA.</u>	
Fillet	<u>N/A</u>	<u>OVER 24" DIA.</u>	
Filler Metal [Table 4.10, Item (3)]			N/A
Spec. No.	<u>A5.1</u>		
Class	<u>E7018</u>		
F-No. [Table 4.10, Item (2)]	<u>F4</u>		
Gas/Flux Type [Table 4.10 Item (3)]	<u>N/A</u>		N/A
Other	<u>N/A</u>		

VISUAL INSPECTION (4.8.1)			
Acceptable YES or NO		YES	
Guided Bend Test Results (4.30.5)			
Type	Result	Type	Result
Fillet Test Results (4.30.2.3 and 4.30.4.1)			
Appearance	<u>N/A</u>	Fillet Size	<u>N/A</u>
Fracture Test Root Penetration	<u>N/A</u>	Macroetch	<u>N/A</u>
(Describe the location, nature, and size of any crack or tearing of the specimen.)			

Inspected by Brad Wells CWI # 00050221 Test Number N/A
 Organization Maine Oxy Date Dec. 12, 2007

RADIOGRAPHIC TEST RESULTS (4.30.3.1)					
Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
	<u>Pass</u>				

Interpreted by Raymond Parsherman Test Number RAE-07-8347
 Organization RAE Date 12/13/07

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, () Structural Welding Code — Steel.

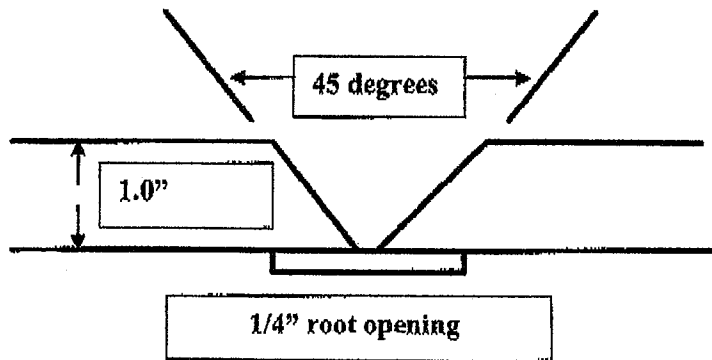
Manufacturer or Contractor _____ Authorized By _____
 Date _____

**WELDING PROCEDURE SPECIFICATIONS (WPS)
AWS D1.1 Structural Welding Code - Steel (Prequalified)**

Company Name American Aerial Date 12/18/08
 WPS Number AA - 001 Supporting PQR Number(s) Prequalified
 Revision Number _____ Date of Revision _____
 Welding Processes(es) SMAW Types (Manual, Auto, Semi-Auto) Manual

JOINTS

Joint Design Butt Single V Groove Plate
 Backing Yes XX No _____ Backing Material A36 - 1/4" x 1-1/2"
 Back Gouging Yes _____ No XX Method _____



BASE METALS

Material Group: Two Thickness Groove 1" Fillet _____ Pipe(Dia) _____
 Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 >3/4"
 Other _____

FILLER METALS

Specification Number	AWS A 5.1	
AWS Classification Number	E7018 MR	
F Number	F4	
Size of Filler Metal	1/8" diameter	Qualified: 3/32 - 5/32 diameter

POSITIONS

Position of Groove 3G (Vertical) and 4G (Overhead) Qualified: All positions groove and fillet welds

Welding Progression : Up XXX Down _____

GAS	Gas(es)	%Mixture	Flow Rate
Shielding			
Trailing			
Backing			

**WELDING PROCEDURE SPECIFICATIONS (WPS)
AWS D1.1 Structural Welding Code - Steel (Prequalified)**

WPS Number AA - 001

PREHEAT

Preheat Temperature Ambient Interpass Temperature _____
Other _____

POSTWELD HEAT TREATMENT

Temperature Range _____ Time Range _____

ELECTRICAL CHARACTERISTICS

Current DC Polarity Positive Amps 115 - 120 Volts 21 - 22
Tungsten Size and Type _____
Metal transfer for GMAW _____
Electrode Wire Speed Range _____

TECHNIQUE

Stringer or Weave Stringer
Gas Nozzle Size _____
Initial Cleaning Grinding/Brushing Interpass Cleaning Chipping/Grinding/Brushing
Method of Back Gouging _____
Oscillation _____
Contact Tip or Nozzle to Work distance (FMAW) _____
Multiple or Single Pass per Side: Weld Side Multi-Pass Other Side _____
Multiple or Single Electrodes Single
Travel Speed 6 - 8" per minute
Peening _____
Other _____

