

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 6/23/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 6/24/2025 through 6/30/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1530	9.11	2.69	51.9
26A	58-003	Stoneco	270	1.61	2.69	9.2
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		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"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	85.2	100.0	100.0	92.3	7.5	7.7
1/2"	44.1	99.0	100.0	70.9	21.4	29.1
3/8"	25.2	82.3	100.0	59.6	11.3	40.4
#4	4.8	6.2	98.8	41.6	18.0	58.4
#8	1.8	1.7	85.8	34.5	7.0	65.5
#16	1.3	1.3	69.4	27.8	6.7	72.2
#30	1.1	1.2	51.0	20.6	7.3	79.4
#50	1.1	1.1	25.2	10.5	10.1	89.5
#100	1.0	1.1	4.9	2.5	8.0	97.5
LBW	0.9	1.0	0.5	0.8	1.8	99.2

*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.



Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

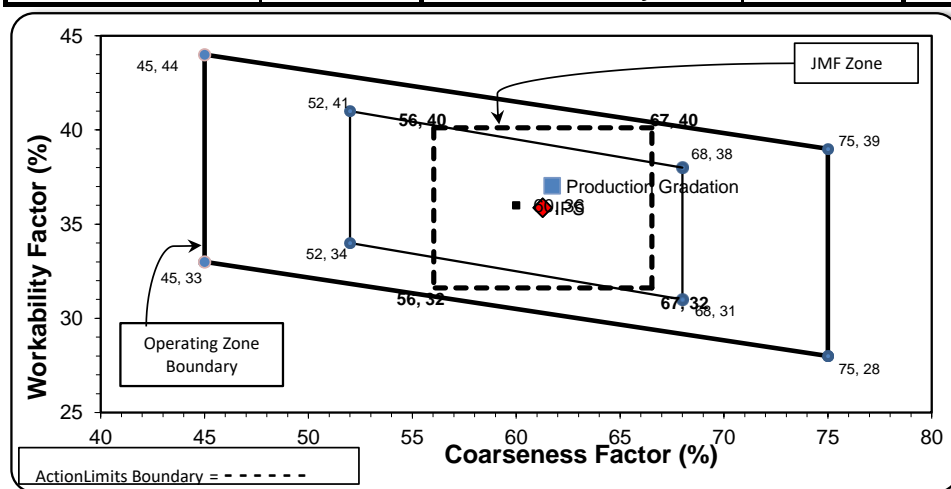
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	35	37.0
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Coarseness Factor:	61
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Workability Factor:	36
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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

PREPARED BY:
SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: p11

Sample Date: 6/23/25

Dates Test Represents: 6/24/2025 through 6/30/2025

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.0	100.0	100.0	98.5	1.5	1.5
3/4"	74.6	100.0	100.0	87.3	11.2	12.7
1/2"	32.4	96.5	100.0	65.9	21.4	34.1
3/8"	17.8	83.5	100.0	57.2	8.7	42.8
#4	2.7	19.6	96.7	41.7	15.6	58.3
#8	1.8	7.6	80.4	33.5	8.2	66.5
#16	1.6	4.4	62.8	26.1	7.4	73.9
#30	1.5	3.5	45.7	19.2	6.9	80.8
#50	1.4	3.3	23.7	10.4	8.8	89.6
#100	1.3	3.1	5.5	3.2	7.3	96.8
LBW	1.0	2.7	0.8	1.1	2.1	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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

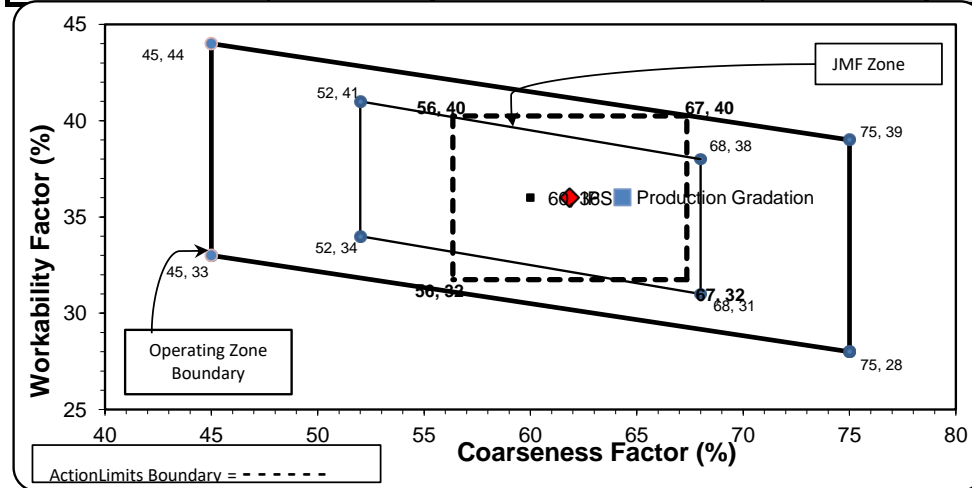


Superior Materials, LLC
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Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	34	36.0
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Coarseness Factor:		62	
Workability Factor:		36	
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"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
 SM, LLC Technical Service

Approved By:

[Signature]