

SRG ENGINEERING, INC.

CONSULTING STRUCTURAL ENGINEERS

TRANSMITTAL SHEET

TO:	Mr. Mike Nugent	FROM:	Steven Grant, P.E.
COMPANY:	City of Portland, Code Enforcement	DATE:	4/11/2005
MAIL/STREET:	389 Congress Street	WE ARE SENDING YOU:	Statement of Final Inspection, Field, Lab, and Test Reports by SWC/SRG.
TOWN, STATE, ZIP:	Portland, ME 04101	SENDER'S REFERENCE NUMBER:	04-107
RE:	Motion Industries Addition	METHOD OF SHIPMENT:	1 st class US mail

FOR YOUR USE AS REQUESTED FOR REVIEW/COMMENT PLEASE RESUBMIT

NOTES/COMMENTS:

Hi Mike,

Here are the reports for the above mentioned project. Please call if you have any questions.

Best wishes.

Sincerely,



Steven R. Grant, President

Encs.

Cc: Dennis Waters at PATCO on April 11, 2005 via 1st class US Mail.

255A/6

S E A M

Structural Engineering Association of Maine

FINAL REPORT OF SPECIAL INSPECTIONS

PROJECT: MOTION INDUSTRIES ADDITION
 LOCATION: 190 RAND COM, PORTLAND
 PERMIT APPLICANT: PATCO CONSTRUCTION, INC
 APPLICANT'S ADDRESS: 1293 MAN ST
SANFORD, ME 04073
 STRUCTURAL ENGINEER OF RECORD: STEVEN R. GRANT SRG ENGINEERING, INC.
 Name P.O. Box 925
 ARCHITECT OF RECORD: JOHN EINSEIDLER, R.A. SAME GRANT ME 04039
 Name Firm
 GENERAL CONTRACTOR: PATCO CONSTRUCTION, INC

To the best of my information, knowledge, and belief, the Special Inspections required for this project, and described in the Statement of Special Inspections submitted for the project, have been completed.

The following discrepancies that were outstanding since the last interim report, No. ___ dated _____, have been corrected:

(Use additional sheets, if necessary)

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

Submitted By:
SPECIAL INSPECTOR

STEVEN R. GRANT

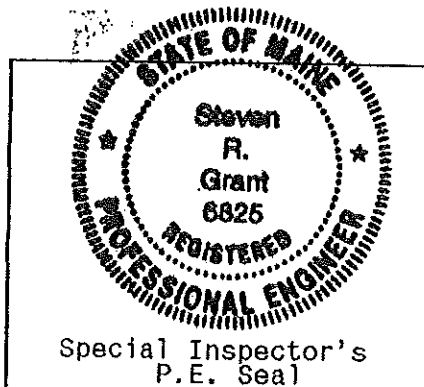
NAME

[Signature]

SIGNATURE

4-11-05

DATE



FIELD REPORT #2

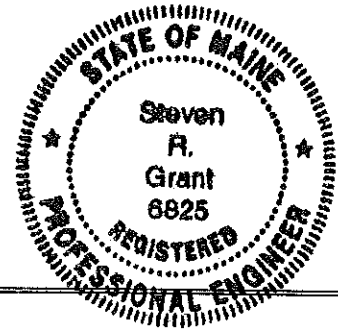
SRG Engineering, Inc.
P. O. Box 925
Gray, ME 04039-0925
Tel:(207)-657-7323 Fax:(207)-657-7342

Project No.:04-107 Date: December 21, 2004
Project Name: Motion Industries Addition
Project Location: Portland, Maine
Weather Conditions: Overcast, 30's
Contact Person(s): Steven Grant-SRG Eng.
 Tom Landry-PATCO

Discussion/Observations:

Observations are as follows:

1. Reinforcing at the interior piers on grid line 2 was in place. Footings were cast the day before.
2. Blankets were in place over the grid line 2 interior footings and pier reinforcement.
3. Pier concrete is to be placed within the next day.
4. All other foundations and footings are in place.



Diagrams:

Copies To: *File*

Signed: *[Signature]*

04-107

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition

Project No.: 04-0841

Client: SRG Engineering, Inc.

Client's Rep.: Steve Grant

Date: December 8, 2004

Weather: cloudy with flurries

Work in Progress: placement of footing between G/3 and C/1

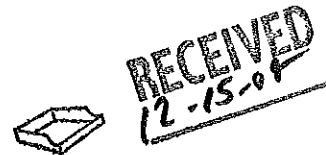
Work Performed by SWC Rep.: concrete and rebar inspections; and digital photos of concrete placement

General Observations, Discussions, Etc: This S.W. Cole rep arrived onsite and met with Patco Construction rep Tom Doyle and reviewed the shop drawings for the foundation written up by Harmac Rebar. Following reviewing the shop drawings a rebar inspection was done on the footing between foundation lines G/3 to C/1, the findings were:

- Correct size rebar used
- Number and spacing of bars correct
- Reinforcing steel splices adequate
- Vertical dowels at column locations C, D, & E on 1line as well as vertical dowels between column lines were wet stuck following concrete placement
- Concrete coverage around rebar was adequate

Findings of the concrete inspection were as follows:

- Concrete slump: 3.75"
- Concrete air entrainment: 7.8%
- Concrete and ambient temperatures during placement: 52 & 36 degrees Fahrenheit



Tom Doyle was informed of all field results and that there is no specified slump or air entrainment specification according to the structural documents as written by SRG Engineering. The concrete placement is to be covered with insulation blankets following insertion of vertical dowels. The concrete specimens were left in an insulated cure-box filled with 70 +/- degree water.