Weld Layers	Process	Filler Metal Class	Filler Metal Diameter	Current and Polarity	Amp Range	Volt Range	Travel Speed Range	Other
1 - 16	SMAW	E7018MR	1/8"	DC +	115 - 120	21 - 22	6 - 8" min	

PREPARED BY

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
CWI 04050361
QC1 EXP. 5/01/10

Warren G. Swan

American Aerial Representative _____

Welder Performance Qualification Record AWS D1.1 Structural Welding Code - Steel

Welder's Name John Gallagher ID Number 2593
 Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
 Material Specification, Type or Grade A36 > 3/4" to Material Specification, Type or Grade A36 > 3/4"
 Test Thickness 1" Groove
 Thickness Qualified Plate Groove: 1/8" - Unlimited Filletts: Unlimited
 Thickness Qualified Pipe _____
Groove 1/8" - unlimited on pipe equal to or greater than 24" diameter
Filletts: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u> <u>Group One and Group Two</u>	
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u> <u>F1, F2, F3, F4</u>	
Position	<u>3G and 4G</u> <u>All Positions</u>	
Vertical Progression (up or down)	<u>Up</u>	<u>Up Only</u>
Inert Gas Backing	_____	_____
Transfer Mode (GMAW)	_____	_____
Current / Polarity	<u>115 - 120 amps DC+</u>	_____

RESULTS

Visual Examination of Completed Weld Passed Date 1/30/08
 Bend Test Results: Side Bend Passed Side Bend Passed Date 1/30/08
 Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
 Affiliation New England School of Metalwork
 Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
 CWI 04050361
 QC1 EXP. 5/01/10

Warren G. Swan



Bhate Engineering Corporation
 Geotechnical, Materials, Environmental Engineers
 5217 Fifth Avenue South
 Birmingham v Alabama v 35212-3515
 (205) 591-7062
 (205) 591-7184 (FAX)

ANSI/AWS D1.3-89 WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name Glen Henderson
 Identification Number _____ Qualification Date 9-20-99
 Welder's Social Security Number 3424
 In Accordance with WPS Number AWS D1.3-89 Revision Number _____
 Welding Process(es) SMAW Type Manual
 (Automatic, Manual, etc.)
 Mode of Transfer for GMAW N/A
 (Short Circuiting, Spray, Globular)

VARIABLE	ACTUAL VARIABLE USED IN QUALIFICATION	QUALIFICATION RANGE
JOINT:		
Joint Type	<u>Arc spot weld</u>	<u>Lap</u>
Backing Material Type	_____	_____
Groove Welded From: one side or both sides	_____	_____
BASE METAL:		
Material Specification	_____	_____
Sheet Steel	<u>ASTM A606 To A611</u>	<u>ASTM A606 to A611</u>
Supporting Steel	<u>ASTM A36 to A570</u>	<u>ASTM A36 to A570</u>
Sheet Thickness	_____	_____
Groove	<u>22 GA</u>	<u>0.5+ through 2t</u>
Fillet	_____	_____
Arc Spot	<u>5/8" diameter</u>	<u>1/2" to 1 1/16"</u>
Arc Beam	_____	_____
COATING(S):		
Type	<u>N/A</u>	_____
Thickness	_____	_____
POSITION:		
Groove	_____	_____
Fillet	_____	_____
Arc Spot	<u>Flat</u>	<u>Flat</u>
Arc Beam	_____	_____
Progression	_____	_____
GAS		
	<u>N/A</u>	_____
ELECTRODE		
Size	<u>1/8" to 5/32"</u>	<u>1/8" to 5/32"</u>
Group Designation	<u>F1 E6022</u>	<u>F1 E6022</u>

VISUAL EXAMINATION RESULTS

Specimen 1 Acceptable 2 layer twist test Specimen 2 Acceptable 2 layer twist test
 Appearance Uniform Cracks None Undercut None excessive
 Reinforcement 1/32" min Diameter of Arc Spot Nugget 1 1/16" diameter
 Test Conducted By Jim R. Wall, CAWI-NDT Level II Per Bhate Engineering Corporation
 Laboratory Test Number 92099A Date of Test 09-20-99

The undersigned certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of 6.7 of ANSI/AWS D1.3-89 STRUCTURAL WELDING CODE- SHEET STEEL.

