

300 Sierra Manor Drive, Suite 1  
 Reno, NV 89511

April 17, 2019  
 File: 1013

Mr. Andrew Spuehler  
**A&K EARTHMOVERS, INC.**  
 PO Box 1059  
 Fallon, NV 89407

**RE: Aggregate Base Type 2 Class B – Bella Vista Pit**

Dear Mr. Spuehler:

Per your request, we have performed testing on the Type 2, Class B aggregate base delivered to our laboratory on April 5<sup>th</sup>. Test results in comparison with local standard specifications are as follows:

Sieve Size Analysis (ASTM C136/C117)		
U.S. Standard Sieve Size	Percent By Weight Passing	
	Bella Vista Pit	Local Standard Specification*
1 Inch	100	100
¾ Inch	96	90 - 100
½ Inch	77	-
¾ Inch	65	-
No. 4	43	35 - 65
No. 8	32	-
No. 10	30	-
No. 16	23	15 - 40
No. 30	18	-
No. 40	16	-
No. 50	14	-
No. 100	11	-
No. 200	8.9	2 - 10

Fractured Faces (Nev. T230)	
Bella Vista Pit	Specification*
99.2%	35% Minimum

Atterberg Limits (ASTM D4318)		
	Bella Vista Pit	Specification*
Liquid Limit	No Value	35 Maximum
Plasticity Index	Nonplastic	8 Maximum

R-Value (ASTM D2844)	
Bella Vista Pit	Specification*
70	70 Minimum

\*Standard Specifications for Public Works Construction (Washoe County, Sparks, Reno, Carson City and Douglas County), 2012 and NDOT Standard Specifications for Road and Bridge Construction, 2014.

\*\*Does not meet specification.

Mr. Reed Tolotti  
**A&K EARTHMOVERS, INC.**  
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Los Angeles Abrasion (ASTM C131)		
	Bella Vista Pit	Specification*
Percent Loss After 500 Revolutions (Grading B)	26.4%	45% Maximum

\*Standard Specifications for Public Works Construction (Washoe County, Sparks, Reno, Carson City and Douglas County), 2012 and NDOT Standard Specifications for Road and Bridge Construction, 2014.

Moisture Density (ASTM D1557C)	
Maximum Dry Density	122.8 PCF
Optimum Moisture	10.7%

We appreciate this opportunity to provide our laboratory testing services. If you have any questions or require further information, please do not hesitate to contact us.

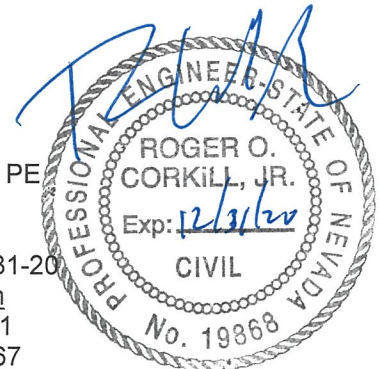
Sincerely,

**CONSTRUCTION MATERIALS ENGINEERS, INC.**



Steven L. Vineis  
Laboratory Manager  
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Roger O. Corkill Jr., PE  
Project Manager  
RE Number 19868  
Expiration Date 12-31-20  
[rcorkill@cmenv.com](mailto:rcorkill@cmenv.com)  
Direct: 775-737-7581  
Mobile: 775-722-5067