On Site: 10:35am to 12:30pm

SWC Rep.: David CoWallis, Jr

GRAY, ME OFFICE

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#04-107

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DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition

Project No.: 04-0841

Client: SRG Engineering, Inc.

Client's Rep.: Steve Grant

Date: December 7, 2004

Weather: cloudy with flurries

Work in Progress: forming 100' of footing

Work Performed by SWC Rep.: observations of sub-grade and construction in progress; and digital photos

General Observations, Discussions, Etc: This S.W. Cole rep was informed upon arrival by the concrete foreman that the concrete placement scheduled for today was canceled, reason for cancellation was due to the concrete supplier unable to deliver concrete today. The concrete crew was forming and tying rebar for approximately 100' of footing. The sub-grade was snow dusted, it was observed that the footing line native sub-grade was over excavated and approximately 10 to 12" of 1 1/2" crushed stone was placed on the native soils. It was unable to be visually determined whether the excavation was done with a smooth or tooth edge bucket; the equipment was not onsite. The concrete placement is to be rescheduled for tomorrow at which time a rebar inspection and concrete inspection will be conducted. Patco Construction rep was not onsite during time of site visit.

RECEIVED
12/15/04

On Site: 8:40am to 9:10am

SWC Rep.: David CoWallis, Jr

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04-107

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition
 Client: SRG Engineering
 Client Rep: Steve Grant
 General Contractor: Patco Construction

Project No.: 04-0841
 Date: December 10, 2004
 Temp. Range: 30's
 Weather: cloudy w/ light precipitation

Work Performed By SWC Rep:

Sub-Grade Obs.	<input checked="" type="checkbox"/>	Rebar Insp.	<input checked="" type="checkbox"/>	Concrete Tests	<input checked="" type="checkbox"/>
Soil Tests	<input type="checkbox"/>	General Obs.	<input checked="" type="checkbox"/>	Digital Photos	<input checked="" type="checkbox"/>

General Observations, Discussions, Etc.: This representative arrived onsite as Gorham Sand & Gravel was completing placement of the 12 to 14" lift of 1 1/4" crushed stone on the excavated native soil sub-grade. The excavation of the footing sub-grade between building lines C/1 to A/3 and was done so using a smooth edged bucket, none of the excavated sub-grade was exposed upon arrival. Some of the excavated material was loaded up and hauled off site.

S.W. Cole rep inspected the formwork and reinforcing steel in the portion of the addition foundation scheduled to be placed today; footing between C/1 to A/3. The reinforcing steel was inspected and found to meet the intent of the structural drawings from SRG Engineering and the rebar shop drawings from Harmac Rebar. The reinforcing steel was found to be installed as follows:

- Size of bar specified and lap splices were acceptable
- Concrete coverage around rebar was acceptable
- Location and spacing of the bars per drawings
- Vertical #4 wall dowels and #8 vertical pier dowels were wet stuck after the concrete was placed

The concrete placement consisted of 6cy of 3000psi concrete with 3/4" aggregate and hot water added. This representative tested the load with regards to concrete temp, slump and air entrainment, the results are as follows:

- Concrete slump was 3.75"
- Concrete air entrainment was 6.8%
- Concrete temp was 60 degrees Fahrenheit

The concrete was found to meet the intent of the requirements specified on this project structural documents supplied by SRG Engineering. The concrete specimens were left in an insulated cure-box with 70+/- degree water. Insulating blankets were to be applied following completion of insertion of rebar into the footing. The forms from the wall placement yesterday were stripped and the wall was left exposed.

Recommendations to Contractor/Owner's Rep.:

Arrived at: 12:39pm
 Departed at: 2:25pm

SWC Rep: David A CoWallis Jr.
 SWC Eng.:

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#04-107

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition

Project No.: 04-0841

Client: SRG Engineering, Inc.

