



December 19, 2017

PL-02667-02

Recycled Aggregate Materials Company  
3713 Alamo Street  
Simi Valley, California 93063

Attention: Mr. Dallas Jones

Subject: **Laboratory Test Results**  
SSPWC Section 200-2.5 Processed Miscellaneous Base  
Recycled Aggregate Materials Company  
250 East Santa Ana Avenue  
Rialto, California

This report presents the results of laboratory tests performed on one (1) sample of Standard Specification for Public Works Construction (SSPWC) Processed Miscellaneous Base from the above referenced project. The sample was delivered to our laboratory on November 8, 2017. Per your request the following tests were performed:

- A) Sieve Analysis (ASTM C-136)
- B) Sand Equivalent (Caltest 217)
- C) Durability Index (Caltest 229)
- D) R-Value (Caltest 301)
- E) Los Angeles Abrasion (ASTM C-131)
- F) Maximum Density – Optimum Moisture (ASTM D-1557)

The laboratory test results are attached. We trust this report meets your current needs. If you have any questions please contact us.

Respectfully submitted,

<b>The Material Tested</b> <input checked="" type="checkbox"/> <b>met</b> <input type="checkbox"/> did not meet the requirements of Standard Specifications for Public Works Construction, 2015 edition Section 200-2.5 Processed Miscellaneous Base, Fine.
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**Earth Systems**  
**Southern California**

Jim Tomkins  
Project Engineer  
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**Summary of Laboratory Test Results**  
**SSPWC Section 200-2.5**  
**Processed Miscellaneous Base**  
**Recycled Aggregate Materials Company - Rialto, California**  
**Delivered on November 8, 2017**

A) **Sieve Analysis** (ASTM C-136)

<u>Sieve Size</u>		<u>Percent Passing</u>	<u>SSPWC Section 200-2.5 Processed Miscellaneous Base</u>
1 1/2"	(37.5 mm)	100	100
1"	(25.0 mm)	100	
3/4"	(19.0 mm)	95	85-100
1/2"	(12.5 mm)	80	
3/8"	(9.5 mm)	72	55-75
#4	(4.75 mm)	56	35-60
#8	(2.36 mm)	46	
#16	(1.18 mm)	35	
#30	(0.6 mm)	25	10-30
#50	(0.3 mm)	16	
#100	(0.15 mm)	10	
#200	(0.075 mm)	5.9	2-9

B) **Sand Equivalent** (Caltest 217)

Sand Equivalent = 68 35 Min.

C) **Durability Index** (Caltest 229)

$D_f = 45$

$D_c = 54$

D) **R-Value** (Caltest 301)

R-Value = 78 78 Min.

E) **Los Angeles Abrasion** (ASTM C-131)

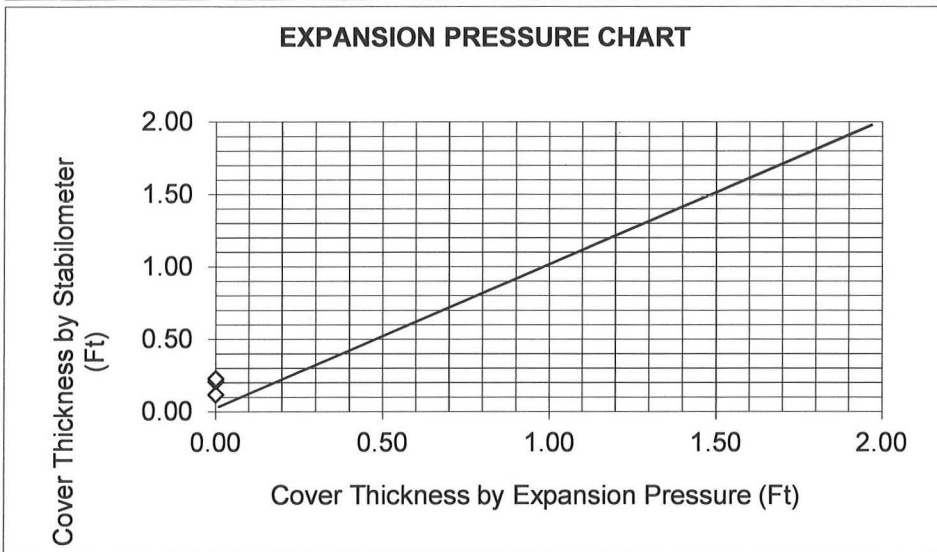
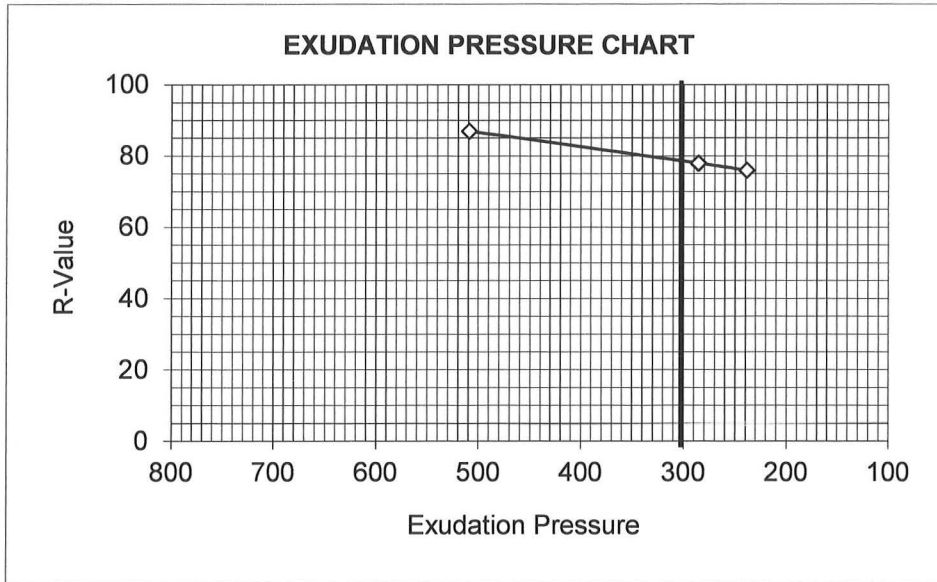
<u>Revolutions</u>	<u>% Loss</u>	
100	11.5	15% Max.
500	35.8	52% Max.

**Summary of Laboratory Test Results**  
**SSPWC Section 200-2.5**  
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**Delivered on November 8, 2017**

F) **Maximum Density – Optimum Moisture** (ASTM D-1557)

<u>Sample Description</u>	<u>Maximum Density</u>	<u>Optimum Moisture</u>
SSPWC Processed Miscellaneous Base *	121.0 PCF	12.0 %

\*Note: This product contains crushed recycled asphalt concrete. A bias is required for all nuclear density tests to adjust the tested dry density results to reflect actual in-place densities

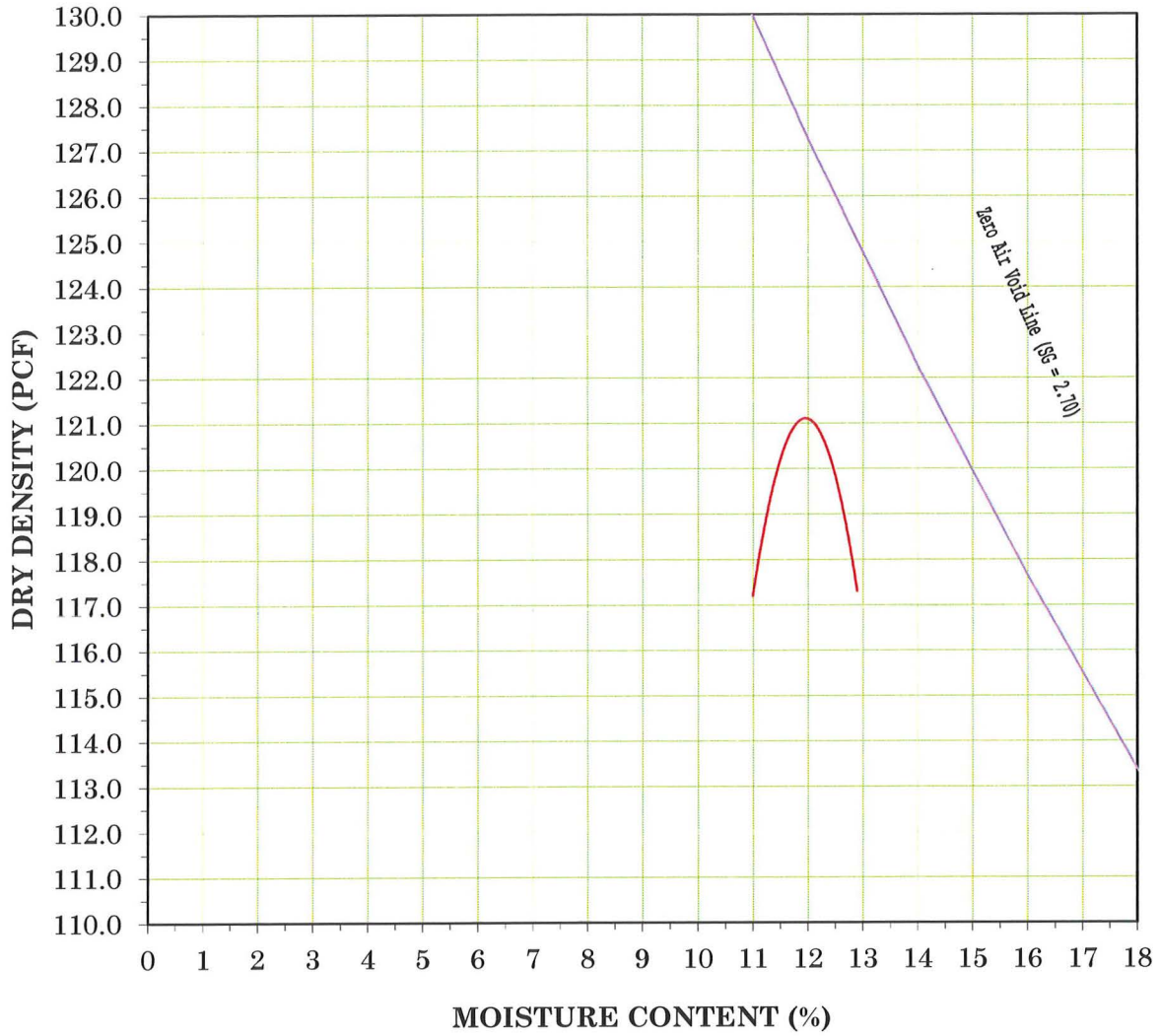


**JOB NAME:** RAMCO - Rialto  
**SAMPLE I. D.:** Sample Delivered on November 8, 2017  
**SOIL DESCRIPTION:** Processed Miscellaneous Base

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	509	286	239
RESISTANCE VALUE	87	78	76
EXPANSION DIAL(0.0001")	0	0	0
EXPANSION PRESSURE (PSF)	0.0	0.0	0.0
% MOISTURE AT TEST	12.7	13.1	13.5
DRY DENSITY AT TEST	113.4	113.9	113.7

R-VALUE @ 300 PSI EXUDATION	78
R-VALUE by Expansion Pressure*	100

\*Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70



**Maximum Density - Optimum Moisture Characteristics\***


Sample Location: Sample Delivered on November 8, 2017

Material: Processed Miscellaneous Base

Maximum Density (pcf): 121.0

Optimum Moisture: 12.0%

\* Test Method: ASTM D-1557

<b>MAXIMUM DENSITY - OPTIMUM MOISTURE</b>	
<b>RAMCO - Rialto</b>	
<b>Rialto, California</b>	
 <b>Earth Systems Southern California</b>	
12/19/2017	PL-02667-02