Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 4/3/23

Concrete Grade: **S2M, 3500HP**

Contractor: _____

Dates Test Represents: 4/4/2023 through 4/10/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	**3050**	**18.57**		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	96.8	100.0	100.0	98.4	1.6	1.6
3/4"	73.6	100.0	100.0	87.0	11.4	13.0
1/2"	34.4	95.9	100.0	67.3	19.7	32.7
3/8"	20.1	82.6	100.0	58.9	8.4	41.1
#4	3.3	17.2	96.7	42.4	16.5	57.6
#8	1.8	5.4	84.4	35.5	6.9	64.5
#16	1.7	2.9	69.4	29.1	6.4	70.9
#30	1.6	2.3	51.2	21.7	7.5	78.3
#50	1.6	2.1	25.2	11.2	10.5	88.8
#100	1.5	1.9	6.5	3.6	7.6	96.4
LBW	1.3	1.6	0.8	1.1	2.4	98.9

*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Superior Materials, LLC
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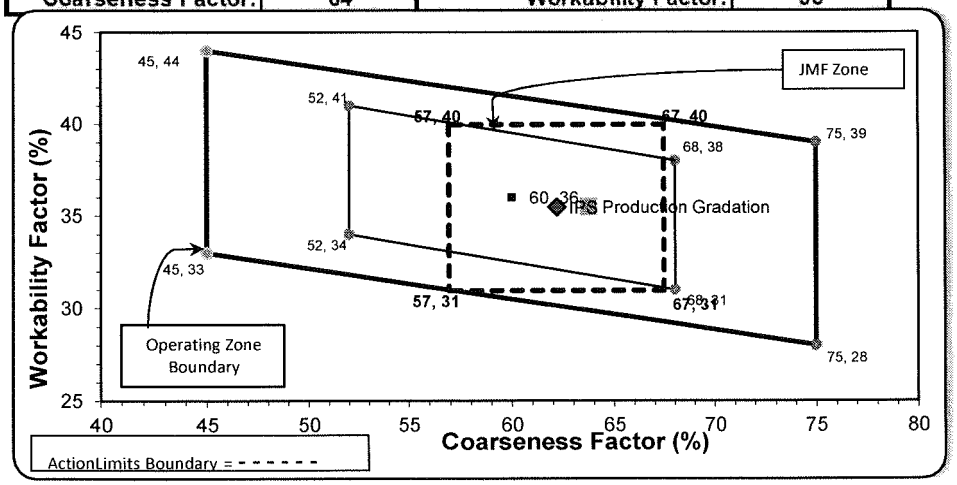
Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	64	Workability Factor:	35



Intial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:
SM, LLC Technical Service

Approved By:

Edw. C. Levy Co.

JMT
8911 W. Jefferson
Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1054-6AA LS PI

Period: 04/02/2023 - 04/08/2023

Name/Title Doug Storey / QC Technician

Report Date 04/07/2023

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.8	%	95-100
	3/4" (19mm)	73.6	%	
	1/2" (12.5mm)	34.4	%	30-60
	3/8" (9.5mm)	20.1	%	
	#4 (4.75mm)	3.3	%	0-8
	#8 (2.36mm)	1.8	%	
	#16 (1.18mm)	1.7	%	
	#30 (.6mm)	1.6	%	
	#50 (.3mm)	1.6	%	
	#100 (.15mm)	1.5	%	
	#200 (75µm)	1.3	%	
	Wash Loss (#200/75um)	1.3	%	0-2
	Total Moisture	1.8	%	

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Plant 958-JMT

Product 1067-26A Mod LS

Period: 04/02/2023 - 04/08/2023

Name/Title Doug Storey / QC Technician

Report Date 04/07/2023

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	95.9	%	95-100
	3/8" (9.5mm)	82.6	%	60-95
	#4 (4.75mm)	17.2	%	5-30
	#8 (2.36mm)	5.4	%	0-12
	#16 (1.18mm)	2.9	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	1.9	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	2.6	%	

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Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 04/02/2023 - 04/08/2023

Name/Title Doug Storey / QC Technician

Report Date 04/07/2023

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	96.7	%	95-100
	#8 (2.36mm)	84.4	%	65-95
	#16 (1.18mm)	69.4	%	35-75
	#30 (.6mm)	51.2	%	20-55
	#50 (.3mm)	25.2	%	10-30
	#100 (.15mm)	6.5	%	0-10
	#200 (75µm)	1.1	%	
	FM	2.67		2.6-3
	Wash Loss (#200/75um)	0.8	%	0-3
	Total Moisture	3.5	%	