

March 9, 2010

Subject: Laboratory Testing,
Delivered Recycled Concrete
Sample

Job No. 09-1019

Mr. Gary Hansen
Allied Recycled Aggregates
P.O. Box 566
Commerce City, Colorado 80037-0566

Dear Mr. Hansen,

As requested analytical testing was completed on a sample of class 6 recycled concrete delivered to our laboratory by your representative. The following testing was completed in general accordance with the respective standards; Sieve Analysis (ASTM C 136), Atterberg Limits (ASTM D 4318), Modified Proctor (ASTM D 1557), R-Value (ASTM D 2844) and Los Angeles Abrasion (ASTM C 131). The sample location was identified as 4082. This sample meets CDOT Class 6 Grading requirements. This sample also meets the City of Aurora Type 2 Base Grading requirements.

The results of the testing have been attached.

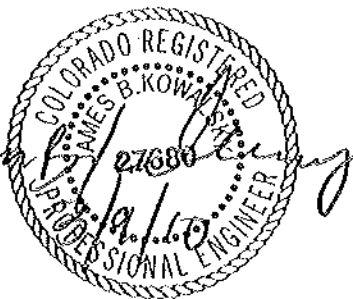
If you have any questions regarding this data, please do not hesitate to contact our office.

GROUND ENGINEERING CONSULTANTS, INC.

Sincerely,


Nick Andrade
Laboratory Supervisor

Reviewed by
James B. Kowalsky, PE



GROUND

ENGINEERING CONSULTANTS, INC.

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Office Locations: Englewood • Commerce City • Loveland • Granby • Gypsum

Ground Engineering's ID Number: 2919
Sample location: 4082
Date Sampled: 02/17/2010
Sample Identification: Class 6 Recycled Concrete

Table I. Sieve Analysis Results, (ASTM C 136)

Sieve Size	% Passing	CDOT Class 6 Specs.	City of Aurora Type 2 Base Specs.
1"	100	100	100
3/4"	100	100	--
1/2"	84	--	--
3/8"	69	--	50-85
No.4	46	30-65	35-65
No. 8	34	25-55	--
No. 10	32	--	25-50
No. 16	28	--	--
No. 30	19	--	--
No. 40	15	--	15-30
No. 50	10	--	--
No. 100	5	--	--
No. 200	3.2	3-12	3-15

Table II. Additional Test Results: Atterberg Limits, (ASTM D 4318), Modified Proctor, (ASTM D 1557, Method C), Los Angeles Abrasion, (ASTM C 131, Grading B), R-Value (ASTM D 2844)

Test Method	Result	CDOT Class 6 Specs.	City of Aurora Type 2 Base Specs.
Atterberg Limits			
<i>Liquid Limit</i>	N/V	30 Maximum	25 Maximum
<i>Plasticity Index</i>	N/P	6 Maximum	15 Maximum
Modified Proctor			
<i>Maximum Dry Density (pcf)</i>	115.7	--	--
<i>Optimum Moisture Content (%)</i>	14.6	--	--
L. A. Abrasion (% loss)	38.7	50 Maximum	45 Maximum
Grading B			
R-Value	80	--	78 Minimum

Ground Engineering Consultants, Inc.

COMPACTION TEST REPORT

Curve No.: 2919

Project No.: 09-1019

Date: 3/9/10

Project: Allied Recycled Aggregates Lab Testing

Location: 4082 - Allied Recycled Aggregates Plant

Elev./Depth:

Sample No. 2919

Remarks:

MATERIAL DESCRIPTION

Description: Class 6 Recycled Concrete

Classifications -

USCS:

AASHTO:

Nat. Moist. =

Sp.G. =

Liquid Limit = N/V

Plasticity Index = N/P

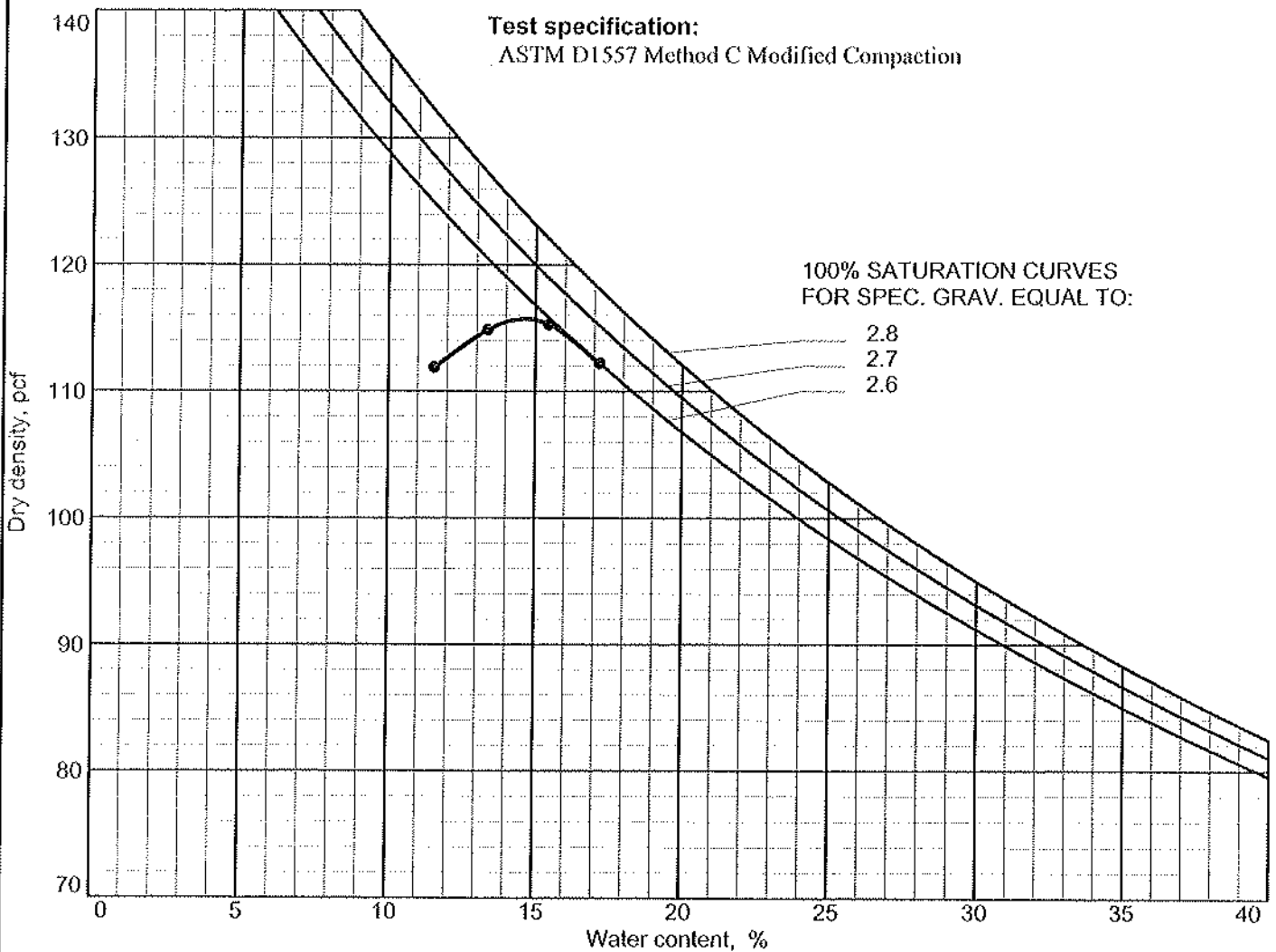
% > 3/4 in. = %

% < No.200 = 3.2 %

TEST RESULTS

Maximum dry density = 115.7 pcf

Optimum moisture = 14.6 %



Figure

GROUND

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GRADATION PROPERTIES

Project: Allied Recycled Aggregates
Job Number: 09-1019

Date: March 9, 2010

Reported to: Gary Hansen
P.O. Box 566
Commerce City, Co
80037-3543

Copies to:

Sample Information

Allied Job Number: CDOT 2010

Sample Number: 2919

Sample Location: 4082

Aggregate Identification: Class 6 Recycled Concrete

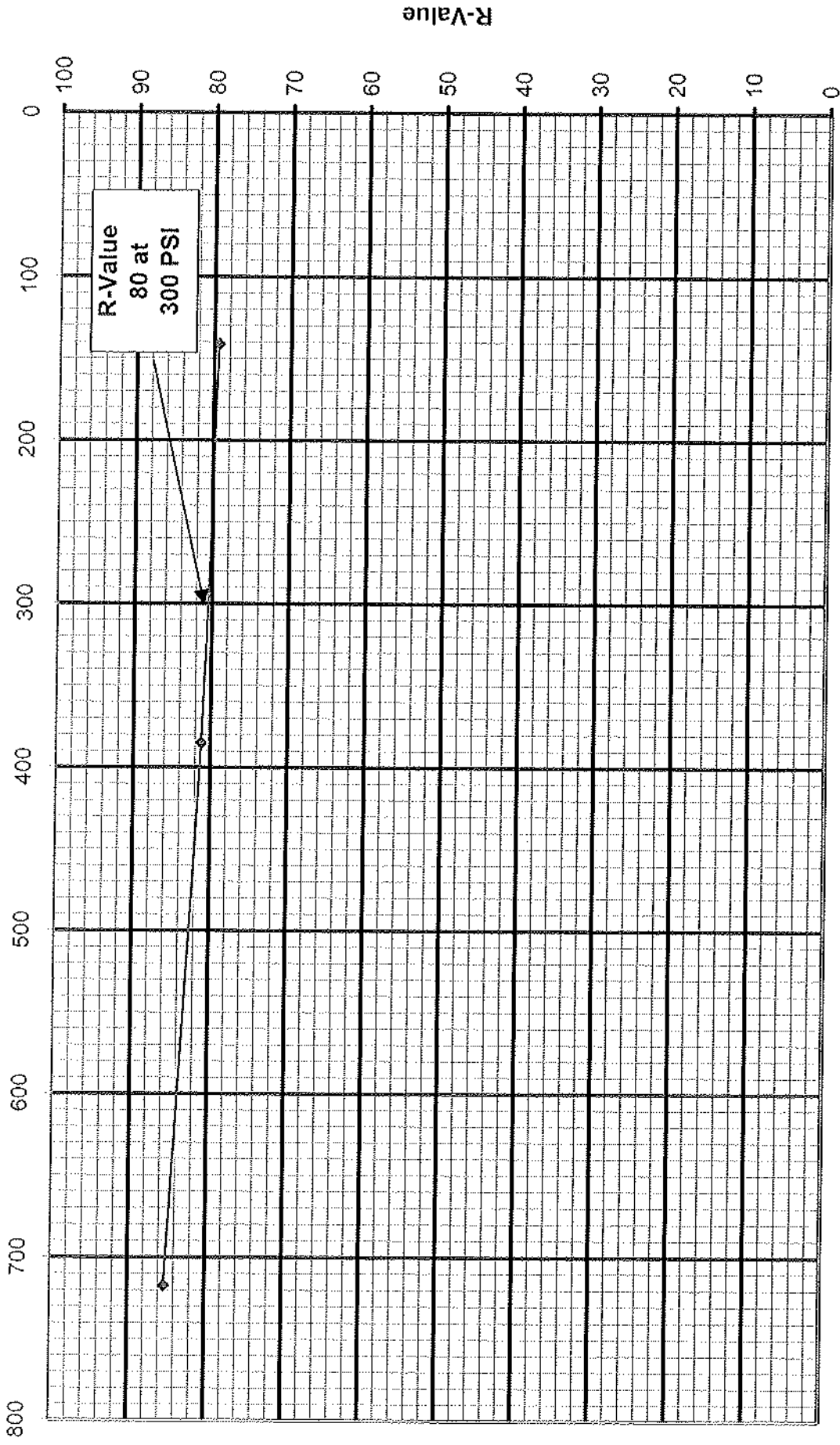
Date Sampled: 2/17/2010

Sampled By: Allied Recycled Aggregates Representative

Gradation Analysis (ASTM C136)

Sieve Size (opening)	Passing (%)
1"	100
3/4"	100
1/2"	84
3/8"	69
#4	46
#8	34
#10	32
#16	28
#30	19
#40	15
#50	10
#100	5
#200	3.2
Liquid Limit:	N/V
Plasticity Index:	N/P

Exudation Pressure (PSI)



R-Value
80 at
300 PSI

Location: 4082

Test Specimen	1	2	3
Moisture (%)	10.9	12.9	15.5
R-Value	85	81	79
Exudation Pressure	717	385	141

Sample ID No. 2919
 Job No. 09-1019
 Soil Type: Class 6 / Type II Recycled Concrete
 ***Material will be considered "unstable" if optimum moisture is greater than 300 psi exudation moisture and the decrease in R-value from 400 psi to 300 psi exudation pressure is 10 or greater

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 ENGINEERING CONSULTANTS
 R-VALUE TEST RESULT
 ASTM D 2844-07