WHITE ENGINEERING, LLC P.O. Box 878 Glen, N.H. 03838

nealjwhite@gmail.com

Tel. 603-383-9347 Fax. 603-383-8262

Client: S.W. Cole Engineering, Inc.

Report: 001

Project: UNE Portland Campus - Stevens Ave. Armory Renovation

SWCE Project #: 16-0953 **Date:** October 4, 2016

Subject: Structural Steel Site Inspection

We visited the site on this date as requested to initiate structural steel inspections on the UNE Portland Campus Stevens Ave Armory Renovation project. Upon arrival we met with the project superintendent for Ledgewood Construction who provided us with structural and erection drawings which were used to perform our inspections. Inspected at this time was the 2nd Floor framing from line N to V between lines 3 and 9. Our actions and observations were as follows:

- Framing was inspected for overall conformance to drawings and details.
- Columns were inspected for plumb, proper bearing and properly tightened anchor rod nuts. Column base plates at P/7 and R/7 were removed in the field and welded back on in accordance to the LMC Light Iron shop details for those pieces. We performed visual inspections on these welds.
- Bolted connections were inspected. Some connections were field welded in lieu of bolting due to misalignment. Visual inspections were performed on these welds.
- Several shear plates were installed at the incorrect locations or missing altogether. New plates were field welded in the correct locations in accordance to the LMC Light Iron shop details. Visual inspections were performed on the welds.
- Welding of the HSS brace frames was visually inspected.
- Visual inspections were performed on all moment connections.
- Layout, welding and fastening of the composite deck were inspected.
- Layout and welding of the shear studs were inspected.
- Welding of the ½" pour stop around the perimeter was inspected. The pour stops adjacent to the existing CMU walls was not welded on the underside of the plate as access was difficult. The absence of these welds was acceptable per a conversation between the general contractor and the EOR at Oak Point Associates.

All inspections performed above appeared acceptable in accordance to AWS, AISC, RCSC and contract documents.

The project superintendent as well as the erector foreman was notified of our findings.

Inspector; Michael Bump CWI#07091231



Project Name/Location:	University of New England	i, (Armory R	enovations)	1	Project No: 16-0953				
Client/Client's Rep.:	University of New England	l / Greg Hog	an		Date:	9-14-16			
Concrete Contractor:	J Mac Custom Concrete				Sheet:	1 of 1			
Placement Location:	Drill Room Pier Footings				S.W.COLE Re	N. McArth	ur		
Weather:	Overcast, 70's				On Site:	10:30a –	12:00p		
Pre Placement Observations			In Comp	liance	N/O	Comments			
Bar size and location (diamete	r, length, bend and coverage	∋)	Yes 🛛	No □		#5 Verts, #4 sti	rrups		
Splicing (type, overlap)			Yes 🗌	No 🗌	\boxtimes				
Stability (wiring, chairs, and sp	acers)		Yes 🛛	No 🗌		2" steel chairs			
Reinforcement conditions (clear	inliness, temperature etc.)		Yes 🛛	No 🗌		Clean, Clear			
Embedments and anchor bolts			Yes 🗌	No 🗌	\boxtimes				
Soil subgrade prepared in acco	ordance with project specific	ations	Yes 🛛	No 🗆		3/4"crushed rock			
Referenced Drawings		Date	Page(s)	Rev.	ASTM	GRADE	Ē		
UNE Armory Renovations		8-9-16	R100	1	A 615 🛛	40 🗌 50 🔲 60 🖂			
					A 616	75 🗌			
					A 617 A 706	A 775 E poxy □	7		
					-	A 110 Epoxy	_1		
					_				
Concrete Placement Observe	ations		In Compli		N/O	Comment	s		
Required mix used				No 🗌		3,000psi			
Concrete properly conveyed to Internal vibration / consolidatio	•			No □ No □		Chute Mechanical			
Even layering around openings				No 🗌		viechanicai			
Post placement observations (No 🗌	$oxed{oxed}$ –				
Field Testing of Concrete Pe				No 🗌	Loads:	2 Yards:	14.0		
*Cylinder Set Number:	838 - 2		←*refer to as	ssociated	l concrete test	report			
Non-Conformance Items Obs	served (person notified)					•			
Notes: S.W.COLE was requested onsite by Ledgewood Construction for the inspection of reinforcing steel and the field testing of concrete. All reinforcements were correct according to the provided plans. Some clearance issues were made known to J Macs Custom Concrete and they corrected them prior to the pour. Concrete was a 3000psi mix containing Master Glenium mid-range water reducer, Master Set R100 retarder and air entrainment. Tests performed indicated the mix properties to be within design specification. All results were reported verbally to Ledgewood Construction, and to J Macs Custom Concrete.									
N/O=Not Observed									
Attachments: Photos			Revie	ewed By	r: RED				



