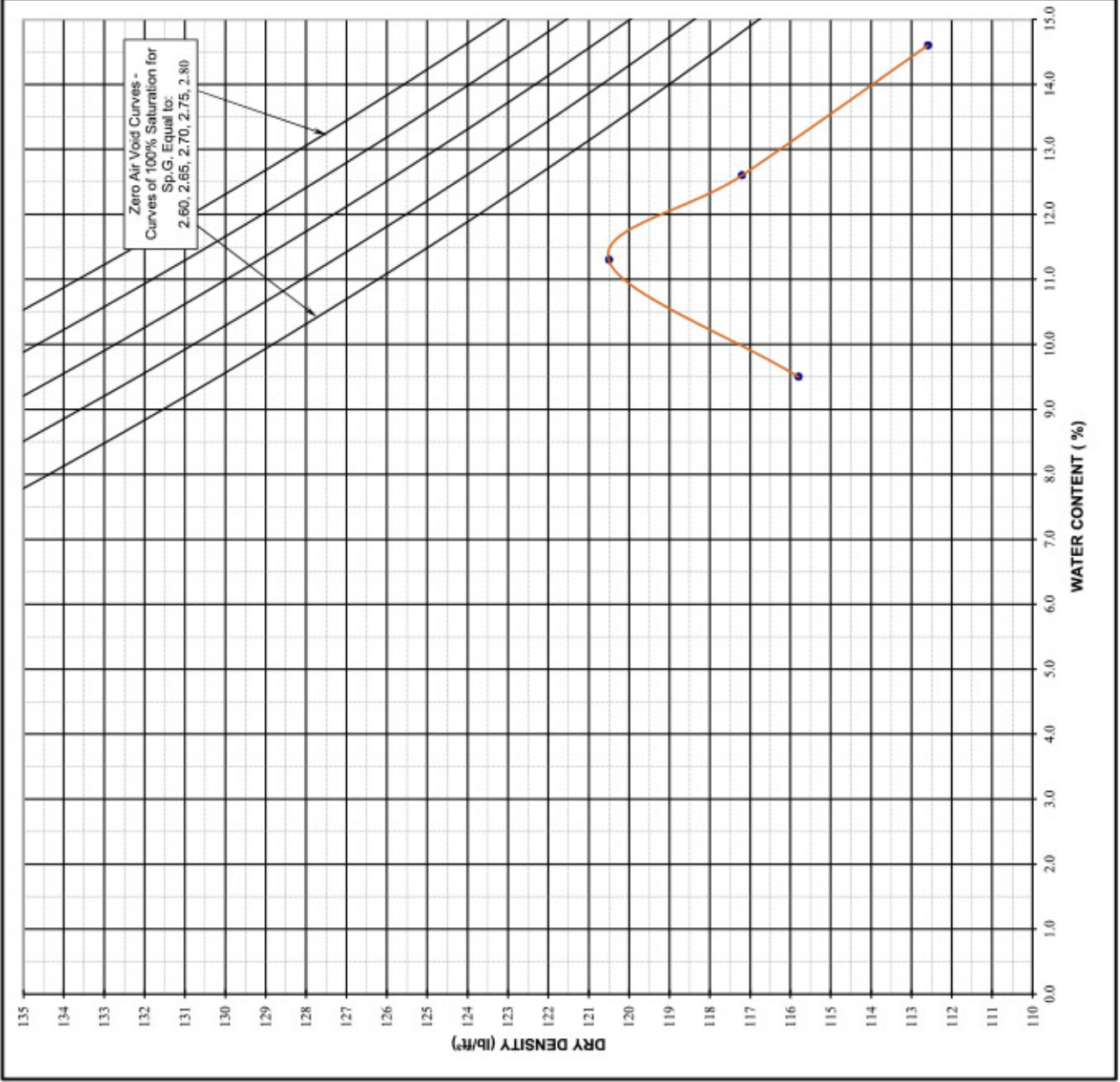


MOISTURE - DENSITY RELATIONSHIP



Project No:	221-123		
Name:	Colorado Aggregate Recycling		
Location:	Onsite Stockpile		
Maximum Dry Density (pcf):			120.6
Optimum Moisture Content(%):			11.3
Sample ID:	G-119		
Sample Location:	Onsite Stockpile		
Soil Description:	Light Brown Silty Sand with Gravel (Class 1)		
USCS Group Name:			SM
AASHTO Group Symbol:			A-1-b
AASHTO Group Index:			0
Specific Gravity:			NT
Atterberg (ASTM D - 4318)			
LL:			NP
PL:			NP
PI:			NP
Gradation (ASTM D-422, D-136)			
#4			84
#10			72
#40			41
#200			16.5
ASTM Designation: ASTM D1557			
Method:			C
Preparation Method: Dry			
Mold Size:			6 inch
Hammer Type:			10-lb, Manual
Sampled By: Contractor			
Date:			11/10/21
Tested By: C. Miranda			
Date:			11/11/21
Reviewed By: John Ibarra			
Date:			11/16/21





WORKSHEET FOR SOIL INDEX and MOISTURE DENSITY

Project No: 221-123 Project Name: Colorado Aggregate Recycling
 Sampled by: Contractor Date Sampled: 11/10/2021 Date Tested: 11/11/2021
 Lab No: G-119 Depth (ft): Stockpile Location: Onsite Stockpile
 Tested by: C. Miranda Checked by: J. Ibarra

Soil Description: Light Brown Silty Sand with Gravel (Structural Backfill Class 1)
 Tests Performed: Full Soil Class Gradation -200 Wash Moisture Atterberg Unit Wt.

Sieve Analysis (ASTM D 421, C 136 & AASHTO T 27)						Wash - #200 (D 1140, C 117 & T 11) & Moisture Content (D 2216 & T 265)		
Sieve Size		Accum. Wt., (g)	% Retained	% Passing	Spec's.			