Company Bhate Engineering Corporation Authorized By 

**Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel**

Welder's Name Zach Johndro ID Number 4984
Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 > 3/4"
Test Thickness 1" Groove
Thickness Qualified Plate Groove: 1/8" - Unlimited Fillets: Unlimited
Thickness Qualified Pipe _____
Groove 1/8 - unlimited on structural pipe equal to or greater than 24" diameter
Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>3G and 4G</u>	<u>All Positions</u>
Vertical Progression (up or down)	<u>Up</u>	<u>Up Only</u>
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	<u>115 - 120 amps DC+</u>	

RESULTS

Visual Examination of Completed Weld Passed Date 2/7/08
Bend Test Results: Side Bend Passed Side Bend Passed Date 2/7/08
Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
CWI 04050361
QC1 EXP. 5/01/10

Warren G. Swan

**Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel**

Welder's Name Ray Lagueux ID Number 0179
Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
Material Specification, Type or Grade A36 > 3/4" to Material Specification, Type or Grade A36 > 3/4"
Test Thickness 1" Groove
Thickness Qualified Plate Groove: 1/8" - Unlimited Fillets: Unlimited
Thickness Qualified Pipe _____
Groove 1/8 - unlimited on pipe equal to or greater than 24" diameter
Fillets: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u> <u>Group One and Group Two</u>	
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u> <u>F1, F2, F3, F4</u>	
Position	<u>3G and 4G</u> <u>All Positions</u>	
Vertical Progression (up or down)	<u>Up</u>	<u>Up Only</u>
Inert Gas Backing	_____	_____
Transfer Mode (GMAW)	_____	_____
Current / Polarity	<u>115 - 120 amps DC+</u>	_____

RESULTS

Visual Examination of Completed Weld Passed Date 1/30/08
Bend Test Results: Side Bend Passed Side Bend Passed Date 1/30/08
Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
CWI 04050361
QC1 EXP. 5/01/10

Warren G. Swan

Welder Performance Qualification Record AWS D1.1 Structural Welding Code - Steel

Welder's Name Barry Morrison ID Number 7073
Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 > 3/4"
Test Thickness 1" Groove
Thickness Qualified Plate Groove: 1/8" - Unlimited Filletts: Unlimited
Thickness Qualified Pipe _____
Groove 1/8 - unlimited on pipe equal to or greater than 24" diameter
Filletts: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>3G and 4G</u>	<u>All Positions</u>
Vertical Progression (up or down)	<u>Up</u>	<u>Up Only</u>
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	<u>115 - 120 amps DC+</u>	

RESULTS

Visual Examination of Completed Weld Passed Date 1/30/08
Bend Test Results: Side Bend Passed Side Bend Passed Date 1/30/08
Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN

CWI 04050361

QC1 EXP. 5/01/10

Warren G. Swan

Welder Performance Qualification Record AWS D1.1 Structural Welding Code - Steel

Welder's Name Nicholas Perro ID Number 5042
Company American Aerial

TEST DESCRIPTION

WPS Number AA-001 Test Coupon XXX Production Weld _____
Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 > 3/4"
Test Thickness 1" Groove
Thickness Qualified Plate Groove: 1/8" - Unlimited Fillet: Unlimited
Thickness Qualified Pipe
Groove 1/8 - unlimited on structural pipe equal to or greater than 24" diameter
Fillet: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS

Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>3G and 4G</u>	<u>All positions</u>
Vertical Progression (up or down)	<u>Up</u>	<u>Up only</u>
Inert Gas Backing		
Transfer Mode (GMAW)		
Current / Polarity	<u>115 - 120 amps DC+</u>	

RESULTS

Visual Examination of Completed Weld Passed Date 8/27/08
Bend Test Results: Side Bend Passed Vertical Side Bend Passed Vertical Date 8/27/08
Bend Test Results: Side Bend Passed Overhead Side Bend Passed Overhead Date 8/27/08
Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210



WARREN SWAN
EWI 04020361
BCI EXP. 5/31/10

Warren G. Swan, Jr.

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Name of Welder Nick Perro
 Name American Aerial Identification No. 0000-5042
 Welding Procedure Specification No. 1 Rev. N/A Date June 22, 2004

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	FCAW	
Electrode (single or multiple) [Table 4.10, Item (2)]	E 045 E71T-11	ALL
Current Polarity	140 A DC+	
Position [Table 4.10, Item (6)]	3G	1G, 2G, 3G
Weld Progression [Table 4.10, Item (6)]	N/A	N/A
Backing (YES or NO) [Table 4.10 Item (7)]	YES	YES
Material/Spec. Base Metal	Group 1 to Group 1	
Thickness: (Plate)		
Groove	1"	UNLIMITED
Fillet	N/A	UNLIMITED
Thickness: (Pipe/Tube)		
Groove	N/A	UNLIMITED
Fillet	N/A	UNLIMITED
Diameter (Pipe)		
Groove	N/A	OVER 24" DIA.
Fillet	N/A	OVER 24" DIA.
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	A5.20	
Class	E71T-11	
F-No. [Table 4.10, Item (2)]	F6	F6
Gas/Flux Type [Table 4.10 Item (3)]	N/A	
Other	N/A	N/A