Project Name/Location:	Armory Renovations/Portla	and		P	Project No: 16-0953			
Client/Client's Rep.:	University of New England	/ Greg Hog	an		ate:	-	10-28-16	
Concrete Contractor:	Phinney Concrete	* ***		s	heet:		1 of 1	
Placement Location:	Slab on Deck: Pre-function)		s	.W.COLE Rep).:	C. Cromwell	
Weather:	Rain, 40's			c	n Site:		6:30-10:30	
Pre Placement Observations			In Comp	liance	N/O		Comments	
Bar size and location (diamete	r, length, bend and coverage	∍)	Yes 🗌	No 🗌		Wire I	Mesh	
Splicing (type, overlap)			Yes 🛛	No 🗌				*****
Stability (wiring, chairs, and sp	acers)		Yes 🏻	No 🗌	. 🗀	Wire/o	hairs	
Reinforcement conditions (clea	anliness, temperature etc.)		Yes 🗌	No 🗌		Clean		
Embedments and anchor bolts	installed		Yes 🗌	No 🗌		N/A		
Soil subgrade prepared in acco	ordance with project specific	ations	Yes 🗌	No 🗌		N/A		
Referenced Drawings		Date	Page(s)	Rev.	ASTM		GRADE	
Rebar and Mesh- rebar		R101	1	A 615 🗌	40 🗌	50 🔲 60 [
					A 616 🗍	75 🗌		
					A 617 ☐ A 706 ☐	Δ 779	Ероху 🗌	
					A100	A 170	героху 🗀	
Concrete Placement Observ	ations	1	in Compi	iance	N/O		Comments	
Required mix used			Yes 🛛	No 🗌	_		i, w/ air light	weight
Concrete properly conveyed to	all areas of placement		Yes 🛚	No 🗌		Pump		
Internal vibration / consolidation			Yes 🗌	No 🗌	⊠ ⊠	NI/A		
Even layering around opening			Yes □ Yes □	No 🗌		N/A N/A		
Post placement observations			res ∐ Yes ⊠	No 🗌	Loads:	6	Yards:	60
Field Testing of Concrete Pe					d concrete test		i aius.	00
*Cylinder Set Number:	839 -12,13		Yes	No 🛛	1 CONCIETE TEST	тероп		
Non-Conformance Items Ob	servea (person nounea)		169 []	NO EZ				
S.W.COLE was onsite as sch Ready Mix contained a midra Testing indicated concrete be Ledgewood Construction. Con The wet unit weight for first loa	ange water reducer (Master eing placed was within proj ncrete tests were performed	Glenium 79 ject specific from sampl	500) and 2% ations. All re es obtained f	of maste sults wer rom the p	erset added du e reported to point of dischar	iring the the sup rge and	e batching pervisor ons	rocess. ite from
N/O=Not Observed Attachments: None			Rev	lewed B	y: KBG			



Project Name/Location:	University of New England	I, (Armory Re	enovations)	₽	roject No:	16-0953
Client/Client's Rep.:	University of New England	/ Greg Hoga	an	D	ate:	9-19-16
Concrete Contractor:	CCI			s	heet:	1 of 1
Placement Location:	Slab: bathroom and corrid	or 117, eleva	ator pit	s	.W.COLE Rep	J. Moore
Weather:	Clear, 70's			0	n Site:	9am- 12pm
Pre Placement Observation	ns		In Comp	liance	N/O	Comments
	ter, length, bend and coverage	e)	Yes 🛛	No 🗌		To specification
Splicing (type, overlap)			Yes 🛚	No 🗌		To specification
Stability (wiring, chairs, and s	spacers)		Yes 🛚	No 🗌		Steel chairs
Reinforcement conditions (cl	eanliness, temperature etc.)		Yes 🖂	No 🗌		Clean, Clear
Embedments and anchor bol	ts installed		Yes 🗌	No 🗌	\boxtimes	
Soil subgrade prepared in ac	cordance with project specific	ations	Yes 🛛	No 🗌		
Referenced Drawings		Date	Page(s)	Rev.	ASTM	GRADE
Oak point structural		5-24-16	AE101		A 615 🖂	40 🗌 50 🗌 60 🖾
		,			A 616 [75 🗌
					A 617 ☐ A 706 ☐	A 775 Epoxy □
					A100	A 773 Lpoxy
		ĺ				
		1	1			
Concrete Placement Obser	vations	<u>l</u>	In Compl	lance	N/O	Comments
Concrete Placement Obser Required mix used	rvations	I	In Compl Yes □	No 🗌		4,000psi, no air
		I	Yes ☐ Yes ⊠	No □ No □		4,000psi, no air Pump truck
Required mix used Concrete properly conveyed Internal vibration / consolidat	to all areas of placement tion of concrete	<u> </u>	Yes ☐ Yes ⊠ Yes ⊠	No No No		4,000psi, no air
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin	to all areas of placement tion of concrete gs and embedments	<u></u>	Yes ☐ Yes ☒ Yes ☒ Yes ☒	No No No No No No		4,000psi, no air Pump truck
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations	to all areas of placement tion of concrete igs and embedments s (finishing, curing, etc.)		Yes ☐ Yes ☒ Yes ☒ Yes ☒ Yes ☐	No		4,000psi, no air Pump truck Mechanical