Client's Rep.: Steve Grant

Date: December 9, 2004

Weather: m. cloudy 40's

Work In Progress: forming and placement of foundation wall

Work Performed by SWC Rep.: concrete and rebar inspections, and digital photos

General Observations, Discussions, Etc: This representative arrived and inspected the formwork and reinforcing steel in-place from building line G/3 to approximately 3' E of C/1 (assuming that 1 line runs east to west). The reinforcing steel was inspected and findings are as follows:

- Correct size rebar used
- Number and spacing of bars correct
- Reinforcing steel splices adequate
- #4 vertical dowels specified at a 48" OC spacing were wet stuck following concrete placement
- Concrete coverage around rebar was adequate
- ✓ The #5 horizontal bars were found to be placed at an elevation approx. middle of the wall, this was corrected by the concrete contractor and were placed in the top 4 to 6" of the wall

Findings of the concrete inspection were as follows:

- Concrete slump: 4.0
- ✓ Concrete air entrainment: 7.2%
- Concrete and ambient temperatures during placement: 68 & 40 degrees Fahrenheit
- Two loads were delivered totaling 11cy, both loads slumps were less than 4"

It was discussed with Patco's superintendent that the reinforcing detail was not the norm with the wall #4 vertical dowels designed for a 48" OC spacing and the footing #4 vertical dowels designed with an 18" spacing, thereby not creating a continuous bond with from the footer to the wall. The superintendent was also asked to schedule the next inspection site visit so that the native sub-grade could be inspected.

On Site: 1:22pm to 3:10pm

SWC Rep.: David CoWallis, Jr

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04-107



• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition
Client: SRG Engineering
Client Rep: Steve Grant
General Contractor: Patco Construction

Project No.: 04-0841
Date: December 10, 2004
Temp. Range: 30's
Weather: cloudy w/ light precipitation

Work Performed By SWC Rep:	Sub-Grade Obs.	<input checked="" type="checkbox"/>	Rebar Insp.	<input checked="" type="checkbox"/>	Concrete Tests	<input checked="" type="checkbox"/>
	Soil Tests	<input type="checkbox"/>	General Obs.	<input checked="" type="checkbox"/>	Digital Photos	<input checked="" type="checkbox"/>

General Observations, Discussions, Etc.: This representative arrived onsite as Gorham Sand & Gravel was completing placement of the 12 to 14" lift of 1 1/2" crushed stone on the excavated native soil sub-grade. The excavation of the footing sub-grade between building lines C/1 to A/3 and was done so using a smooth edged bucket, none of the excavated sub-grade was exposed upon arrival. Some of the excavated material was loaded up and hauled off site.

S.W. Cole rep inspected the formwork and reinforcing steel in the portion of the addition foundation scheduled to be placed today; footing between C/1 to A/3. The reinforcing steel was inspected and found to meet the intent of the structural drawings from SRG Engineering and the rebar shop drawings from Harmac Rebar. The reinforcing steel was found to be installed as follows:

- Size of bar specified and lap splices were acceptable
- Concrete coverage around rebar was acceptable
- Location and spacing of the bars per drawings
- Vertical #4 wall dowels and #8 vertical pier dowels were wet stuck after the concrete was placed

The concrete placement consisted of 6cy of 3000psi concrete with 3/4" aggregate and hot water added. This representative tested the load with regards to concrete temp, slump and air entrainment, the results are as follows:

- Concrete slump was 3.75"
- Concrete air entrainment was 6.8%
- Concrete temp was 60 degrees Fahrenheit

The concrete was found to meet the intent of the requirements specified on the project structural documents supplied by SRG Engineering. The concrete specimens were left in an insulated cure-box with 70+/- degree water. Insulating blankets were to be applied following completion of insertion of rebar into the footing. The forms from the wall placement yesterday were stripped and the wall was left exposed.

Recommendations to Contractor/Owner's Rep.:

Arrived at: 12:39pm
Departed at: 2:25pm

SWC Rep: David A CoWallis Jr.
SWC Eng.:

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04-107



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DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition
Client: ~~SRG Engineering~~
Client Rep: Steve Grant
General Contractor: Patco Construction

Project No.: 04-0841
Date: December 13, 2004
Temp. Range: 40
Weather: m. cloudy

Work Performed By SWC Rep:	Sub-Grade Obs. <input type="checkbox"/>	Rebar Insp. <input type="checkbox"/>	<input checked="" type="checkbox"/> Concrete Tests	<input checked="" type="checkbox"/>
	Soil Tests <input type="checkbox"/>	General Obs. <input type="checkbox"/>	<input type="checkbox"/> Digital Photos	<input checked="" type="checkbox"/>

General Observations, Discussions, Etc.: This representative arrived onsite as scheduled for a rebar and concrete inspection of the wall section between 3' E of building line C/1 and A/3. Upon arrival the concrete crew was completing formwork and installation of reinforcing steel. Following completion of formwork and reinforcing the findings are as follows:

- The horizontal #4 bars were installed appropriately including corner bars at A/1
- The spacing of the footing vertical dowels were at 16 to 18" OC
- The required size and number of reinforcing bars were per Harmac shop drawings
- The concrete coverage around the reinforcing bars was found to be acceptable
- The #5 horizontal bars and the #4 vertical bars required to be installed at 48"OC were wet stuck following concrete placement
- The #4 U-bar in pier A/3 was drilled and secured with epoxy as required

This representative inspected the 6.5cy of 3000psi concrete delivered by F. R. Carroll for the wall placement and determined the following:

- Concrete slump was 5.75"
- Concrete air entrainment was 5.8%
- Concrete temp was 63 degrees Fahrenheit

The concrete was internally vibrated following the same placement procedure that was done on the wall placement that occurred on 12/9/04. The concrete specimens were left inside the existing Motion Industries building and the placement was to be covered with insulating blankets following finishing top of the wall. According to a discussion with Patco rep the wall will be stripped tomorrow and a rap will be built over today's placement to gain access into the addition for backfilling to be done by Gorham Sand & Gravel and placement of the footings for the columns along three line.