VISUAL INSPECTION (4.8.1)			
Type	Acceptable YES or NO		Result
	Guided Bend Test Results (4.30.5)		
1G SIDE BEND	N/A		1G SIDE BEND N/A
	N/A		N/A
Fillet Test Results (4.30.2.3 and 4.30.4.1)			
Appearance	N/A	Fillet Size	N/A
Fracture Test Root Penetration	N/A	Macroetch	N/A
(Describe the location, nature, and size of any crack or tearing of the specimen.)			

Inspected by Brad Wells CWI # 00050221 Test Number N/A
 Organization Maine Oxy Date June 23, 2004

RADIOGRAPHIC TEST RESULTS (4.30.3.1)					
Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
<u>N/A Nick Perro</u>	<u>N/A Accept</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Interpreted by N/A Ryan Russell CWI Test Number N/A 04-414
 Organization N/A OAL Date N/A June 23, 2004

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (2000) Structural Welding Code — Steel.

Manufacturer or Contractor American Aerial Serv. Authorized By [Signature]
 Date 6/22/04

WELDING PROCEDURE SPECIFICATION (WPS) Yes
PREQUALIFIED QUALIFIED BY TESTING
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Company Name American Aerial
 Welding Process(es) FCAW
 Supporting PQR No.(s) B-123456 PQR

Identification # AA R 001
 Revision 001 Date 2/25/04 By B.Wellb
 Authorized by _____ Date _____
 Type—Manual Semi-Automatic
 Machine Automatic

JOINT DESIGN USED GROOVE
 Type:
 Single Double Weld
 Backing: Yes No
 Backing Material: ASTM A36
 Root Opening 1/4" Root Face Dimension _____
 Groove Angle: 45° Radius (J-U) _____
 Back Gouging: Yes No Method _____

POSITION
 Position of Groove: 3G 4G Fillet: _____
 Vertical Progression: Up Down

BASE METALS
 Material Spec. ASTM A36
 Type or Grade _____
 Thickness: Groove 3/8" Fillet _____
 Diameter (Pipe) _____

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

FILLER METALS
 AWS Specification AWIS 5.20
 AWS Classification E71T-B

TECHNIQUE
 Stringer or Weave Bead: STRINGER
 Multi-pass or Single Pass (per side) MULTI PASS
 Number of Electrodes ONE
 Electrode Spacing
 Longitudinal _____
 Lateral _____
 Angle _____

SHIELDING
 Flux _____ Gas _____
 Composition _____
 Electrode-Flux (Class) _____ Flow Rate _____
 Gas Cup Size _____

Contact Tube to Work Distance 3/4"
 Peening NOPE
 Interpass Cleaning: hand wipe brush, pick
NO DRILLING

PREHEAT
 Preheat Temp., Min AS PER BV 435 D1
 Interpass Temp., Min SAME Max _____

POSTWELD HEAT TREATMENT
 Temp. _____
 Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1-4	FCAW	E71T-B	.068	DC-	110"/min	20V	4JPM	

Form E-1 (Front)

INNERSHIELD® NR® -232

Self-shielded, flux-cored wire with fast freezing slag system, which supports weld metal deposited at high rates on out-of-position welding.

For single or multiple pass all position welding of 3/16" (4.8mm) and thicker mild steel.

Excellent impact properties.

Superior arc characteristics and excellent slag removal (on many applications, it's self-peeling) gives NR-232 high operator appeal.

CONFORMANCE

AWS A5.20: E71T-8

ABS: 3SA-3YSAH

Lloyd's: 3S-3YSH

DNV: III YMS

G.L.: 3YSH

N.K.: ISSW5(3N)H10

MIL Spec: MIL-71T-8AS

WELDING POSITIONS

Smaller diameter wires are generally used for out-of-position.

Larger diameter wires are generally used for flat and horizontal welding.



1G



2F



2G



3G↑



4G



5G↑

TYPICAL APPLICATIONS

Excellent choice for poor fit-up applications. Recommended for open gap root pass welding.

General plate fabrication, including bridge construction, hull plate and stiffener welding on ships and barges. Machinery parts, tanks, hoppers, racks, scaffolding, etc.

