

Project: *Salvation Army Dining Hall V2*
Date Prepared: **October 25, 2017**

Structural Statement of Special Inspections (Continued)

Final Report of Special Inspections (SSIC/SI 1)

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

Project: *Salvation Army Dining Hall Addition*
Location: *88 Preble St, Portland Me*
Owner: *Salvation Army Adult Rehab Command Center*
Owner's Address: *440 West Nyack Rd, West Nyak NY 10994*

Architect of Record: *Evan Carroll* *Bild Architecture*
(name) (firm)
Structural Registered Design
Professional in Responsible Charge: *Aaron C. Jones* *Structural Integrity*
(name) (firm)

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

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

Respectfully submitted,
Structural Special Inspection Coordinator

Aaron C. Jones, PE, SEBC
(Type or print name)

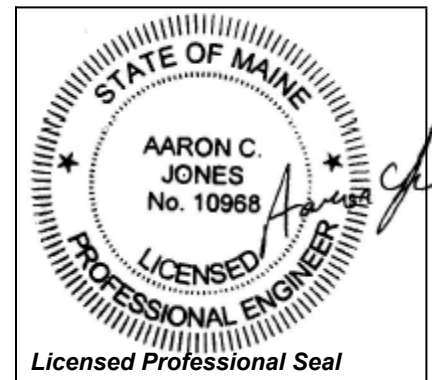
Structural Integrity Consulting Engineers, Inc.
(Firm Name)

Aaron C. Jones

Signature

10/25/2017

Date



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Salvation Army Dining Hall - Construction
 Materials Testing Services

Project Number: 17-0245

Client: The Salvation Army

Client Contract Number:
General Contractor:
Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 4/6/2017 **Time Cast:** 12:50 **Date Received:** 4/7/2017
Placement Location: Footings: H-line from 1-line to 7-line, A-line from 1-line to 2-line, 6-line from B-line to C-line
Placement Method: TRUCK CHUTE **Placement Vol. (yd³):** 20
Cylinders Made By: CHARLES CROMWELL **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 45 **Maximum (°F)** 72

DELIVERY INFORMATION

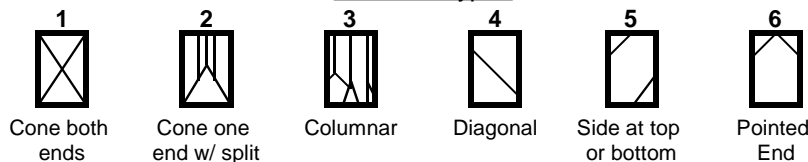
Admixtures: MASTERAIR, MASTERSET, MASTERGLENIUM

TEST RESULTS

Slump (in) (C-143):	Slump WR: 5 1/2	Load Number: 1	Batch
Air Content (%) (C-231)	Air WR: 6.5	Mixer Number: 98	11:38
Air Temp (°F): 36		Ticket Number: 315717	Arrive
Conc. Temp (°F) (C-1064): 58		Cubic Yards: 10	12:35
		Design (psi): 3000	Depart
			1:19

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)
910-1A	8.25	3.99	12.50	Hold	Lab	7	4	42.8	3420
910-1B	8.25	3.99	12.50	5/4/2017	Lab	28	4	52.6	4210
910-1C	8.25	4.01	12.63	5/4/2017	Lab	28	4	53.4	4230
910-1D	8.25			Hold	Lab				

Fracture Types




Remarks:

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Salvation Army Dining Hall - Construction
 Materials Testing Services

Project Number: 17-0245

Client: The Salvation Army

Client Contract Number:
General Contractor:
Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 4/13/2017 **Time Cast:** 3:10 **Date Received:** 4/14/2017

Placement Location: FOUNDATION WALLS

Placement Method: PUMP

Placement Vol. (yd³): 26

Cylinders Made By: PETER PHELAN

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) NT **Maximum (°F)** NT

DELIVERY INFORMATION

Admixtures: MRWR

TEST RESULTS

Slump (in) (C-143): 3 3/4

Load Number: 1 **Batch** 2:06

Air Content (%) (C-231) 5.0

Mixer Number: 148

Air Temp (°F): 54

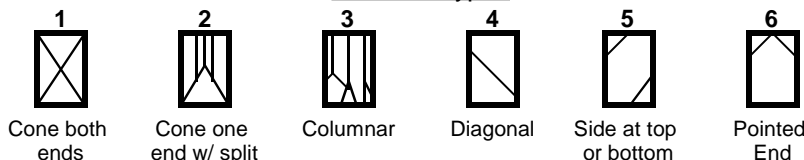
Ticket Number 3159 **Arrive** 2:50

Conc. Temp (°F) (C-1064): 71

Cubic Yards: 9 **Depart** 3:15
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)
910-2A	8.40	4.00	12.53	4/20/2017	Lab	7	4	58.6	4680
910-2B	8.35	4.00	12.57	5/11/2017	Lab	28	5	68.2	5430
910-2C	8.35	4.01	12.61	5/11/2017	Lab	28	4	68.0	5390
910-2D	8.30			Hold	Lab				