Recommendations to Contractor/Owner's Rep.:

Arrived at: 12:31pm
Departed at: 2:10pm

SWC Rep: David A CoWallis Jr.
SWC Eng.:

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#04-107

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition

Project No.: 04-0841

Client: SRG Engineering, Inc.

Client's Rep.: Steve Grant

Date: December 9, 2004

Weather: m. cloudy 40's

Work in Progress: forming and placement of foundation wall

Work Performed by SWC Rep.: concrete and rebar inspections, and digital photos

General Observations, Discussions, Etc: This representative arrived and inspected the formwork and reinforcing steel in-place from building line G/3 to approximately 3' E of C/1 (assuming that 1 line runs east to west). The reinforcing steel was inspected and findings are as follows:

- Correct size rebar used
- Number and spacing of bars correct
- Reinforcing steel splices adequate
- #4 vertical dowels specified at a 48' OC spacing were wet stuck following concrete placement
- Concrete coverage around rebar was adequate
- The #5 horizontal bars were found to be placed at an elevation approx. middle of the wall, this was corrected by the concrete contractor and were placed in the top 4 to 6" of the wall

Findings of the concrete inspection were as follows:

- Concrete slump: 4.0
- Concrete air entrainment: 7.2%
- Concrete and ambient temperatures during placement: 68 & 40 degrees Fahrenheit
- Two loads were delivered totaling 11cy, both loads slumps were less than 4"

It was discussed with Patco's superintendent that the reinforcing detail was not the norm with the wall #4 vertical dowels designed for a 48" OC spacing and the footing #4 vertical dowels designed with an 18" spacing, thereby not creating a continuous bond with from the footer to the wall. The superintendent was also asked to schedule the next inspection site visit so that the native sub-grade could be inspected.

On Site: 1:22pm to 3:10pm

SWC Rep.: David CoWallis, Jr

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04-107



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DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition
Client: SRG Engineering
Client Rep: Steve Grant
General Contractor: Patco Construction

Project No.: 04-0841
Date: December 21, 2004
Temp. Range: 20's
Weather: sunny

Work Performed By SWC Rep: Sub-Grade Obs. Rebar Insp. Concrete Tests
Soil Tests General Obs. Digital Photos

General Observations, Discussions, Etc.:

This S. W. Cole rep arrived this morning for the scheduled 9 o'clock concrete placement, and was informed by Patco representative that the placement was pushed back to between 12 and 2pm due to concrete supply and cold ambient temperature.

This representative arrived onsite for the 12pm concrete for the rescheduled concrete placement and conducted an inspection of the rebar in the column footings at C, D, and E on 2 line. The reinforcing was installed per Harmac shop drawings with respect to size and number of reinforcing bars, spacing and concrete coverage met the intent of the design. The subgrade beneath the placement locations was free of solid frost.

F.R. Carroll delivered 6cy of 3000psi concrete with 2%Pozzutec (accelerating additive) as ordered by Patco Construction. Per discussion with Tom Doyle, Patco Construction permission had been given by Steve Grant to use accelerant additives but not Calcium Chloride. The concrete was inspected and found to have the following field properties: 2" slump, 2% air entrainment, and 60 degrees Fahrenheit. One set of four concrete specimens were cast from the placement and left in an insulated cure-box with 70+/- degree water. The concrete placement was covered with insulated blankets. The column pedestals placement is scheduled for tomorrow mid-day.

Recommendations to Contractor/Owner's Rep.:

This representative discussed with Tom Doyle of Patco Construction that a soil sample would be needed of the backfill material used to backfill the foundation inside and out for lab analysis, determination of grain size and moisture-density proctor. The fact that the foundation had been backfilled prior to this date and no compaction testing had been done was also discussed. Gorham Sand &Gravel is scheduled to return to the site and rework the building soils and backfill column piers placed tomorrow.