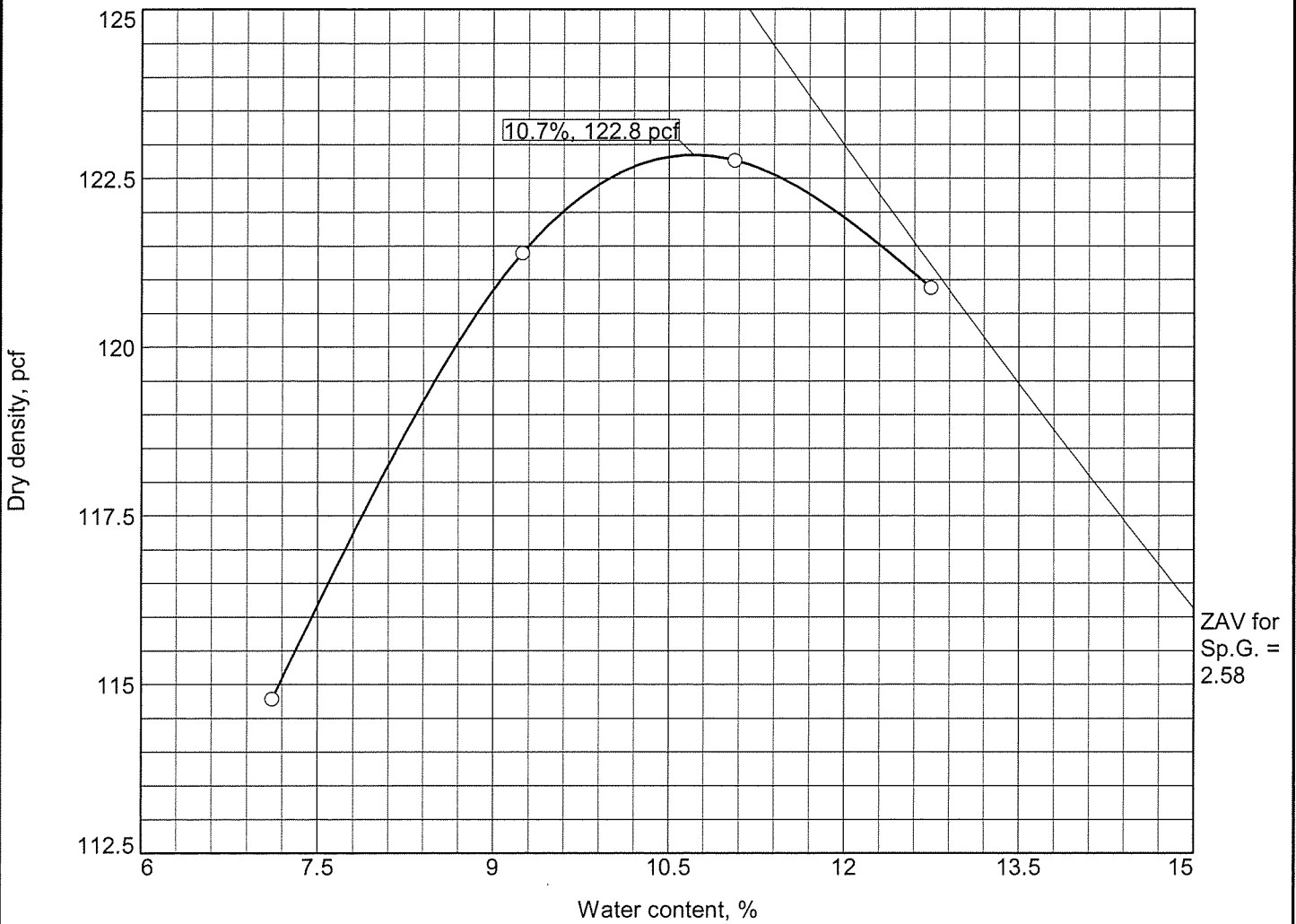


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SLV:ROC:jb  
Enclosures

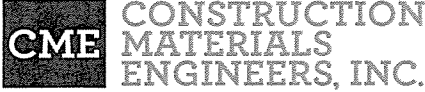
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# COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method C Modified

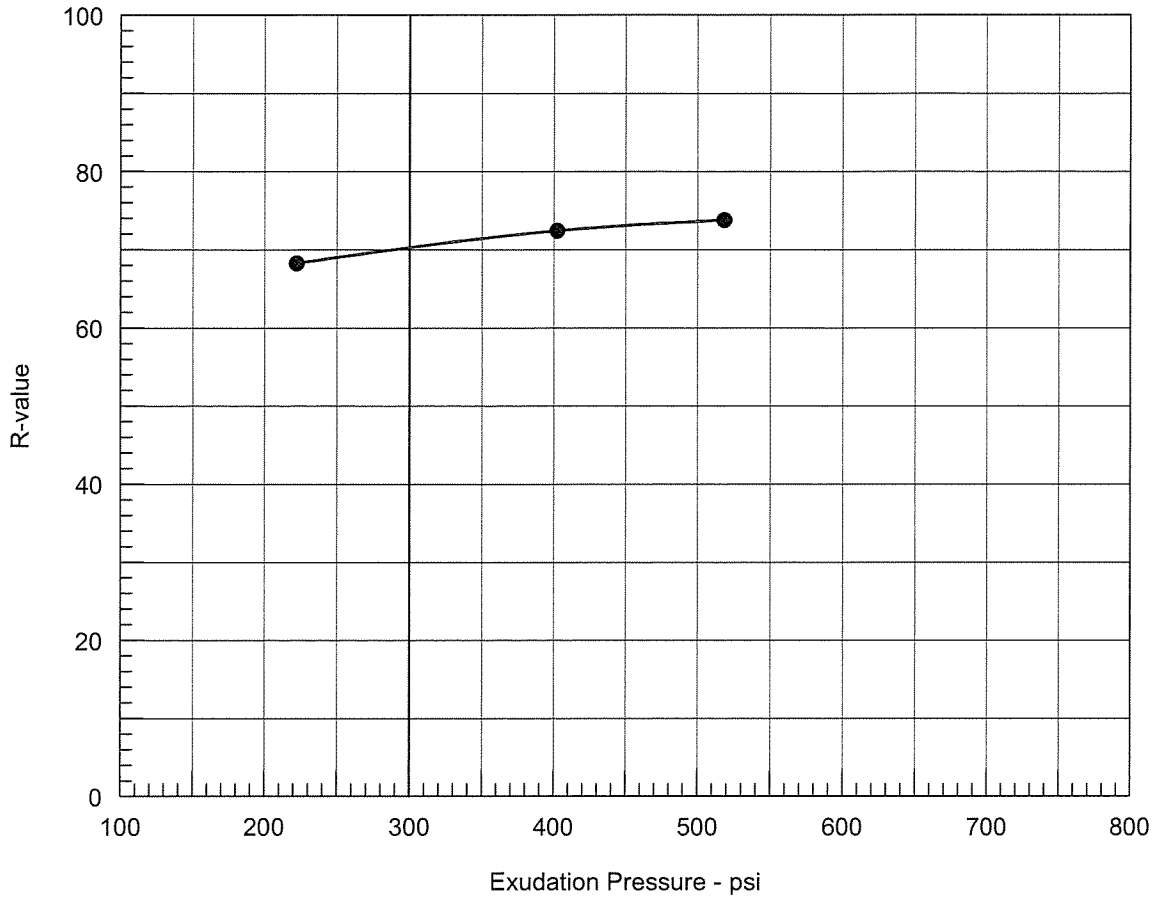
Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
							4.0	8.9

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 122.8 pcf Optimum moisture = 10.7 %	AGGREGATE BASE TYPE 2 CLASS B BELLA VISTA PIT
<b>Project No.</b> 1013 <b>Client:</b> A & K EARTHMOVERS, INC. <b>Project:</b> ANNUAL QUALITY TESTING  ○ <b>Location:</b> PLANT STOCKPILE <b>Sample Number:</b> 33278	<b>Remarks:</b> RECEIVED 4/5/2019
	

Figure


Tested By: G. MORALES      Checked By: S. VINEIS

# R-VALUE TEST REPORT



**Resistance R-Value and Expansion Pressure - ASTM D2844**

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	111.3	10.7	0.00	19	2.53	518	74	74
2	350	112.2	11.3	0.00	20	2.52	403	72	72
3	350	118.2	12.5	0.00	21	2.35	222	71	68

Test Results	Material Description
R-value at 300 psi exudation pressure = 70	AGGREGATE BASE TYPE 2 CLASS B BELLA VISTA PIT
<b>Project No.:</b> 1013 <b>Project:</b> ANNUAL QUALITY TESTING <b>Location:</b> PLANT STOCKPILE <b>Sample Number:</b> 33278 <b>Date:</b> 4/17/2019	<b>Tested by:</b> G. MORALES <b>Checked by:</b> S. VINEIS <b>Remarks:</b> RECEIVED 4/5/2019
	Figure 1A