DEPOSIT COMPOSITION

	%C	%Mn	%P	%S	%Si	%Al
Requirements AWS E71T-8 per A5.20	Report only	1.75 max.	0.04 max.	0.03 max.	0.90 max.	1.8 max.
Test Results	.17	.72	.007	.003	.31	.71

MECHANICAL PROPERTIES

	Yield Strength psi (MPa)	Tensile Strength psi (MPa)	Elongation (%)	Charpy V-Notch ft-lbs (Joules) @ -20°F (-29°C)	Hardness Rockwell B
Requirements AWS E71T-8 per A5.20	60,000 (414) min.	72,000 (496) min.	22 min.	20 (27)	--
Test Results *	60,000 - 74,000 (414 - 510)	72,000 - 87,000 (496 - 600)	22 - 30	20 - 69 (27 - 94)	89

* Tensile specimen aged at 220°F (104°C) for 48 hours.

DIAMETERS / PACKAGING

Diameter Inches (mm)	13.5 Lb. Coil	22 Lb. Readi-Reel®	50 Lb. Coil
.068" (1.7)	✓		✓
.072" (1.8)	✓	✓	✓
5/64" (2.0)	✓	✓	✓

RECOMMENDED PROCEDURES

Wire, Polarity ESG Inches (mm) Wire Weight	Wire Feed Speed in/min (m/min)	Arc Voltage (volts)	Approx. Current (amps)	Melt-Off Rate lbs/hr (kg/hr)	Deposition Rate lbs/hr (kg/hr)	Efficiency (%)
.068" NR-232 DC- 1/2-1 (12-25) .755 lbs/1000"	110 (2.7)	18 - 20	195	5.0 (2.3)	3.9 (1.8)	78
	130 (3.3)	19 - 21	225	6.2 (2.8)	4.6 (2.0)	74
	150 (3.8)	19 - 21	250	7.1 (3.2)	5.3 (2.4)	75
	170 (4.3)	20 - 22	270	7.8 (3.5)	6.1 (2.8)	78
	195 (5.0)	23 - 24	300	9.4 (4.3)	7.0 (3.2)	74
	250 (6.4)	23 - 24	350	11.8 (5.4)	9.0 (4.0)	76
320 (7.4)	25 - 27	400	15.2 (6.9)	11.4 (5.2)	75	
.072" NR-232 DC- 1/2-1 (12-25) .778 lbs/1000"	80 (2.0)	16 - 18	130	4.0 (1.8)	3.3 (1.5)	83
	140 (3.6)	18 - 21	225	6.8 (3.1)	5.5 (2.5)	81
	155 (3.9)	19 - 22	240	7.2 (3.3)	6.0 (2.7)	83
	170 (4.3)	20 - 23	265	8.0 (3.6)	6.5 (2.9)	81
	250 (6.4)	22 - 24	315	11.7 (5.3)	9.6 (4.3)	82
	290 (7.4)	23 - 25	360	13.6 (6.2)	11.0 (5.0)	81
5/64" NR-232 DC- 1/2-1 (12-25) 1.00lbs/1000"	60 (1.5)	16 - 17	145	3.7 (1.7)	2.7 (1.2)	73
	115 (2.9)	19 - 20	260	7.0 (3.2)	5.5 (2.5)	78
	120 (3.0)	19 - 20	270	7.3 (3.3)	5.7 (2.6)	78
	130 (3.3)	20 - 21	285	7.8 (3.5)	6.2 (2.8)	79
	180 (4.6)	22 - 23	365	10.9 (5.0)	8.7 (3.9)	80

APPLICATION GUIDELINES

For All Diameters

On epoxy coated primer plates with extremely tight fit-up, some root porosity may occur. A 1/32" (0.8 mm) minimum gap between plates will reduce or eliminate this porosity. If a gap cannot be provided, use the low end of the voltage range.

For .068 and 5/64" (1.7 and 2.0 mm)

Recommended for fillet and butt welding where it is necessary to produce wide passes using a weave technique. For plate contamination such as oil, rust, or paint, use these diameters rather than .072" (1.8 mm).

For .072" (1.8 mm)

To obtain fastest travel speeds and

flattest bead on single pass fillet welds in all positions.

Flattest bead shape and best slag removal on applications such as column butt splices made in the 3 o'clock position and 1/4" (6.3 mm) vertical up fillet welds.

Best slag removal on multiple pass applications where interpass temperatures are in excess of 500°F (260°C).

The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of The Lincoln Electric Company affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, plate chemistry and temperature, weldment design, fabrication methods and service requirements.