Arrived at: 8:15am/11:37am
Departed at: 8:28am/12:53pm

SWC Rep: David A CoWallis Jr.
SWC Eng.:

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RECEIVED
1-3-02

04-107

DAILY CONSTRUCTION REPORT

Project: Motion Industries Addition
Client: SRG Engineering
Client Rep: Steve Grant
General Contractor: Patco Construction

Project No.: 04-0841
Date: December 22, 2004
Temp. Range: 30's
Weather: m. cloudy

Work Performed By SWC Rep:	Sub-Grade Obs. <input type="checkbox"/>	Rebar Insp. <input type="checkbox"/>	<input checked="" type="checkbox"/> Concrete Tests	<input checked="" type="checkbox"/>
	Soil Tests <input type="checkbox"/>	General Obs. <input type="checkbox"/>	<input type="checkbox"/> Digital Photos	<input checked="" type="checkbox"/>

General Observations, Discussions, Etc.:

This representative arrived onsite for a 2:30pm concrete placement, location of which was the column piers on 2 line at C, D, and E lines. Prior to the placement of the 1.5cy of concrete delivered by F. R. Carroll an inspection of the rebar and formwork was done. The concrete contractor installed the appropriate rebar that was specified on the Harmac shop drawings and project documents. The reinforcing was inspected and found to meet the intent of the project documents with respect to number and size of bars, spacing and concrete coverage around the bars. The #6 hair-pin bars were installed into the pier concrete as specified.

The concrete delivered by F. R. Carroll consisted of 1.5cy of 3000psi concrete that was batched with hot water and 2% Pozz 20 (accelerating agent). The concrete was tested mid load and found to have a slump of 5.5", 2.6% air entrainment and a mix temperature of 67 degrees Fahrenheit. Tom Doyle was informed of the field test results. The concrete sample specimens were left in an insulated cure-box with 70 +/- degree water.

Recommendations to Contractor/Owner's Rep: The topic of the interior soil becoming frozen and it needing to be thawed and verified of such was discussed with Tom Doyle again. The intent is to close the building in and heat it prior to placement of the interior slab. A soil sample of the backfill material used and compaction testing of the material in-place is still necessary.

Arrived at: 2:26pm
Departed at: 3:15pm

SWC Rep: David A CoWallis Jr.

SWC Eng.:

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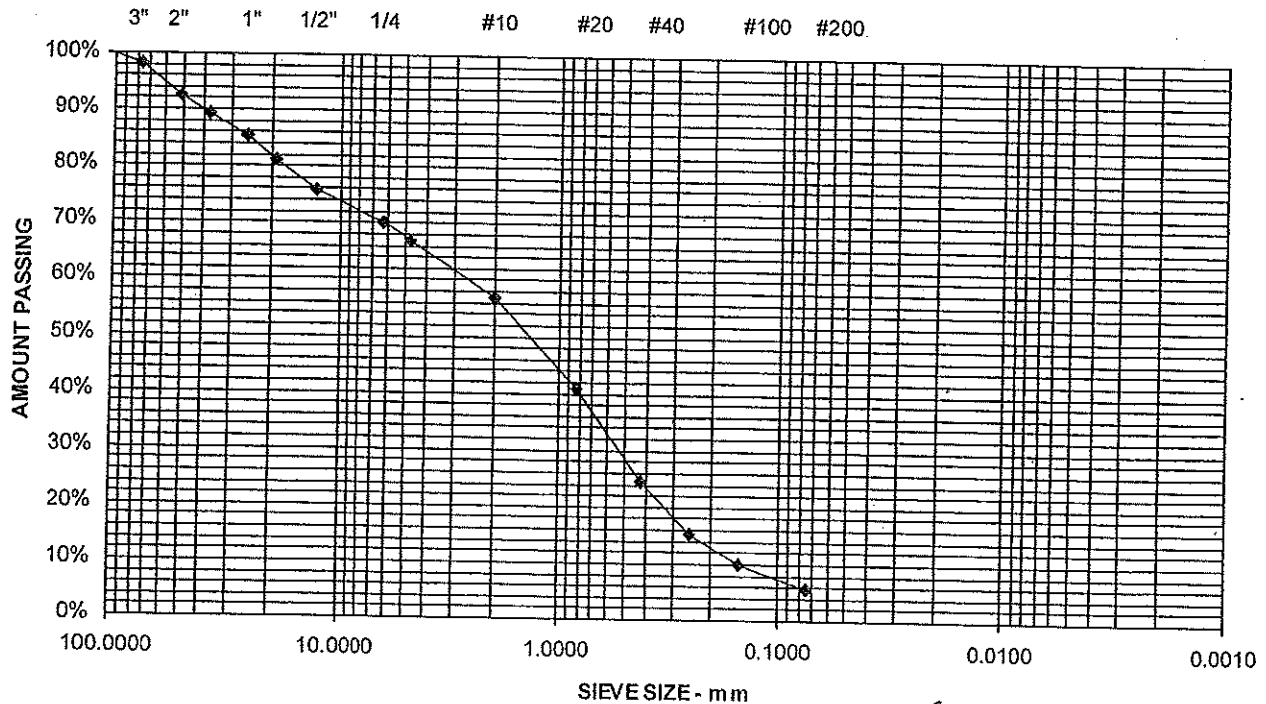
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04-107