Fracture Types




Remarks:

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Salvation Army Dining Hall - Construction
 Materials Testing Services

Project Number: 17-0245

Client: The Salvation Army

Client Contract Number:
General Contractor:
Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 4/20/2017 **Time Cast:** 3:10 **Date Received:** 4/21/2017
Placement Location: WALL: 6-LINE FROM B TO D LINE AND D-LINE FROM 6 TO 7- LINE. FOOTINGS: C/3, C/4.2, F/3.7, E/3.7, E/4.5
Placement Method: PUMP **Placement Vol. (yd³):** 13
Cylinders Made By: CHARLES CROMWELL **Aggregate Size (in):** 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 50.7 **Maximum (°F)** 60.8

DELIVERY INFORMATION

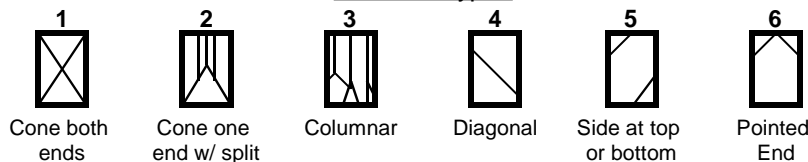
Admixtures: MASTER GLENIUM / AIR

TEST RESULTS

Slump (in) (C-143): 5 1/2	Load Number: 1	Batch
Air Content (%) (C-231) 6.0	Mixer Number: 155	2:19
Air Temp (°F): 52	Ticket Number 316118	Arrive
Conc. Temp (°F) (C-1064): 62	Cubic Yards: 6.5	2:50
	Design (psi): 4000	Depart
		3:10

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)
910-3A	8.30	4.00	12.53	4/27/2017	Lab	7	4	51.6	4120
910-3B	8.30	4.02	12.69	5/18/2017	Lab	28	5	63.0	4960
910-3C	8.30	4.01	12.64	5/18/2017	Lab	28	4	65.4	5170
910-3D	8.30			Hold	Lab				

Fracture Types




Remarks:

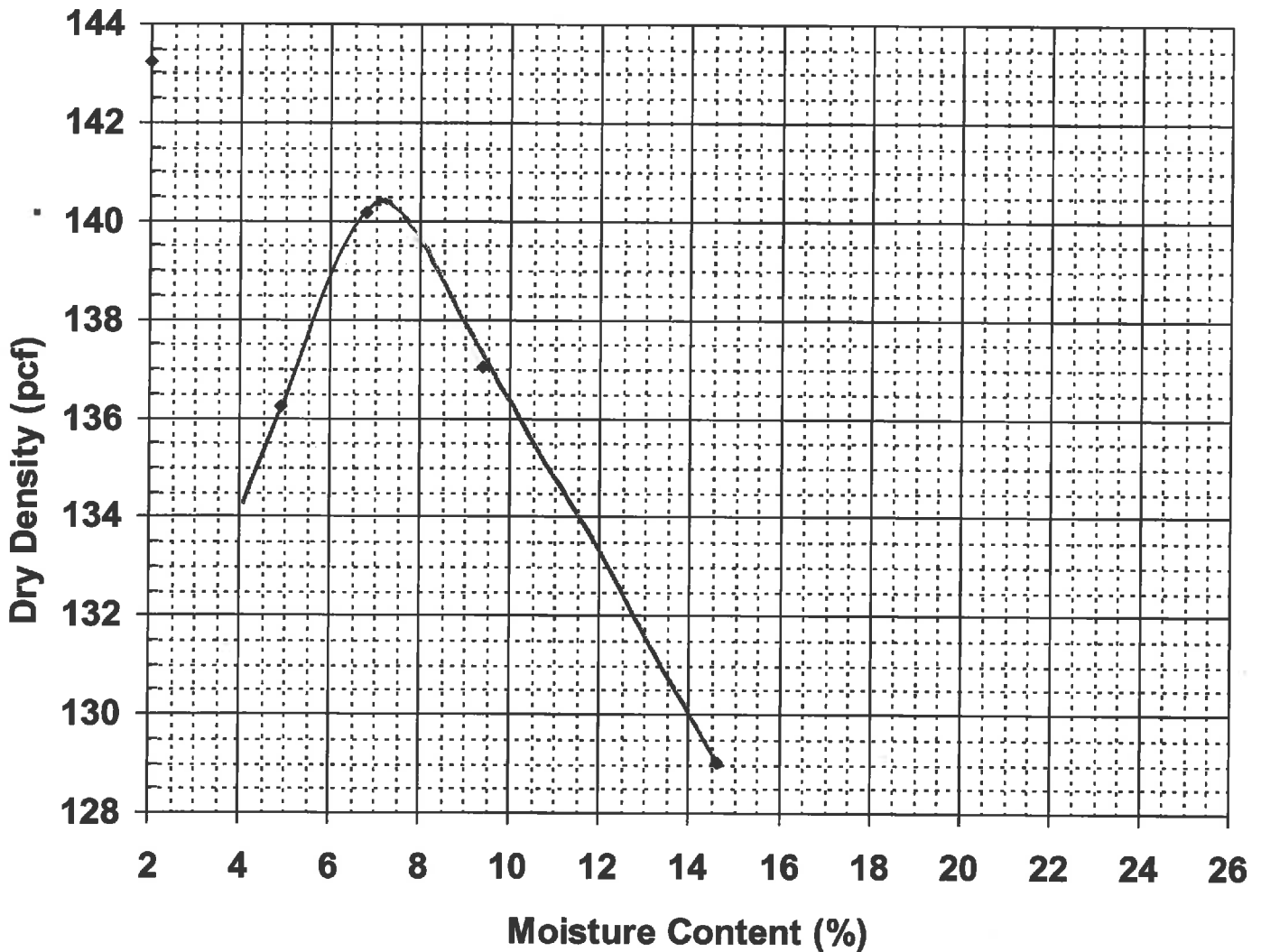
Report of Moisture-Density

Method ASTM D-1557 MODIFIED Procedure C

Project Name PORTLAND ME - SALVATION ARMY DINING HALL -
CONSTRUCTION MATERIALS TESTING SERVICES
Client THE SALVATION ARMY
Material Type GRAVEL
Material Source PIKE WESTBROOK

Project Number 17-0245
Lab ID 22202G
Date Received 4/19/2017
Date Completed 4/24/2017
Tested By PAUL SHAFFER

Moisture-Density Relationship Curve



Maximum Dry Density (pcf) 140.3
Optimum Moisture Content (%) 7
Percent Oversized 30.0%

Corrected Dry Density (pcf) **145**
Corrected Moisture Content (%) **5.5**

Roger E. Domingo

Comments

Roger E. Domingo



Concrete Construction Observation Report

Project Name/Location:	Salvation Army Dining Hall	Project No.:	17-0245
Client/Client's Rep.:	Salvation Army/Ronald Bernardi	Date:	4-28-17
Concrete Contractor:	Huff Concrete	Sheet:	1-1
Placement Location:	Walls: B/6- A/3	S.W.COLE Rep.:	A. Boyce
Weather:	Cloudy 60's	On Site:	1:00-2:45

<i>Pre Placement Observations</i>	In Compliance		N/O	Comments
Bar size and location (diameter, length, bend and coverage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Per Plan
Splicing (type, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Per Plan
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Wire
Reinforcement conditions (cleanliness, temperature etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Clean/ Ambient
Embedments and anchor bolts installed	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

Referenced Drawings	Date	Page(s)	Rev.	ASTM	GRADE
Bild Architecture- General Notes	10-25-16	S001		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Bild Architecture- Foundation Plan	10-25-16	S101		A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
Bild Architecture- Sections	10-25-16	S201		A 617 <input type="checkbox"/>	
Bild Architecture- Sections	10-25-16	S202		A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

<i>Concrete Placement Observations</i>	In Compliance		N/O	Comments
Required mix used	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	4000psi w/air
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Tailgate
Internal vibration / consolidation of concrete	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Mechanically
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Post placement observations (finishing, curing, etc.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	Not onsite

Field Testing of Concrete Performed	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Loads:	2	Yards:	12
*Cylinder Set Number: 910-4	←*refer to associated concrete test report					
Non-Conformance Items Observed (person notified)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>				

Notes:

SW Cole was onsite as scheduled for reinforcing observations and to perform field testing on concrete placed. Reinforcing appeared consistent with above referenced documents. Concrete field testing indicated mix was within project specifications.

Attachments: Photos Reviewed By:

The S.W.COLE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality control.





Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Salvation Army Dining Hall - Construction
 Materials Testing Services

Project Number: 17-0245

Client: The Salvation Army

Client Contract Number:
General Contractor:
Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 4/28/2017 **Time Cast:** 2:20 **Date Received:** 4/29/2017

Placement Location: B/6 - A/3 WALL

Placement Method: TRUCK CHUTE

Placement Vol. (yd³): 12

Cylinders Made By: AIDAN BOYCE

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

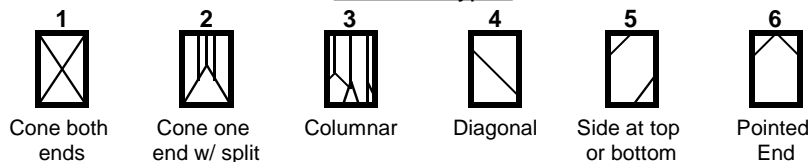
Admixtures: MASTERAIR AE200,
 MASTERGLENIUM

TEST RESULTS

Slump (in) (C-143):	Slump WR: 4	Load Number: 1	Batch
Air Content (%) (C-231)	Air WR: 6	Mixer Number: 83	1:22
Air Temp (°F): 62		Ticket Number: 212981	Arrive
Conc. Temp (°F) (C-1064): 66		Cubic Yards: 6	1:53
		Design (psi): 4000	Depart
			2:40

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)
910-4A	8.30	4.00	12.53	5/3/2017	Lab	5	5	46.8	3730
910-4B	8.30	4.01	12.60	5/5/2017	Lab	7	5	51.4	4080
910-4C	8.30			5/26/2017	Lab	28			
910-4D	8.30			5/26/2017	Lab	28			

Fracture Types




Remarks:



Concrete Construction Observation Report

Project Name/Location:	Salvation Army Dining Hall	Project No:	17-0245
Client/Client's Rep.:	Salvation Army/Ronald Bernardi	Date:	5-19-17
Concrete Contractor:	AP Concrete	Sheet:	1-1
Placement Location:	Floor Slab	S.W.COLE Rep.:	J. Moore
Weather:	Clear, 70's	On Site:	7:15am- 10:15am

Pre Placement Observations	In Compliance		N/O	Comments
Bar size and location (diameter, length, bend and coverage)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Per plan
Splicing (type, overlap)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	1 square
Stability (wiring, chairs, and spacers)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Chairs
Reinforcement conditions (cleanliness, temperature etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Clean/ Ambient
Embedments and anchor bolts installed	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	
Soil subgrade prepared in accordance with project specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	

Referenced Drawings	Date	Page(s)	Rev.	ASTM	GRADE
Bild Architecture- General Notes	10-25-16	S001		A 615 <input checked="" type="checkbox"/>	40 <input type="checkbox"/> 50 <input type="checkbox"/> 60 <input checked="" type="checkbox"/>
Bild Architecture- Foundation Plan	10-25-16	S101		A 616 <input type="checkbox"/>	75 <input type="checkbox"/>
Bild Architecture- Sections	10-25-16	S201		A 617 <input type="checkbox"/>	
Bild Architecture- Sections	10-25-16	S202		A 706 <input type="checkbox"/>	A 775 Epoxy <input type="checkbox"/>

Concrete Placement Observations	In Compliance		N/O	Comments
Required mix used	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	3500psi w/o air
Concrete properly conveyed to all areas of placement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Pump truck
Internal vibration / consolidation of concrete	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	Mechanical consolidation
Even layering around openings and embedments	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>	
Post placement observations (finishing, curing, etc.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input checked="" type="checkbox"/>	Not onsite

Field Testing of Concrete Performed Yes No Loads: 6 Yards: 60

*Cylinder Set Number: 910-5 ←*refer to associated concrete test report

Non-Conformance Items Observed (person notified) Yes No

Notes:

SW Cole was onsite as scheduled for reinforcing observations and to perform field testing on concrete placed. Reinforcement appeared to be consistent with above referenced project documents. The concrete supplied by Auburn contained a mid-range water reducer. One mid load sample was obtained from load 2 for field testing and compressive strength specimens. Testing indicated concrete being placed was in compliance and one set of four cylinders were cast. All results were reported verbally to the supervisor onsite from Benchmark Construction.

Attachments: Photos Reviewed By:

The S.W.COLE field representative is on-site at the request of our client to provide construction materials testing and to observe and document construction activities. The contractor has sole responsibility for schedule, site safety, methods, completeness and quality control.



Worker 1: A man wearing a white hard hat, sunglasses, a light blue t-shirt, and a high-visibility yellow safety vest. He is holding a tool or device in his hands and standing near a vertical steel column.