THE
LINCOLN ELECTRIC
COMPANY

Local Sales and Service through Global
Subsidiaries and Distributors
Cleveland, Ohio 44117-1199 U.S.A.
TEL (216) 481-8100
FAX (216) 485-1751

Cored Wire
C3.2110 3/94

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U.T.S. Of Massachusetts Inc. "The Construction Testing People"

WELDER QUALIFICATION TEST RECORD

Welder or welding operator's name JAMES E READ Identification no. 0634-0634
 Welding process SMAW Manual XXX Semiautomatic _____ Machine _____
 Position 3G (vertical upward) & 4G
 (Flat, horizontal, overhead or vertical) - If vertical, state whether upward or downward)
 In accordance with procedure specification no. _____
 Material specification ASTMA 36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" PLATE
 Thickness range this qualifies LIMITED THICKNESS

FILLER METAL

Specification no. AWS A5.1 Classification E7018 F no. F4
 Describe filler metal (if not covered by AWS specification) _____
 Is backing strip used? YES
 Filler metal diameter and trade name MUREX 1/8" DIA. Flux for submerged arc or gas for gas metal
 arc or flux cored arc welding _____

VISUAL INSPECTION

Appearance ACCEPTABLE Undercut NONE Piping porosity NONE

Guided Bend Test Results

Type	Result	AWS Type	Result
3G RB	ACCEPTABLE	3G RB	ACCEPTABLE
3G FB	ACCEPTABLE	3G FB	ACCEPTABLE

Test conducted by MICHAEL A SCULLY Laboratory test no. 880513
 per CWI # 88070121 Test date MAY 13, 1999

Fillet Test Results

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)
 Test conducted by _____ Laboratory test no. _____
 per _____ Test date _____

RADIOGRAPHIC TEST RESULTS

Film Identification	Results	Remarks	Film Identification	Results	Remarks

Test witnessed by _____ Test no. _____

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of AWS D1.1 - 98 Structural Welding Code - Steel.

Contractor AMERICAN AERIAL
 Authorized by JAMES E READ
 Date MAY 13, 1999



BHATE

Bhate Engineering Corporation
Geotechnical, Materials, Environmental Engineers

5217 6th Avenue South
Birmingham ■ Alabama ■ 35212-3515
(205) 591-7062
(205) 591-0229 (FAX)

LETTER OF TRANSMITTAL

TO American Aerial Services
33 Allen Avenue Extension
Falmouth, ME 04105

Date August 23, 1999	Job No. 170000
Attention Mr. James Read	
RE Welder Qualifications	

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop Drawings Prints Plans Samples Specifications
 Copy of Letter Change Order _____

COPIES	DATE	NO.	DESCRIPTION
1	08-16-99	081699WQ-1	Welder Qualification for Donald Violette
1	08-16-99	081699WQ-2	Welder Qualification for James Read
1	08-16-99	081699WQ-3	Welder Qualification for Eric Buckheit
1	08-16-99	081699WQ-4	Welder Qualification for Stacy Lupo

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ 19____ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO: _____ SIGNED: Jennifer Hanna
If enclosures are not as noted, kindly notify us at once



Bhate Engineering Corporation
 Geotechnical, Materials, Environmental Engineers
 5217 Fifth Avenue South
 Birmingham v Alabama v 35212-3515
 (205) 591-7082
 (205) 591-7184 (FAX)

ANSI/AWS D1.3-89 WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or Welding Operator's Name James Read
 Identification Number 0536 Qualification Date 08-16-98
 Welder's Social Security Number 0536
 In Accordance with WPS Number AWS D1.3-89 Revision Number _____
 Welding Process(es) SMAW Type Manual
 (Automatic, Manual, etc.)
 Mode of Transfer for GMAW N/A
 (Short Circuiting, Spray, Globular)

VARIABLE	ACTUAL VARIABLE USED IN QUALIFICATION	QUALIFICATION RANGE
JOINT:		
Joint Type	<u>Arc Spot Weld</u>	<u>Lap</u>
Backing Material Type	_____	_____
Groove Welded From: one side or both sides	_____	_____
BASE METAL:		
Material Specification		
Sheet Steel	<u>ASTM A606 to A611</u>	<u>ASTM A606 to A611</u>
Supporting Steel	<u>ASTM A36</u>	<u>ASTM A36</u>
Sheet Thickness		
Groove	<u>22 Ga</u>	<u>0.5t through 2t</u>
Fillet		
Arc Spot	<u>5/8" diameter</u>	<u>1/2" to 1 1/16"</u>
Arc Beam		
COATING(S):		
Type	<u>N/A</u>	
Thickness		
POSITION:		
Groove		
Fillet		
Arc Spot	<u>F</u>	<u>F</u>
Arc Beam		
Progression		
GAS		
	<u>N/A</u>	
ELECTRODE		
Size	<u>1/8" to 5/32"</u>	<u>1/8" to 5/32"</u>
Group Designation	<u>F1 (E6022)</u>	<u>F1 (E6022)</u>