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete In	to all areas of placement tion of concrete ags and embedments a (finishing, curing, etc.)		Yes ☐ Yes ☒ Yes ☒ Yes ☒ Yes ☐ Yes ☒	No	□ - □ - □ - □ - □ -	4,000psi, no air Pump truck Mechanical 3 Yards: 25.0
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete I *Cylinder Set Number:	to all areas of placement tion of concrete gs and embedments s (finishing, curing, etc.) Performed 839 -4		Yes ☐ Yes ☒ Yes ☒ Yes ☒ Yes ☐ Yes ☐ Yes ☒	No No No No No No No No		4,000psi, no air Pump truck Mechanical 3 Yards: 25.0
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete F *Cylinder Set Number: Non-Conformance Items O	to all areas of placement tion of concrete gs and embedments s (finishing, curing, etc.) Performed 839 -4		Yes ☐ Yes ☒ Yes ☒ Yes ☒ Yes ☐ Yes ☒	No	□ - □ - □ - □ - □ -	4,000psi, no air Pump truck Mechanical 3 Yards: 25.0
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete II *Cylinder Set Number: Non-Conformance Items O Notes: S.W.COLE was requested of All reinforcements appeared midrange water reducer (Ma form load 1 for laboratory co-	to all areas of placement tion of concrete gs and embedments s (finishing, curing, etc.) Performed 839 -4	e provided p uring the bat flid load sam ab. All concr	Yes ☐ Yes ☒ Yes ☒ Yes ☐ Yes ☒ Yes ☐ Yes ☒ ←*refer to a Yes ☐ inspection o lans. The co tching proces ple for tests	No No No No No No No No	Loads: I concrete test Ing steel and toplied by Hissert of four cylin pecimens was	4,000psi, no air Pump truck Mechanical 3 Yards: 25.0 report the field testing of concrete. ong Ready Mix contained a ders were cast at 10:50am is taken from concrete being
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete II *Cylinder Set Number: Non-Conformance Items O Notes: S.W.COLE was requested of All reinforcements appeared midrange water reducer (Ma form load 1 for laboratory co-	to all areas of placement tion of concrete ags and embedments (finishing, curing, etc.) Performed 839 -4 Poserved (person notified) In the correct according to the aster Glenium 7500) added disampressive strength testing. Morner section of the floor sla	e provided p uring the bat flid load sam ab. All concr	Yes ☐ Yes ☒ Yes ☒ Yes ☐ Yes ☒ Yes ☐ Yes ☒ Frefer to a Yes ☐ inspection of lans. The containing process ple for tests gete placed to the set of the set	No No No No No No No No	Loads: I concrete test Toplied by Hisse of four cylin pecimens was hin project specimens.	4,000psi, no air Pump truck Mechanical 3 Yards: 25.0 report the field testing of concrete. tong Ready Mix contained a aiders were cast at 10:50am as taken from concrete being ecification. All results were
Required mix used Concrete properly conveyed Internal vibration / consolidat Even layering around openin Post placement observations Field Testing of Concrete II *Cylinder Set Number: Non-Conformance Items Of Notes: S.W.COLE was requested of All reinforcements appeared midrange water reducer (Material form load 1 for laboratory co- placed in the South East of reported to the supervisor or	to all areas of placement tion of concrete ags and embedments (finishing, curing, etc.) Performed 839 -4 Poserved (person notified) In the correct according to the aster Glenium 7500) added disampressive strength testing. Morner section of the floor sla	e provided p uring the bat flid load sam ab. All concr	Yes ☐ Yes ☒ Yes ☒ Yes ☐ Yes ☒ Yes ☐ Yes ☒ Frefer to a Yes ☐ inspection of lans. The containing process ple for tests gete placed to the set of the set	No No No No No No No No	Loads: I concrete test Toplied by Hisse of four cylin pecimens was hin project specimens.	4,000psi, no air Pump truck Mechanical 3 Yards: 25.0 report the field testing of concrete. ong Ready Mix contained a ders were cast at 10:50am is taken from concrete being



