

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-102

Contractor: _____

Sample Date: 9/9/24

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 9/10/2024 through 9/16/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
GAA	58-003	Stonoco	1475	8.79	2.69	50.0
26A	58-003	Stonoco	325	1.94	2.69	11.0
ZNS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt						2950
						17.68

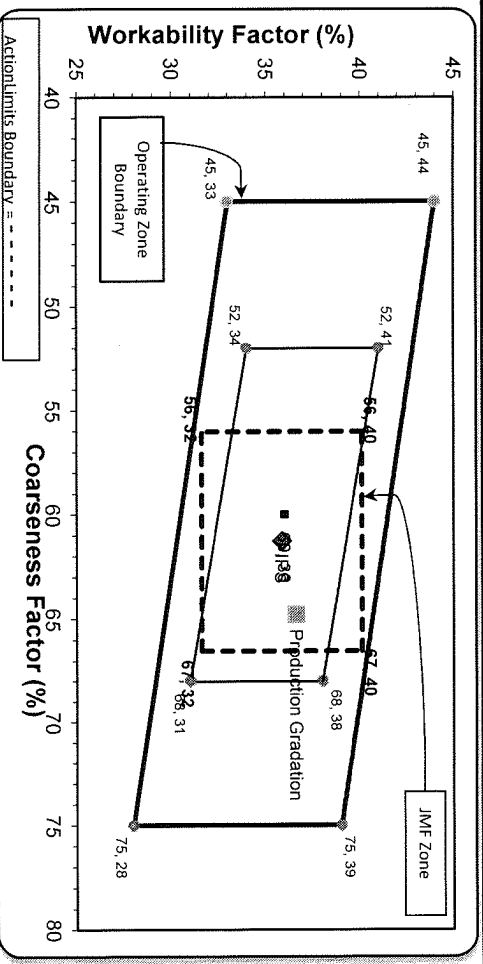
<----- Verify this number is 100%

Sieve	6AA	26A	ZNS	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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	82.1	100.0	100.0	91.1	8.6	9.0
1/2"	37.3	99.8	100.0	68.6	22.4	31.4
3/8"	16.6	91.0	100.0	57.3	11.3	42.7
#4	4.6	4.7	99.3	41.5	15.8	58.5
#8	2.4	1.3	84.1	34.1	7.4	65.9
#16	1.9	1.1	65.2	26.5	7.6	73.5
#30	1.7	1.0	43.0	17.7	8.8	82.3
#50	1.6	0.9	15.6	7.0	10.7	93.0
#100	1.5	0.9	2.7	1.9	5.1	98.1
LBW	1.3	0.8	0.3	0.9	1.0	99.1

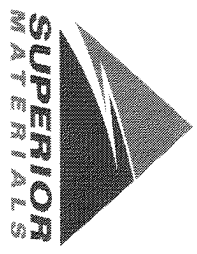
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation	Batch Plant Gradations	Aggregate Supplier Gradations	Adjusted WF
<input checked="" type="radio"/> Coarseness Factor: 65	<input type="radio"/> Workability Factor: 34		36.6

Initial Production Sample (IPS)	Coarseness Factor:	Workability Factor:	Adjusted WF
	61	36	36.6



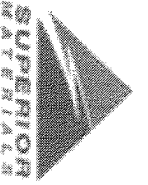
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3



Superior Materials, LLC
 30701 W. 10 Mile Rd.
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PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Thursday, September 12, 2024

Sample Id	-674980875	-674938758	-674905499	-674893851	-674967614
Plant	S102 Superior Novi	S102 Superior Novi	S102 Superior Novi	S102 Superior Novi	S102 Superior Novi
Product	1051 6AA LS	1067 26A Mod LS	1022 2NS GR	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS
Specification	6AA LS	26A Mod LS Spec	2NS GR Spec	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target
Sample Type	QA	QA	QA	QA	QA
Time	13:45	13:49	13:52	19:38	19:42
2" (50mm)	100.0	100.0	100.0	100.0	100.0
1 1/2" (37.5mm)	100.0	100.0	100.0	100.0	100.0
1" (25mm)	99.3	100.0	68.8	100.0	100.0
3/4" (19mm)	82.1	100.0	35.8	100.0	100.0
1/2" (12.5mm)	37.3	99.8	19.8	19.8	95.1
3/8" (9.5mm)	16.6	91.0	12.8	12.8	78.7
#4 (4.75mm)	4.6	4.7	99.3	4.7	25.4
#8 (2.36mm)	2.4	1.3	84.1	3.1	8.0
#16 (1.18mm)	1.9	1.1	65.2	2.8	3.6
#30 (.6mm)	1.7	1.0	43.0	2.6	2.5
#50 (.3mm)	1.6	0.9	15.6	2.4	1.7
#100 (.15mm)	1.5	0.9	2.7	2.2	1.6
#200 (75µm)	1.36	0.9	0.7	2.1	1.5
Pan	0.00	0.0	0.0	0.0	0.0
FM			2.90		
Wash Loss (#200/75µm)	1.3	0.8	0.3	1.9	1.3
Total Moisture	2.69	3.50	2.65	1.00	1.05

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-103

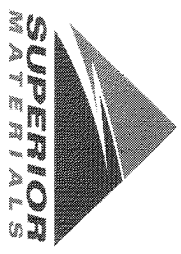
Sample Date: 9/9/24

Dates Test Represents: 9/10/2024 through 9/16/2024

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____



Superior Materials, LLC
 30701 W. 10 Mile Rd.
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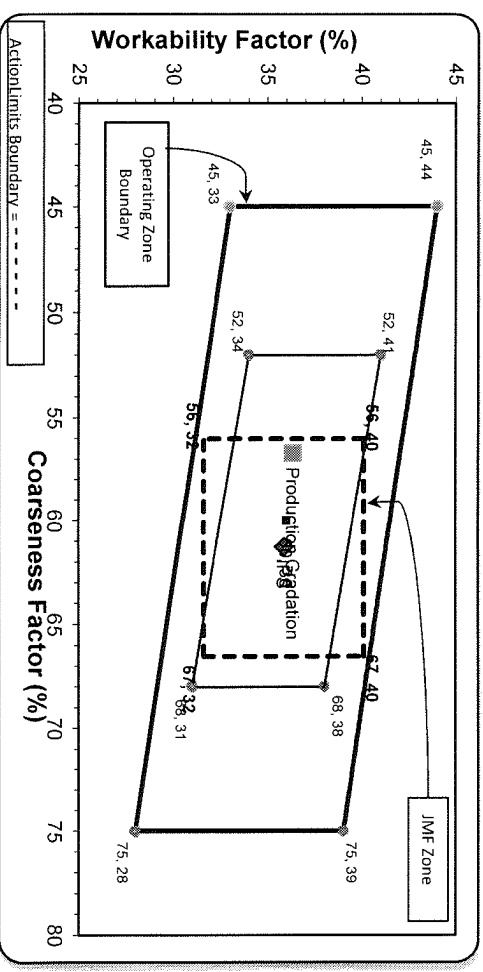
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stonoco	1475	8.79	2.69	50.0
26A	58-003	Stonoco	325	1.94	2.69	11.0
ZNS	63-114	Highland	1150	6.95	2.65	39.0
			Total Wt	2950		100.0

Sieve	6AA	26A	ZNS	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	92.8	100.0	100.0	96.4	3.6	3.6
1/2"	48.2	99.7	100.0	74.1	22.3	25.9
3/8"	27.3	89.4	100.0	62.5	11.6	37.5
#4	6.5	6.8	98.0	42.2	20.3	57.8
#8	2.3	1.8	83.4	33.9	8.3	66.1
#16	1.6	1.3	62.1	25.2	8.7	74.8
#30	1.5	1.1	40.6	16.7	8.5	83.3
#50	1.4	1.0	17.5	7.6	9.1	92.4
#100	1.3	1.0	3.9	2.3	5.4	97.7
LBW	1.1	0.9	0.9	1.0	1.3	99.0

*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

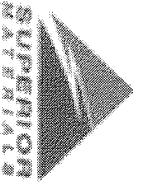
Coarseness Factor: 57 Workability Factor: 34 Adjusted WF: 36.4



Sieve	Coarseness Factor:	Workability Factor:	Adjusted WF:	Initial Production Sample (IPS)
2"	57	34	36.4	61
1.5"	57	34	36.4	36
1"	57	34	36.4	36
3/4"	57	34	36.4	36
1/2"	57	34	36.4	36
3/8"	57	34	36.4	36
#4	57	34	36.4	36
#8	57	34	36.4	36
#16	57	34	36.4	36
#30	57	34	36.4	36
#50	57	34	36.4	36
#100	57	34	36.4	36
LBW	57	34	36.4	36

PREPARED BY:
 SM, LLC Technical Service

Approved BY: _____



Daily Summary Report

Date Thursday, September 12, 2024

Sample Id	-674911912	-1097072124	-674904504
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1051 6AA LS	1022 2NS GR	1067 26A Mod LS
Specification	6AA LS	2NS GR Spec	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	19:47	19:49	19:49
2" (50mm)	100.0		100.0
1 1/2" (37.5mm)	100.0		100.0
1" (25mm)	100.0		100.0
3/4" (19mm)	92.8		100.0
1/2" (12.5mm)	48.2		99.7
3/8" (9.5mm)	27.3	100.0	89.4
#4 (4.75mm)	6.5	98.0	6.8
#8 (2.36mm)	2.3	83.4	1.8
#16 (1.18mm)	1.6	62.1	1.3
#30 (.6mm)	1.5	40.6	1.1
#50 (.3mm)	1.4	17.5	1.0
#100 (.15mm)	1.3	3.9	1.0
#200 (75µm)	1.24	1.1	0.9
Pan	0.00	0.0	0.0
FM		2.94	
Wash Loss (#200/75µm)	1.1	0.9	0.9
Total Moisture	1.51	2.86	0.65