VISUAL EXAMINATION RESULTS

Specimen 1 Acceptable 2 layer twist test Specimen 2 Acceptable 2 layer twist test
 Appearance Uniform Cracks None Undercut None excessive
 Reinforcement 1/32 min Diameter of Arc Spot Nugget 11/16 diameter
 Test Conducted By Jim R. Wall Per ANSI/AWS D1.3-89
 Laboratory Test Number 081699WQ-2 Date of Test 08-16-98

The undersigned certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of 6.7 of ANSI/AWS D1.3-89 STRUCTURAL WELDING CODE- SHEET STEEL.

Company Bhate Engineering Corporation Authorized By [Signature]
 E. Walker, CWI



Steven L. Sanders
Cert # 0710063W SSN # XXX-XX-3727



AMERICAN WELDING SOCIETY

VALID ONLY IF ACCOMPANIED BY PHOTO ID

This Card is the property of AWS and shall be returned on demand.

Steven L Sanders

A	Test	DATE	Size	Code	Process	Gas	Filler	Metal	Base Metal	Position	Thickness	Expires
1	02/24/94	1	D1		SMAW	N/A	E4		P	A	U	09/30/08

24

**Welder Performance Qualification Record
AWS D1.1 Structural Welding Code - Steel**

Welder's Name Christopher Waters ID Number 0719
Company American Aerial

TEST DESCRIPTION

WPS Number AA - 001 Test Coupon XXX Production Weld _____
Material Specification, Type or Grade A36 >3/4" to Material Specification, Type or Grade A36 > 3/4"
Test Thickness 1" Groove
Thickness Qualified Plate Groove: 1/8" - Unlimited Filletts: Unlimited
Thickness Qualified Pipe _____
Groove 1/8 - unlimited on structural pipe equal to or greater than 24" diameter
Filletts: Unlimited

TESTING CONDITIONS AND QUALIFICATION LIMITS


Welding Variables	Actual Values	Range Qualified
Welding Process(es)	<u>SMAW</u>	<u>SMAW</u>
Type (Manual, Semi, Auto)	<u>Manual</u>	<u>Manual</u>
Backing	<u>A36 1/4" x 1-1/2"</u>	<u>Backing required</u>
Material Group Number	<u>Two</u>	<u>Group One and Group Two</u>
Filler Metal AWS Specifications	<u>A5.1</u>	
Filler Metal Classification	<u>E7018 MR</u>	
Filler Metal F Numbers	<u>F4</u>	<u>F1, F2, F3, F4</u>
Position	<u>3G and 4G</u>	<u>All positions</u>
Vertical Progression (up or down)	<u>Up</u>	<u>Up only</u>
Inert Gas Backing	_____	_____
Transfer Mode (GMAW)	_____	_____
Current / Polarity	<u>115 - 120 amps DC+</u>	_____

RESULTS

Visual Examination of Completed Weld Passed Date 8/27/08
Bend Test Results: Side Bend Passed Vertical Side Bend Passed Vertical Date 8/27/08
Bend Test Results: Side Bend Passed Overhead Side Bend Passed Overhead Date 8/27/08
Test conducted by:
Warren G. Swan, Jr. New England School of Metalwork

We certify that the statements in this record are correct and that the test welds were prepared and welded in conformance with the 2006 AWS D1.1 welding code and the above noted Welding Procedure Specification.

Name: Warren G. Swan, Jr.
Affiliation New England School of Metalwork
Address 7 Albiston Way Auburn, ME 04210

 **WARREN SWAN**
CWI 04050361
CCI EXP. 5/31/10
Warren G. Swan

B E C K E R

structural engineers, inc.

MILL CERTIFICATIONS

PROJECT **UNE COLLEGE OF PHARMACY**

STRUCTURAL STEEL	<input checked="" type="checkbox"/> RECEIVED	DATE: 12-22-08	<input type="checkbox"/> NOT RECEIVED
BOLTS	<input checked="" type="checkbox"/> RECEIVED	DATE: 12-22-08	<input type="checkbox"/> NOT RECEIVED
WELD FILLER	<input checked="" type="checkbox"/> RECEIVED	DATE: 12-22-08	<input type="checkbox"/> NOT RECEIVED

ITEMS ABOVE MARKED "RECEIVED" HAVE NOT BEEN INCLUDED IN THIS REPORT DUE TO THE LARGE VOLUME. HARD COPIES ARE AVAILABLE UPON REQUEST.

SPECIAL INSPECTOR: DSB

DATE: 7-15-09

EXHIBIT C

01000 Quality Assurance

Quality Assurance Plan – Exhibit C

QUALITY ASSURANCE FOR SEISMIC RESISTANCE CHECK LIST [IBC 1705]

Project: University of New England – College of Pharmacy, Portland, ME

Date Prepared: 01/24/2008

SEISMIC DESIGN CATEGORY:

QUALITY ASSURANCE PLAN REQUIREMENTS

(A Quality Assurance Plan, enacted through the Special Inspections requirements for this project, are in place for the following systems)

FOR SEISMIC DESIGN CATEGORY C OR HIGHER:

Structural:

- The seismic-force-resisting systems
 - Steel Braced Frames and associated connections/anchorage
 - Steel Moment Frames and associated connections
 - Shear walls: CMU Wood Concrete
 - Diaphragms: Floor Roof
 - Other:

SER

Mechanical/Piping:

- Heating, ventilating and air-conditioning (HVAC) ductwork containing hazardous materials and anchorage of such ductwork
 - Hazardous Material:
 - Hazardous Material:
- Piping systems and mechanical units containing flammable, combustible or highly toxic materials
 - Material:
 - Material:

MER

Electrical:

- Anchorage of electrical equipment used for emergency or standby power systems
 - Equipment:
 - Equipment:
 - Equipment:

EER

ADDITIONAL SYSTEMS FOR SEISMIC DESIGN CATEGORY D OR HIGHER:

Architectural:

- Exterior wall panels and their anchorage
 - Precast Concrete
 - Brick
 - Stone:
 - Other:
- Suspended ceiling systems and their anchorage
- Access floors and their anchorage
- Steel storage racks and their anchorage
 - Retail Storage Racks
 - High Density Files
 - Other:
- Life-safety component required to function after an earthquake:
 - Engineered Egress Stairs
 - Fire Protection Sprinkler System
 - Other:
 - Other:
 - Other:

RAR

NOT REQUIRED (SDC B)

ADDITIONAL SYSTEMS FOR SEISMIC DESIGN CATEGORY D OR HIGHER:

Electrical:

- Electrical equipment

EER

Structural Engineer of Record (SER):

Registered Architect of Record (RAR):

Signature _____ Date _____
Mechanical Engineer of Record (MER):

Signature _____ Date _____
Electrical Engineer of Record (EER):

Signature _____ Date _____
Building Code Official's Acceptance:

Signature _____ Date _____

Quality Assurance Plan – Exhibit C

QUALITY ASSURANCE FOR WIND REQUIREMENTS CHECK LIST [IBC 1706]

Project: University of New England – College of Pharmacy, Portland, ME

Date Prepared: 01/24/2008

Wind Exposure:

REQUIRED	NOT REQUIRED	NOT APPLICABLE	QUALITY ASSURANCE PLAN REQUIREMENTS (A Quality Assurance Plan is required where indicated below)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In wind exposure Categories A and B, where the 3-second-gust basic wind speed is 120 miles per hour (mph) (52.8 m/sec) or greater.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In wind exposure Categories C and D, where the 3-second-gust basic wind speed is 110 mph (49 m/sec) or greater.

Prepared by:

Building Code Official's Acceptance:

Signature

Date

Signature

Date

EXHIBIT D

Statements of Responsibility

Fabricator's Certificate of Compliance – Exhibit D

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per section 1704.2 of the International Building Code must submit a *Fabricator's Certificate of Compliance* at the completion of fabrication.

Project: New England College of Pharmacy

Fabricator's Name: Novel Iron Works, Inc.

Address: 250 Ocean Road, Greenland, NH 03840

Certification or Approval Agency: AISC

Certification Number: Standard for Steel Buildings Structures, Simple Steel Bridges

Date of Last Audit or Approval: April 2008

Description of structural members and assemblies that have been fabricated:

Structural steel columns and beams

Roof truss assemblies

I hereby certify that items described above were fabricated in strict accordance with the approved construction documents.


Signature

12/05/2008
Date

Executive Vice President
Title

Attach copies of fabricator's certification or building code evaluation service report and fabricator's quality control manual

End of Special Inspections Report