Project Name PORTLAND - MOTION INDUSTRIES ADDITIION - PINE TREE
INDUSTRIAL PARK - MATERIALS TESTING
Client SRG ENGINEERING
Material Type CRUSHED GRAVEL
Material Source INPLACE/ FD TESTS #1&3

Project Number 04-0841
Lab ID 3192G
Date Received 3/16/2005
Date Complete 3/17/2005
Tested By KATIE GUSTAFSON

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	<u>SPECIFICATIONS (%)</u>
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	98	
50 mm	2"	93	
38.1 mm	1-1/2"	89	
25.0 mm	1"	85	
19.0 mm	3/4"	81	
12.5 mm	1/2"	76	
6.3 mm	1/4"	70	
4.75 mm	No. 4	67	
2.00 mm	No. 10	57	
850 um	No. 20	41	
425 um	No. 40	25	
250 um	No. 60	15	
150 um	No. 100	10	
75 um	No. 200	5.6	



Comments

R. E. Domingo
Roger E. Domingo



PATCO
CONSTRUCTION, INC.

~~04-107~~
#04-107

FAX TRANSMITTAL

TO: *JASON*
SRG ENGINEERING – Steve Grant

FR: ~~Jason Gardner~~ *SRG*

DATE: 12-21-04

TOTAL # OF PAGES: 2 ✓
(Including Cover Sheet)

FAX #: 657-7342

MESSAGE:

Per your recommendation, the 3000p.s.i. concrete mix design shall be used for the foundation walls & footings. The 3500p.s.i. concrete mix design shall be used for the slab on both of the following jobs:

Job # 2677 – Motion Industries

Job # 2663 – Big Moose Harley

Please feel free to contact us if you have any questions. Thank you.

SHOP DRAWING / SUBMITTAL REVIEW			
Engineer's Review		Contractor's Response	
No exceptions taken <input checked="" type="checkbox"/>	Rejected <input type="checkbox"/>	Confirm <input type="checkbox"/>	
Note markings <input type="checkbox"/>	Comments Attached <input type="checkbox"/>	Resubmit <input type="checkbox"/>	
<p>Engineer's review is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project's plans and specifications, nor departures therefrom. The contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.</p>			
SRG Engineering, Inc.		Date Received <i>12/21/04</i>	
By <i>2</i>		Date Reviewed <i>2/2/04</i>	

04-107

F. R. Carroll, Inc.
P. O. Box 9
Limerick, Me. 04048

207-793-2742
207-793-8753

November 16, 2004

Patco Const.
Sanford, Me.

Attn: Ron

Re: Concrete Mix Design

3000 psi.- 3/4"

Stone 3/4"	1750 Lbs.
Sand	1450 Lbs.
Cement	517 Lbs.
Water	32.7 Gal.
Pollyheed 997	4.0 Oz.
Microair	2.0 Oz.
Water Cement Ratio	.52

MOTION INDUSTRIES

THIS IS OK FOR FOOTINGS AND WALLS. BUT NEED TO BE NO MORE THAN 0.50 FOR SLABS (INTERIOR)

The above weights are based on the use of Ciment Quebec Type II, F. R. Carroll's aggregates, Master Builders air entraining agent(Microair), and Master Builders water reducer(Pollyheed 997).

The quantities are given in the oven dried state(no free or absorbed moisture). The oven dried quantities are the basic quantities which will be adjusted for moisture, slump, and yield.

If you have any questions, please feel free to give me a call.

Sincerely,

Michael P. Carroll

Michael P. Carroll
V. P. Concrete Division



B04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

1-12-05

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/9/2004 **Time Cast:** 2:30 **Date Received:** 12/11/2004

Placement Location: Wall G/3 to 3' of C/1

Placement Method: Chute

Placement Vol. (yd³): 11

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 64.3 **Maximum (°F)** 70.7

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.0
Air Content (%) (C-231): 7.2
Air Temp (°F): 40
Conc. Temp (°F) (C-1064): 68

Load Number: 1
Mixer Number: 14
Ticket Number: 3975
Cubic Yards: 5.5
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)
438-2A		6.00	28.27	12/16/2004	Lab	7	4	72.5	2570
438-2B		6.00	28.27	1/6/2005	Lab	28	4	94.0	3330
438-2C		6.00	28.27	1/6/2005	Lab	28	4	92.0	3250
438-2D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



04-107 / 1-12-05

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/10/2004 Time Cast: 1:54 Date Received: 12/11/2004

Placement Location: Footing Between C/1 & A/3

Placement Method: Chute

Placement Vol. (yd³): 6

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 57.5 Maximum (°F) 66.2

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3.75

Load Number: 1

Air Content (%) (C-231): 6.8

Mixer Number: 14

Air Temp (°F): 38

Ticket Number: 3958

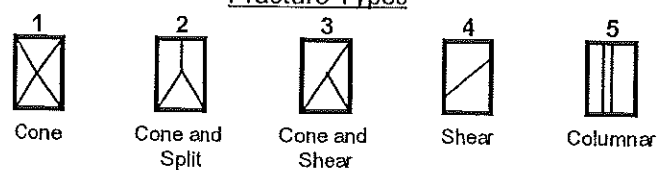
Conc. Temp (°F) (C-1064): 60

Cubic Yards: 6

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)
438-3A		6.00	28.27	12/17/2004	Lab	7	4	111.0	3930
438-3B		6.00	28.27	1/7/2005	Lab	28	4	162.0	5730
438-3C		6.00	28.27	1/7/2005	Lab	28	4	165.0	5840
438-3D				Hold	Lab				