in. / #	mm.							
3"+	75			100		Dish I.D.	SC-9	
2-1/2"	63			100		Dish wt. (g)	293.4	
2"	50			100	100	Original wt. of soil + dish (g)	683.5	
1-1/2"	37.5			100		Oven dry wt. of soil + dish (g)	649.2	
1"	25			100		If Split, Dish+Pre-wash Soil (g)		
3/4"	19			100		Wash oven dry wt. of soil + dish (g)	601.4	
1/2"	12.5	18.7	5	95		% Moisture Content		9.6%
3/8"	9.5	31.0	9	91		% Wash - #200		13.4%
#4	4.75	57.0	16	84	30-100			
#8	2.360	90.2	25	75				
#10	2.000	100.4	28	72		Sieve Samples Dried Separately? <input type="checkbox"/>		
#16	1.180	135.2	38	62		Pan Wt. (g)		
#30	0.600	183.3	52	48		Pan + Wet Soil Wt. (g)		
#40	0.425	209.7	59	41		Pan + Dry Soil Wt. (g)		
#50	0.300	233.8	66	34	10-60	Pan + Dry Wash Soils (g)		
#100	0.150	272.1	76	24		Unit Weight (By Volume)		
#200	0.075	297.0	83	16.5	5-20	Height (in)	Diameter (in)	Moist Weight(g)
Pan								
Oven dry Weight		355.8						
Oven dry weight		355.8						

One Point Method	Liquid Limit	Plastic Limit			Moist Unit Weight (pcf)	
Blow Counts (20-30)						
Tin ID						
Tin Wt. (g)						
Tin+Wet Soil Wt. (g)					Dry Unit Weight (pcf)	
Tin+ Dry Soil Wt. (g)						
Wt. of Water (g)						
Wt. of Dry Soil (g)						
Moisture Content			PL(s)	NP		

Liquid Limit	NV	Plastic Limit	NP	Plastic Index	NP
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Gravel (%)	16	Sand (%)	67	Fines (%)	17
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CLASSIFICATION:	AASHTO:	A-1-b (0)	USCS:	SM
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