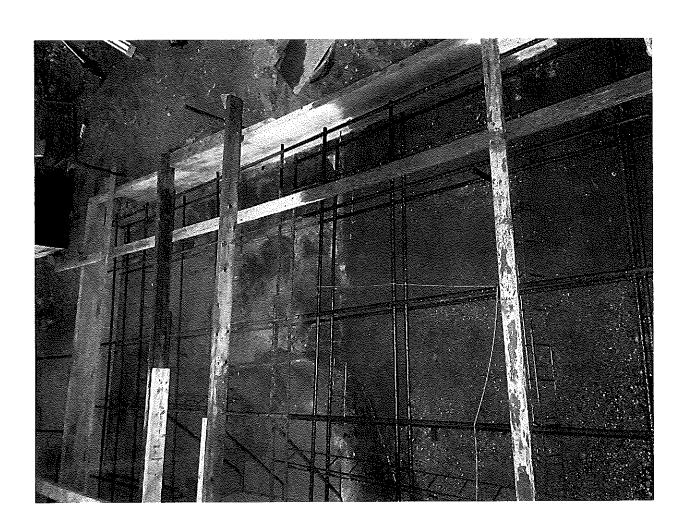






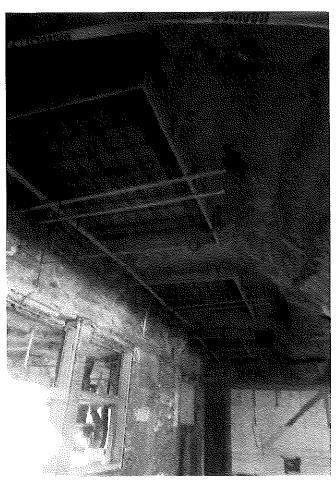






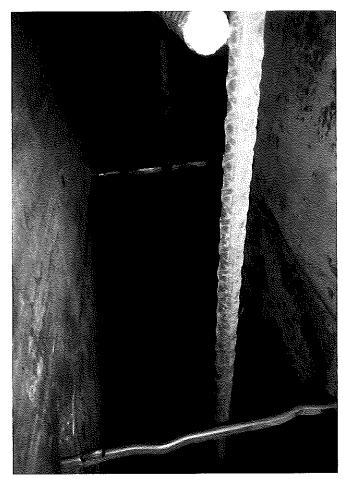


Project Name/Location:	University of New England	d, (Armory Re	enovations)	Pr	roject No: 16-0953					
Client/Client's Rep.:	University of New England	d / Greg Hoga	an	Da	ate:	9-22-16				
Concrete Contractor:	J Mac Custom Concrete			Sł	neet:	1 of 1	9-22-16 1 of 1 N. McArthur 11:30a – 12:45p Comments 5 mat, #5 verts ' steel chairs / Bricks lean, Clear ''crushed rock GRADE 0 □ 50 □ 60 ☒ 5 □			
Placement Location:	Interior Pier Footings Elevator Pit			s.	W.COLE Rep	9-22-16 1 of 1 : N. McArthur 11:30a – 12:45p Comments #5 mat, #5 verts 2" steel chairs / Bricks Clean, Clear 3/4"crushed rock				
Weather:	Clear, 70's			Oı	n Site:	11:30a – 12:45p)			
Pre Placement Observations			In Comp	liance	N/O					
Bar size and location (diameter	r, length, bend and coverage	e)	Yes 🛛	No 🗌		#5 mat, #5 verts				
Splicing (type, overlap)			Yes 🗌	No 🗌	\boxtimes					
Stability (wiring, chairs, and sp	acers)		Yes 🛚	No 🗌		2" steel chairs / Brick	S			
Reinforcement conditions (clea	anliness, temperature etc.)		Yes 🛛	No 🗌		Clean, Clear				
Embedments and anchor bolts	installed		Yes 🗌	No 🗌	\boxtimes					
Soil subgrade prepared in acc	ordance with project specific	cations	Yes 🛛	No 🗌		¾"crushed rock				
Referenced Drawings		Date	Page(s)	Rev.	ASTM	GRADE				
UNE Armory Renovations		8-9-16	R100	1	A 615 🖂	40 🗌 50 🔲 60 🖂				
				A 616	75 🗌					
					A 617 🗌 A 706 🔲	A 775 Epoxy □				
			1		AIVU	Y 110 Eboy				
					-					
					1					
Concrete Placement Observ	rations		In Compl	iance	N/O	Comments				
Required mix used			Yes 🗌	No 🗌	\boxtimes	3,000psi				
Concrete properly conveyed to	all areas of placement			No 🗌		Chute				
Internal vibration / consolidation	on of concrete		Yes 🖾	No 🗌		Mechanical				
Even layering around opening	s and embedments		Yes 🛛	No 🗌						
Post placement observations	(finishing, curing, etc.)		Yes 🗌	No 🗆		A V OF				
Field Testing of Concrete Pe	erformed		Yes 🛚	No 🗌	Loads:		5.0			
*Cylinder Set Number:	839 -4				concrete test	report				
Non-Conformance Items Ob	served (person notified)		Yes 🗌	No ⊠						
Notes: S.W.COLE was requested onsite by Ledgewood Construction for the inspection of reinforcing steel and field testing of concrete. All reinforcements were correct according to the provided plans. Some clearance issues were made known to J Macs Custom Concrete and they corrected them prior to the pour. Concrete was a 3000psi mix containing Master Glenium mid-range water reducer, Master Set R100 retarder and air entrainment. Tests performed indicated the mix properties to be within design specification. All results were reported verbally to Ledgewood Construction, and to J Macs Custom Concrete.										
N/O=Not Observed										
Attachments: Photos				Santa and the	. DED					
			Rev	iewed By	: RED					





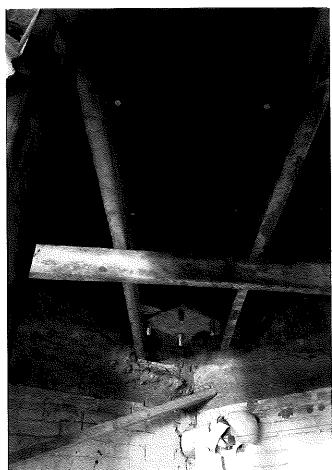






Project Name/Location:	University of New England	l, (Armory R	Renovations)		Project No:	16-0953			
Client/Client's Rep.:	University of New England	I / Greg Hog	jan		Date:	9-27-16			
Concrete Contractor:	J Mac Custom Concrete				Sheet:	1 of 1			
Placement Location:	Interior pre-function Piers				S.W.COLE Re	p.: N. McArthur			
Weather:	Clear, 70's		•		On Site:	12:15a – 4:15p			
Pre Placement Observation	S		In Comp	liance	N/O	Comments			
Bar size and location (diameter	er, length, bend and coverage	∋)	Yes 🛛	No 🗌		#5 horiz, #5 verts			
Splicing (type, overlap)			Yes 🗌	No 🗌	\boxtimes				
Stability (wiring, chairs, and sp	pacers)		Yes 🛚	No 🗌		N/A			
Reinforcement conditions (cle	anliness, temperature etc.)		Yes 🛚	No 🗌		Clean, Clear			
Embedments and anchor bolt	s installed		Yes 🗌	No 🗌	\boxtimes				
Soil subgrade prepared in acc	cordance with project specific	ations	Yes ⊠	No 🗌		N/A			
Referenced Drawings		Date	Page(s)	Rev.	ASTM	GRADE			
UNE Armory Renovations		8-9-16	R100	1	A 615 🖂	40 🗌 50 🔲 60 🖾			
					A 616 A 617	75 🗔			
					A 706	A 775 Epoxy □			
					1				
					-				
					-				
					N/O				
Concrete Placement Observ Required mix used	ations		in Complia Yes □	ance No □	N/O ⊠	Comments 3,000psi			
Concrete properly conveyed to	n all areas of placement			No 🗌	_	Pump			
Internal vibration / consolidation	" "			No 🗌		Mechanical			
Even layering around opening				No 🗌					
Post placement observations			Yes 🗌	No 🗌	\boxtimes				
Field Testing of Concrete Pe	erformed		Yes 🛛	No 🗌	Loads:	3 Yards: 30.0			
*Cylinder Set Number:	839 -5		←*refer to as	sociate	d concrete test	report			
Non-Conformance Items Ob	served (person notified)		Yes 🗌 🔝	No 🗵					
Notes: S.W.COLE was requested onsite by Ledgewood Construction for the inspection of reinforcing steel and field testing of concrete. All reinforcements were correct according to the provided plans. Concrete was a 3000psi mix containing Master Glenium mid-range water reducer, and air entrainment. Tests performed indicated the mix properties to be within design specification. All results were reported verbally to Ledgewood Construction, and to J Macs Custom Concrete.									
N/O=Not Observed Attachments: Photos			Revie	ewed B	1. Lagar	e Il			







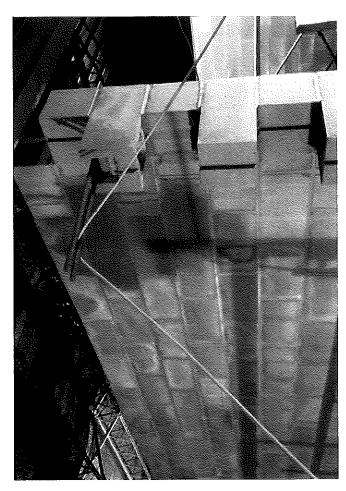


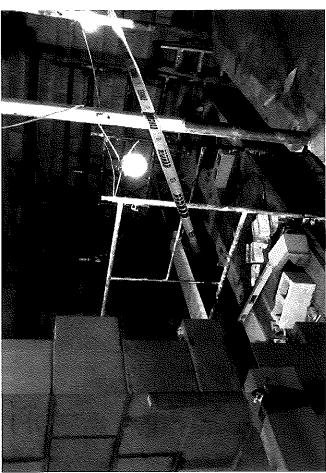


Masonry Construction Observation Report

Project Name/Location:	University of New	England, (Armory	Renovatio	ons)	Project No:	16-0953
Client/Client's Rep.:	University of New	England / Greg H	ogan		Date:	11-3-16
Masonry Contractor:	Bellafleur Mason	у			Sheet:	1 of 1
Placement Location:	8"CMU Stair S02	at Elevation 140'-0	0"	<u>_</u>	S.W.COLE Rep.:	C. Cromwell
Weather:	Rain 50's				On Site:	8:30-10:00
Referenced Drawings		Date	Page	Revisio	n Comments	
Oak Point Associates- Structu	ral Notes	5-24-16	S-001			
Oak Point Associates- Stair S	02 Masonry Wall	5-24-16	SF203			
		i.				
Masonry Construction				served		
Proportioning of site-mixed me	ortar		Yes 🖂	No 🗌		
Placement of units and constr	uction of mortar join	ts	Yes 🛚	No 🗌	Full Joint Co	nstruction
Joint reinforcing (type, spacing	g, laps)		Yes 🖂	No 🗌	Joint reinford	ing at 16" O.C.
Vertical reinforcing (size, space	ing, positioners, lap	s)	Yes 🛚	No 🗀	#5 every 2'-8	3" O.C.
Horizontal reinforcing (size, sp	pacing, positioners,	laps)	Yes 🛚	No 🗌	(2) #5 bond I	oeam at floor levels
Cold-weather / Hot-weather co	onstruction (tempera	ature, practices)	Yes 🗌	No 🗵	50's Outside	Temp
Embedments and anchor bolt	S		Yes 🗌	No 🗵	N/A	
Installation of flashing and we	eps – material and į	placement	Yes 🗌	No 🗵	N/A	
Grout Placement	mo		<u>Obs</u>	served		
Grout space (cleanliness, mor	tar fins, size/alignm	ent, etc.)	Yes 🛚	No 🗌	Clear & unot	ostructed
Lift height (cleanouts if neede	d)		Yes 🛚	No □	-	
Proportions of site-mixed grou	ıt or vendor mix use	d	Yes 🛚	No 🗌	Pro Masonry	Bags
Placement of grout (consolida	tion, reconsolidation	1)	Yes 🛚	No 🗌	Rodded by h	and
Field Testing Performed		Mortar ⊠		G	Frout ⊠	Prism
refer to associated spe	SET NO:	839-14		:	839-15	
NON-CONFORMANCE IT			Yes [
Notes:	EIWS OBSERVED (versur <u>nounea)</u>	163			
S.W.COLE was onsite as so accordance with special inspoworking on bring up last side beam at elevation 140'-0". If General masonry construction	ections, At time of a to elevation 140'-0 Reinforcing observe	orrival Bellafleur M 7". Reinforcing col ed appeared to ha	asonry had nsisted of ave been	d three sid #5 vertica installed v	les of stairway up ls at 32" O.C. and with required clea	to roof elevations and were d (2) #5 horizontals for bond arances and splice lengths.
Attachments: Photos		Rev	iewed By: RED			











ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

General

Contractor:

Concrete

Supplier: HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

9/7/2016

Time Cast: 3:15

Date Received:

Placement Location: DRILL RM FOOTINGS

Placement Method:

POWER BUGGY CHUTE

Cylinders Made By:

NATHANIEL MCARTHUR

Placement Vol. (yd3): 21

Aggregate Size (in): 3/4

DELIVERY INFORMATION

INITIAL CURING CONDITIONS

Temperatures

Admixtures:

MRWR

SET

Minimum (°F)

Maximum (°F)

TEST RESULTS

Slump (in) (C-143):

Slump WR:

6.25

Load Number: 2

Batch

Air Content (%) (C-231)

Mixer Number: 317

Air WR:

5.8

2:02

Air Temp (°F):

68

Ticket Number 3448

Arrive 2:15

Conc. Temp (°F) (C-1064):

75

Cubic Yards:

10.5

Depart

Design (psi):