Fracture Types



Remarks:



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/21/2004 Time Cast: 12:30

Date Received: 12/22/2004

Placement Location: FOOTINGS LINE 2 C, D AND E

Placement Method: TAILGATE

Placement Vol. (yd³): 6

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures: 2% POZZUTEC 20

TEST RESULTS

Slump (in) (C-143): 2.0

Load Number: 1

Air Content (%) (C-231): 2.0

Mixer Number: 7

Air Temp (°F): 20

Ticket Number: 4052

Conc. Temp (°F) (C-1064): 60

Cubic Yards: 6

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)
438-5A		6.00	28.27	12/28/2004	Lab	7	4	119.5	4230
438-5B		6.00	28.27	1/18/2005	Lab	28	4	148.0	5240
438-5C		6.00	28.27	1/18/2005	Lab	28	4	155.0	5480
438-5D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



#04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

1-21-05
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Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/22/2004 **Time Cast:** 2:58 **Date Received:** 12/23/2004

Placement Location: COLUMN PIERS C, D, & E ON 2 LINE

Placement Method: TAILGATE

Placement Vol. (yd³): 1.5

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: 2% POZZUTEC

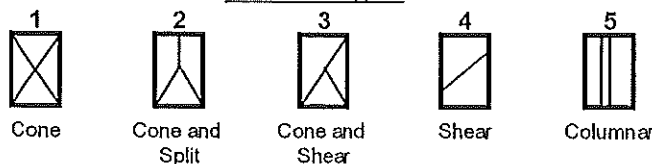
TEST RESULTS

Slump (in) (C-143): 5.5
Air Content (%) (C-231): 2.6
Air Temp (°F): 37
Conc. Temp (°F) (C-1064): 67

Load Number: 1
Mixer Number: 4
Ticket Number: 4069
Cubic Yards: 1.5
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)
438-6A		6.00	28.27	12/29/2004	Lab	7	4	64.0	2260
438-6B		6.00	28.27	1/19/2005	Lab	28	4	91.0	3220
438-6C		6.00	28.27	1/19/2005	Lab	28	4	87.0	3080
438-6D				Hold	Lab				

Fracture Types



Remarks:

1-3-05

04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/22/2004 Time Cast: 2:58 Date Received: 12/23/2004

Placement Location: COLUMN PIERS C, D, & E ON 2 LINE

Placement Method: TAILGATE

Placement Vol. (yd³): 1.5

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures: 2% POZZUTEC

TEST RESULTS

Slump (in) (C-143): 5.5
Air Content (%) (C-231): 2.6
Air Temp (°F): 37
Conc. Temp (°F) (C-1064): 67

Load Number: 1
Mixer Number: 4
Ticket Number: 4069
Cubic Yards: 1.5
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)
438-6A		6.00	28.27	12/29/2004	Lab	7	4	64.0	2260
438-6B				1/19/2005	Lab	28			
438-6C				1/19/2005	Lab	28			
438-6D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



#04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/8/2004 **Time Cast:** 12:00 **Date Received:** 12/9/2004

Placement Location: Footing G/3 to C/1

Placement Method: Chute

Placement Vol. (yd³): 10

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 69.9 **Maximum (°F)** 75.9

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3.75

Load Number: 1

Air Content (%) (C-231): 7.8

Mixer Number: 9

Air Temp (°F): 36

Ticket Number: 3956

Conc. Temp (°F) (C-1064): 52

Cubic Yards: 10

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)
438-1A		6.00	28.27	12/15/2004	Lab	7	4	68.0	2410
438-1B		6.00	28.27	1/5/2005	Lab	28	4	94.0	3330
438-1C		6.00	28.27	1/5/2005	Lab	28	4	94.0	3330
438-1D				2/2/2005	Lab	56			

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:



04-107
1-15-05

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/13/2004 **Time Cast:** 1:47 **Date Received:** 12/14/2004

Placement Location: Wall A/3 to 3' East of C/1

Placement Method: Chute

Placement Vol. (yd³): 6.5

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 60.4 **Maximum (°F)** 68.7

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 5.75

Load Number: 1

Air Content (%) (C-231): 5.8

Mixer Number: 8

Air Temp (°F): 40

Ticket Number: 3995

Conc. Temp (°F) (C-1064): 63

Cubic Yards: 6.5

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)
438-4A		6.00	28.27	12/20/2004	Lab	7	4	71.5	2530
438-4B		6.00	28.27	1/10/2005	Lab	28	4	105.0	3710
438-4C		6.00	28.27	1/10/2005	Lab	28	4	105.0	3710
438-4D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/21/2004 **Time Cast:** 12:30