Worker 2: A man wearing a white hard hat, a white t-shirt, and light blue jeans. He is standing on the rebar grid, looking towards the camera.

FAMILY THRIFT STORE

WASTE

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Salvation Army Dining Hall - Construction
 Materials Testing Services

Project Number: 17-0245

Client: The Salvation Army

Client Contract Number:
General Contractor:
Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 5/19/2017 **Time Cast:** **Date Received:** 5/22/2017

Placement Location: SLAB

Placement Method: PUMP

Placement Vol. (yd³): 60

Cylinders Made By: JOSHUA MOORE

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) NT **Maximum (°F)** NT

DELIVERY INFORMATION

Admixtures: MRWR

TEST RESULTS

Slump (in) (C-143): 7 1/2

Load Number: 2

Batch
Air Content (%) (C-231) 8.4

Mixer Number: 94

6:38

Air Temp (°F):
Ticket Number 213591

Arrive

7:25

Conc. Temp (°F) (C-1064): 70

Cubic Yards: 10

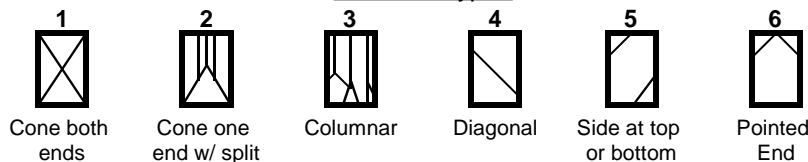
Depart

7:43

Design (psi): 3500

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)
910-5A	8.40	4.00	12.58	5/26/2017	Lab	7	5	47.2	3750
910-5B	8.40			6/16/2017	Lab	28			
910-5C	8.40			6/16/2017	Lab	28			
910-5D	8.40			Hold	Lab				

Fracture Types




Remarks:



Report of Field Density

ASTM D6938

Project: PORTLAND ME - SALVATION ARMY DINING HALL - CONSTRUCTION MATERIALS TESTING SERVICES Project Number: 17-0245

Client: THE SALVATION ARMY

Field Density Test Results

Test #	Test Date	Tech	Test Location	Elev Feet	Test Depth	Lab ID	Moisture		Compaction Percent	Required Compaction
							Dry Density	Content Percent		
13	5/2/2017	NM	A(+3') / 3	-2' TOW	12	22202G	139.1	4.0	95.9	95
14	5/2/2017	NM	A(+3') / 3 (+15')	-2' TOW	8	22202G	142.0	4.1	97.9	95
15	5/2/2017	NM	A(-3') / 3 (+19')	-10" TOW	8	22202G	139.2	4.2	96.0	95

Laboratory Compaction Test Reference

Lab ID	Date Received	Material Source	Material Type	Method	Max Dry Density PCF	Optimum Moisture Content (%)	Comments
22202G	4/19/2017	Pike Westbrook	Gravel	ASTM D-1557 Modified C	145.0	5.5	

Elevation Notes:

TOW - TOP OF WALL

Comments:

Reviewed By

Client: S.W. Cole Engineering, Inc.**Project:** Salvation Army ARC**Date:** June 12, 2017**Project #:** 17-0245**Subject:** Site Inspection of Structural Steel**Report:** 001

We visited the site on this date as requested to perform structural steel inspections on the Salvation Army ARC project located at 88 Preble St. in Portland, NH. Upon arrival we met with the project superintendent who provided us with structural drawings and Precision Welding & Fabrication drawings which were used to perform our inspections. Our actions and observations were as follows:

- Welder certifications were provided for welding personnel. Personnel were properly certified to weld in the processes and positions being used on this project.
- Framing was inspected for conformance to drawings and details.
- Columns around the perimeter were inspected for proper bearing and properly tightened anchor rod nuts. All column base plates at the interior were poured in the concrete slab at the time of this inspection.
- Bolted connections were inspected for proper size, grade and installation of bolts.
- Welding of the HSS brace frames was visually inspected.
- Welding of all HSS girder connections was visually inspected.
- The HSS moment connection on the Low Roof framing at F/1 was visually inspected (Ultrasonic testing was not performed as the wall thickness on the HSS member was too thin to effectively test).
- Welding and bearing of roof joists and joist bridging were inspected.
- Layout, welding and fastening of the roof deck were inspected.
- Welding of the Kicker angles at the Roof framing was inspected.
- Welding of the galvanized MC at the canopy was visually inspected.

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

The project superintendent was notified of our findings.

Inspector; Michael Bump
CWI #07091231