3000

3:30

		Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
-1A 8.20	4.01	12.61	9/14/2016	Lab	7	5	39.8	3160
-1B 8.20	4.01	12.63	10/5/2016	Lab	28	2	50.8	4020
-1C 8.20	4.01	12.64	10/5/2016	Lab	28	4	49.4	3910
-1D 8.20			Hold	Lab				
_	nder Weigh nation (lbs) -1A 8.20 -1B 8.20 -1C 8.20	nder Weight Diameter nation (lbs) (in) -1A 8.20 4.01 -1B 8.20 4.01 -1C 8.20 4.01	Inder nation Weight (lbs) Diameter (in) Sectional Area(In)² -1A 8.20 4.01 12.61 -1B 8.20 4.01 12.63 -1C 8.20 4.01 12.64	Inder nation Weight (lbs) Diameter (in) Sectional Area(In)² Date Of Test -1A 8.20 4.01 12.61 9/14/2016 -1B 8.20 4.01 12.63 10/5/2016 -1C 8.20 4.01 12.64 10/5/2016	Inder nation Weight (lbs) Diameter (in) Sectional Area(In)² Date Of Test Cure Type -1A 8.20 4.01 12.61 9/14/2016 Lab -1B 8.20 4.01 12.63 10/5/2016 Lab -1C 8.20 4.01 12.64 10/5/2016 Lab	Inder nation Weight (lbs) Diameter (in) Sectional Area(In)² Date Of Test Age (days) -1A 8.20 4.01 12.61 9/14/2016 Lab 7 -1B 8.20 4.01 12.63 10/5/2016 Lab 28 -1C 8.20 4.01 12.64 10/5/2016 Lab 28	Inder nation Weight (lbs) Diameter (in) Sectional Area(In)² Date Of Test Cure Type Age (days) Fracture Type -1A 8.20 4.01 12.61 9/14/2016 Lab 7 5 -1B 8.20 4.01 12.63 10/5/2016 Lab 28 2 -1C 8.20 4.01 12.64 10/5/2016 Lab 28 4	Age nation Weight (lbs) Diameter (in) Sectional Area(In)² Date Of Test Cure Type Age (days) Fracture Type Load (kips) -1A 8.20 4.01 12.61 9/14/2016 Lab 7 5 39.8 -1B 8.20 4.01 12.63 10/5/2016 Lab 28 2 50.8 -1C 8.20 4.01 12.64 10/5/2016 Lab 28 4 49.4



Cone both ends



Columnar



Side at top

or bottom

Pointed End

Remarks:



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number: 16-0953

Client Contract Number: University of New England

General Contractor:

Client:

Concrete

Supplier: **HISSONG CONCRETE**

PLACEMENT INFORMATION

Date Cast:

9/14/2016

Time Cast: 11:50

Date Received:

Placement Location: INTERIOR PIER FOOTINGS

Placement Method:

PUMP

NATHANIEL MCARTHUR Cylinders Made By:

Placement Vol. (yd³): 14

Aggregate Size (in):

DELIVERY INFORMATION INITIAL CURING CONDITIONS

Temperatures

Admixtures:

MRWR

Minimum (°F)

Maximum (°F)

MASTER SET

TEST_RESULTS

Slump (in) (C-143):

Slump WR:

6

Load Number: 2

Batch

Air Content (%) (C-231)

Air WR:

5.5

Mixer Number: 324

11:02

Air Temp (°F):

Conc. Temp (°F) (C-1064):

72

Ticket Number 3515 Cubic Yards:

Arrive 11:35

81

Design (psi):

Depart

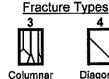
3000

Cylinder r Weight ion (lbs)		Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
8.25	4.01	12.66	9/21/2016	Lab	7	3	47.0	3710
8.25	4.01	12.64	10/12/2016	Lab	28	5	58.4	4620
8.25	4.01	12.66	10/12/2016	Lab	28	5	62.0	4900
8.25			Hold	Lab				
	8.25 8.25 8.25	Weight Diameter on (lbs) (in) 8.25 4.01 8.25 4.01 8.25 4.01	Weight Diameter Sectional (lbs) (in) Area(In) ² 8.25 4.01 12.66 8.25 4.01 12.64 8.25 4.01 12.66	Weight Diameter Sectional Date Of Test 8.25	Weight Diameter Sectional Date Of (lbs) (in) Area(In) ² Test Cure Type 8.25 4.01 12.66 9/21/2016 Lab 8.25 4.01 12.64 10/12/2016 Lab 8.25 4.01 12.66 10/12/2016 Lab	Weight on Diameter (lbs) Sectional (in) Date Of Area(In)² Age Cure Type (days) 8.25 4.01 12.66 9/21/2016 Lab 7 8.25 4.01 12.64 10/12/2016 Lab 28 8.25 4.01 12.66 10/12/2016 Lab 28	Weight On (lbs) Diameter Sectional (lbs) Date Of (lbs) Test Cure Type Cure Type Recture Type	Weight Oiameter Sectional Date Of (lbs) (in) Area(In) ² Test Cure Type (days) Type (kips) 8.25 4.01 12.66 9/21/2016 Lab 7 3 47.0 8.25 4.01 12.64 10/12/2016 Lab 28 5 58.4 8.25 4.01 12.66 10/12/2016 Lab 28 5 62.0

Cone both ends



end w/ split



Diagonal



or bottom



Pointed End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

University of New England

Concrete

Supplier: HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

Contractor:

Client:

General

9/19/2016

Time Cast: 10:50

Date Received:

Placement Location: FLOOR SLAB: BEDROOM AND CORRIDOR 117, ELEVATOR PIT

Placement Method:

PUMP

Cylinders Made By:

JOSHUA MOORE

Placement Vol. (yd3): 44

Aggregate Size (in):

DELIVERY INFORMATION

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F)

Maximum (°F)

TEST RESULTS

Slump (in) (C-143):

Slump WR:

6

Load Number: 1

Admixtures:

Batch

Air Content (%) (C-231)

Air WR:

Mixer Number: 324

10:00

Air Temp (°F):

1.7

Ticket Number 3553

Arrive

75

Cubic Yards:

10:27

Conc. Temp (°F) (C-1064):

77

Design (psi):

Depart

4000

11

MRWR

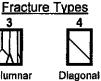
Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
839-3A	8.45	4.00	12.59	9/26/2016	Lab	7	5	54.2	4310
839-3B	8.50	4.01	12.61	10/17/2016	Lab	28	4	72.4	5740
839-3C	8.45	4.01	12.63	10/17/2016	Lab	28	4	71.4	5650
839-3D	8.40			11/14/2016	Lab	56			



Cone both



Columnar



Side at top

or bottom

Pointed End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

Concrete

General Contractor:

Supplier: HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

9/22/2016

Time Cast: 12:40

Date Received:

Placement Location: INTERIOR PIER FOOTINGS ELEVATOR PIT

Placement Method:

PUMP

Cylinders Made By:

NATHANIEL MCARTHUR

Placement Vol. (yd³): 26

Aggregate Size (in):

INITIAL CURING CONDITIONS

Temperatures

Maximum (°F)

DELIVERY INFORMATION

Admixtures: **MRWR**

MASTER SET

Minimum (°F)

TEST RESULTS Slump (in) (C-143):

Slump WR:

5.0

Load Number: 1

Batch

Air Content (%) (C-231)

Air WR:

Mixer Number: 327

5.8

11:56

Air Temp (°F):

70

Ticket Number 3599

Arrive 12:15

Conc. Temp (°F) (C-1064):

75

Cubic Yards:

Design (psi):

Depart

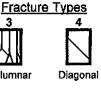
Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
							_		
839-4A	8.20	4.01	12.61	9/29/2016	Lab	7	4	38.2	3030
839-4B	8.10	4.01	12.65	10/20/2016	Lab	28	5	59.2	4680
839-4C	8.15	4.01	12.65	10/20/2016	Lab	28	4	59.0	4670
839-4D	8.05			Hold	Lab				



Cone both ends

Cone one end w/ split

Columnar







Pointed End

3000



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

Concrete

Supplier:

HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

Contractor:

General

9/27/2016

Time Cast: 2:50

Date Received:

Placement Location: PRE FUNCTION PIERS

Placement Method:

PUMP

Cylinders Made By:

NATHANIEL MCARTHUR

Placement Vol. (yd³): 30

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Admixtures:

DELIVERY INFORMATION MRWR

AIR

Minimum (°F)

Maximum (°F)

TEST RESULTS

Slump (in) (C-143):

Slump WR:

5

Load Number: 2

Batch

Air Content (%) (C-231)

Air WR:

5.0

Mixer Number: 327

12:58

Air Temp (°F):

60

Ticket Number 3650

Arrive 1:25

Conc. Temp (°F) (C-1064):

74

Cubic Yards: 10

Depart

Design (psi):

3000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
839-5A	8.15	4.01	12.62	10/4/2016	Lab	7	5	37.2	2950
839-5B	8.15			10/25/2016	Lab	28	•		
839-5C	8.15			10/25/2016	Lab	28			
839-5D	8.15			Hold	Lab				



Cone both ends



Fracture Types Columnar







Pointed End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

General

Contractor:

Concrete

Supplier: HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

10/7/2016

Time Cast: 7:35

Date Received:

Placement Location: SLAB ON DECK CLASSROOMS

Placement Method:

PUMP

Cylinders Made By:

CHARLES CROMWELL

Placement Vol. (yd³): 100

DELIVERY INFORMATION

Aggregate Size (in):

INITIAL CURING CONDITIONS

Temperatures

Admixtures:

LIGHT WEIGHT

MIDRANGE

Minimum (°F)

Maximum (°F)

TEST RESULTS

Slump (in) (C-143):

Slump WR:

6.5

Load Number: 7

Batch

Air Content (%) (C-231)

Air WR: 7.5

6:24

Mixer Number: 312

Air Temp (°F):

55

Ticket Number 3763

Arrive 7:00

Conc. Temp (°F) (C-1064):

66

Cubic Yards: 10

Depart

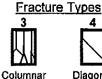
Design (psi):

4000

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
						•			
839-6A	7.10	4.01	12.64	10/14/2016	Lab	7	4	33.2	2630
839-6B	7.00	4.01	12.63	11/4/2016	Lab	28	5	55.0	4350
839-6C	7.00	4.00	12.58	11/4/2016	Lab	28	5	59.4	4720
839-6D	7.05			Hold	Lab				
839-6E				Hold	Lab				
839-6F				Hold	Lab				



Cone one end w/ split



Diagonal





Remarks: 6E & 6F = Dry Unit Weight 106.8pcf



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

General

Concrete

Supplier:

HISSONG READY MIX

2% MASTERSET FP GLENIUM

Load

(kips)

54.0

PLACEMENT INFORMATION

Date Cast:

Contractor:

10/12/2016

Time Cast: 7:15

Date Received:

Placement Location: SLAB ON GRADE PRE FUNCTION HALL

Placement Method:

PUMP TRUCK

Cylinders Made By:

NORRIS NADEAU

Placement Vol. (yd3): 100

Aggregate Size (in):

DELIVERY INFORMATION

INITIAL CURING CONDITIONS

Temperatures

Maximum (°F)

TEST RESULTS

Minimum (°F)

Slump (in) (C-143):

Slump WR:

6 1/4

Load Number: 1

Batch

Air Content (%) (C-231)

Conc. Temp (°F) (C-1064):

Cylinder

Air WR:

2.0

Date Of

Mixer Number: 329

6:40

Air Temp (°F):

Ticket Number 3823

Arrive

43 64

Cubic Yards:

Admixtures:

10 4000

Fracture

Type

4

7:00

Design (psi):

Age

Depart 7:15

Strength

(psi)

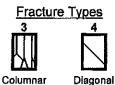
4290

Cylinder Cylinder Cross Weight Diameter Sectional

Designation		(ibs)	(IN)	Area(In) ²	Test	Cure Type	(days)	
	·							
	839-8A	8.60	4.01	12.60	10/19/2016	Lab	7	
	839-8B	8.60			11/9/2016	Lab	28	
	839-8C	8.60			11/9/2016	Lab	28	
	839-8D	8.60			Hold	Lab		

Cone both

Cone one ends end w/ split









End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number: Client Contract Number: 16-0953

Client: General University of New England

Concrete

Supplier: HISSONG CONCRETE

Contractor:

Date Cast:

PLACEMENT INFORMATION

10/17/2016

Time Cast: 1:15

Date Received:

10/18/2016

Placement Location: ENTRY WAY FOUNDATION AT S ELEVATION

Placement Method: Cylinders Made By:

TRUCK CHUTE

JOSHUA MOORE

Placement Vol. (yd3): 9

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

60

Minimum (°F)

Maximum (°F)

63

DELIVERY INFORMATION

MRWR

ΑE

TEST RESULTS

Slump (in) (C-143):

Slump WR:

6

Load Number: 1

Admixtures:

Batch

Air Content (%) (C-231)

Air WR: 6.2 Mixer Number: 329

12:40

Air Temp (°F):

Ticket Number 3906

Arrive

70

Cubic Yards:

12:54

Conc. Temp (°F) (C-1064):

70

Depart

Design (psi):

3000

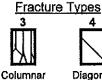
Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)	
839-10A	8.10	4.01	12.62	10/24/2016	Lab	7	4	35.0	2780	
839-10B	8.10	4.01	12.63	11/14/2016	Lab	28	5	52.0	4120	
839-10C	8.10	4.01	12.64	11/14/2016	Lab	28	4	53.6	4240	
839-10D	8.10			Hold	Lab					



Cone both ends



end w/ split



Diagonal



Side at top or bottom



Pointed End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

Project Number:

Client Contract Number:

16-0953

Client:

University of New England

General

Contractor:

Concrete

Supplier:

HISSONG CONCRETE

PLACEMENT INFORMATION

Date Cast:

10/21/2016

Time Cast: 7:20

Date Received:

Placement Location: SLAB ON GRADE DRILL HALL

Placement Method:

PUMP

Cylinders Made By:

CHARLES CROMWELL

Placement Vol. (yd3): 57

Aggregate Size (in):

DELIVERY INFORMATION

INITIAL CURING CONDITIONS

Temperatures

Maximum (°F)

Admixtures: **MIDRANGE**

2% MASTER SET

TEST RESULTS

Minimum (°F)

Slump (in) (C-143):

Slump WR:

7.0 2.0

Load Number: 1

Batch

Air Content (%) (C-231)

Air WR:

Mixer Number: 317

Air Temp (°F):

6:44

50

Ticket Number 3975

Arrive. 6:55

Conc. Temp (°F) (C-1064):

68

Cubic Yards: 10

Depart

Design (psl):

4000

7:20

 Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psi)
839-11A	8.50	4.00	12.56	10/28/2016	Lab	7	4	47.0	3740
839-11B	8.50	4.02	12.68	11/18/2016	Lab	28	4	71.4	5630
839-11C	8.50	4.00	12.57	11/18/2016	Lab	28	5	69.0	5490
839-11D	8.45			Hold	Lab				



Cone both ends



Columnar

Fracture Types Diagonal

Side at top

or bottom



End



ASTM C-31 & C-39

Project Name: Portland ME - Stevens Avenue Armory Renovation -

Construction Materials Testing Services

University of New England

General

Client:

Contractor:

Project Number:

16-0953

Client Contract Number:

Concrete

Supplier: HISSONG CONCRETE

PLACEMENT INFORMATION

INITIAL CURING CONDITIONS

Date Cast:

10/28/2016

Time Cast: 8:00

Date Received:

Placement Location: SLAB ON DECK PRE FUNCTION

Placement Method:

PUMP

Cylinders Made By:

CHARLES CROMWELL

Placement Vol. (yd³): 60

Aggregate Size (in):

DELIVERY INFORMATION

Temperatures

Minimum (°F)

Maximum (°F)

Admixtures: 2% MASTER SET

MIDRANGE

TEST RESULTS

Slump (in) (C-143):

Slump WR:

6

Load Number: 2

Batch

Air Content (%) (C-231)

Air WR:

7.0

Mixer Number: 317

7:12

Air Temp (°F):

Ticket Number 40.59

Arrive 7:35

Conc. Temp (°F) (C-1064):

48 58

Cubic Yards:

11

Depart

Design (psi):

4000

8:00

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In) ²	Date Of Test	Cure Type	Age (days)	Fracture Type	Load (kips)	Strength (psl)	
839-12A	7.00	3.99	12.52	11/4/2016	Lab	7	6	38.2	3050	
839-12B	7.05	3.99	12.53	11/28/2016	Lab	31	5	69.0	5510	
839-12C	7.00	3.99	12.52	11/28/2016	Lab	31	5	70.2	5610	
839-12D				Hold	Lab					
839-12E				Hold	Lab					
839-12F				Hold	Lab					



Cone both







end w/ split

or bottom

End

Remarks: DRY UNIT WEIGHT: 839-12E= 106.7pcf 839-12f= 107.8 pcf