Date Received: 12/22/2004

Placement Location: FOOTINGS LINE 2 C, D AND E

Placement Method: TAILGATE

Placement Vol. (yd³): 6

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: 2% POZZUTEC 20

TEST RESULTS

Slump (in) (C-143): 2.0

Load Number: 1

Air Content (%) (C-231): 2.0

Mixer Number: 7

Air Temp (°F): 20

Ticket Number: 4052

Conc. Temp (°F) (C-1064): 60

Cubic Yards: 6

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)
438-5A		6.00	28.27	12/28/2004	Lab	7	4	119.5	4230
438-5B				1/18/2005	Lab	28			
438-5C				1/18/2005	Lab	28			
438-5D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

Rec'd
12-22-04

04-107



Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/8/2004 Time Cast: 12:00 Date Received: 12/9/2004

Placement Location: Footing G/3 to C/1

Placement Method: Chute

Placement Vol. (yd³): 10

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 69.9 Maximum (°F) 75.9

DELIVERY INFORMATION

Admixtures:

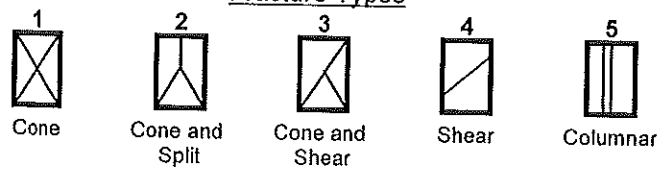
TEST RESULTS

Slump (in) (C-143): 3.75
Air Content (%) (C-231): 7.8
Air Temp (°F): 36
Conc. Temp (°F) (C-1064): 52

Load Number: 1
Mixer Number: 9
Ticket Number: 3956
Cubic Yards: 10
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)
438-1A		6.00	28.27	12/15/2004	Lab	7	4	68.0	2410
438-1B				1/5/2005	Lab	28			
438-1C				1/5/2005	Lab	28			
438-1D				Hold	Lab				

Fracture Types



Remarks:



*Rec'd
12-22-04*

04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITIION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/10/2004 Time Cast: 1:54 Date Received: 12/11/2004

Placement Location: Footing Between C/1 & A/3

Placement Method: Chute

Placement Vol. (yd³): 6

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 57.5 Maximum (°F) 66.2

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 3.75

Load Number: 1

Air Content (%) (C-231): 6.8

Mixer Number: 14

Air Temp (°F): 38

Ticket Number: 3958

Conc. Temp (°F) (C-1064): 60

Cubic Yards: 6

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)
438-3A		6.00	28.27	12/17/2004	Lab	7	4	111.0	3930
438-3B				1/7/2005	Lab	28			
438-3C				1/7/2005	Lab	28			
438-3D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

12-22-04

#04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/13/2004 Time Cast: 1:47 Date Received: 12/14/2004

Placement Location: Wall A/3 to 3' East of C/1

Placement Method: Chute

Placement Vol. (yd³): 6.5

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 5.75
Air Content (%) (C-231): 5.8
Air Temp (°F): 40
Conc. Temp (°F) (C-1064): 63

Load Number: 1
Mixer Number: 8
Ticket Number: 3995
Cubic Yards: 6.5
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)
438-4A		6.00	28.27	12/20/2004	Lab	7	4	71.5	2530
438-4B				1/10/2005	Lab	28			
438-4C				1/10/2005	Lab	28			
438-4D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks:

12-22-04

#04-107

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: PORTLAND - MOTION INDUSTRIES ADDITION - PINE TREE INDUSTRIAL PARK - MATERIALS TESTING

Project Number: 04-0841

Client: SRG ENGINEERING

Client Contract Number:

General Contractor:

Concrete Supplier: F. R. CARROLL

PLACEMENT INFORMATION

Date Cast: 12/9/2004 Time Cast: 2:30 Date Received: 12/11/2004

Placement Location: Wall G/3 to 3' of C/1

Placement Method: Chute

Placement Vol. (yd³): 11

Cylinders Made By: DAC

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) Maximum (°F)

DELIVERY INFORMATION

Admixtures:

TEST RESULTS

Slump (in) (C-143): 4.0
Air Content (%) (C-231): 7.2
Air Temp (°F): 40
Conc. Temp (°F) (C-1064): 68

Load Number: 1
Mixer Number: 14
Ticket Number: 3975
Cubic Yards: 5.5
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)
438-2A		6.00	28.27	12/16/2004	Lab	7	4	72.5	2570
438-2B				1/6/2005	Lab	28			
438-2C				1/6/2005	Lab	28			
438-2D				Hold	Lab				

Fracture Types



Cone



Cone and Split



Cone and Shear



Shear



Columnar

Remarks: