Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Contractor: _____

Sample Date: 6/13/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/14/2026 through 6/21/2026

1 inch slump

MDOT No.: _____

Agg. Class	Pit #	Source	400	ft³	Specific Gravity	% Contribution
6AA	71-47	Preque Isle	1350	8.42	2.57	45.3
26A	71-47	Preque Isle	400	2.49	2.57	13.4
2NS	63-115	Ray Rd	1230	7.38	2.67	41.3
		Total Wt	**2980**	**18.30**		100.0

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

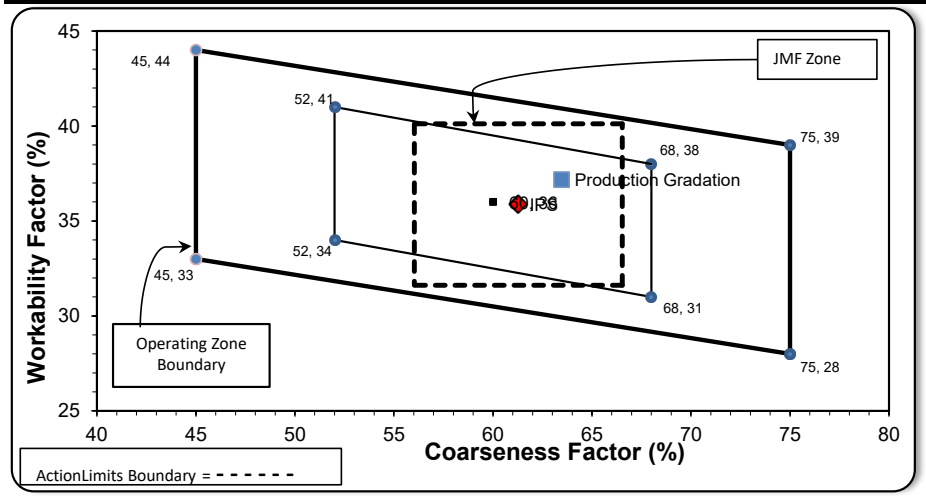
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	97.4	100.0	100.0	98.8	1.2	1.2
3/4"	75.7	100.0	100.0	89.0	9.8	11.0
1/2"	35.3	98.7	100.0	70.5	18.5	29.5
3/8"	13.7	82.4	100.0	58.5	12.0	41.5
#4	2.2	17.8	95.3	42.7	15.8	57.3
#8	1.6	5.7	80.4	34.7	8.0	65.3
#16	1.4	2.7	65.7	28.1	6.6	71.9
#30	1.3	2.0	49.4	21.2	6.9	78.8
#50	1.3	1.8	25.2	11.2	10.0	88.8
#100	1.2	1.7	5.8	3.2	8.1	96.8
LBW	1.0	1.5	0.6	0.9	2.3	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

Coarseness Factor:	63	Workability Factor:	35	Adjusted WF 37.2



Intial Production Sample (IPS)

Coarseness Factor:	61
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"	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:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor:

Sample Date: 6/13/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/14/2026 through 6/21/2026

1 inch slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	49.0
IA	58-003	StoneCo	280	1.67	2.69	9.2
2NS	63-114	Highland	1280	7.71	2.66	41.8
		Total Wt	**3060**	**18.32**		100.0

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

Sieve	6AA	IA	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"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	87.3	100.0	100.0	93.8	6.2	6.2
1/2"	48.4	87.1	100.0	73.5	20.2	26.5
3/8"	30.8	69.8	100.0	63.3	10.2	36.7
#4	4.1	15.9	98.7	44.8	18.6	55.2
#8	1.6	2.3	84.8	36.5	8.3	63.5
#16	1.1	1.7	67.4	28.9	7.6	71.1
#30	1.0	1.5	47.8	20.6	8.3	79.4
#50	1.0	1.5	23.9	10.6	10.0	89.4
#100	0.9	1.1	5.1	2.7	7.9	97.3
LBW	0.9	0.9	0.6	0.8	1.9	99.2

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

*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.

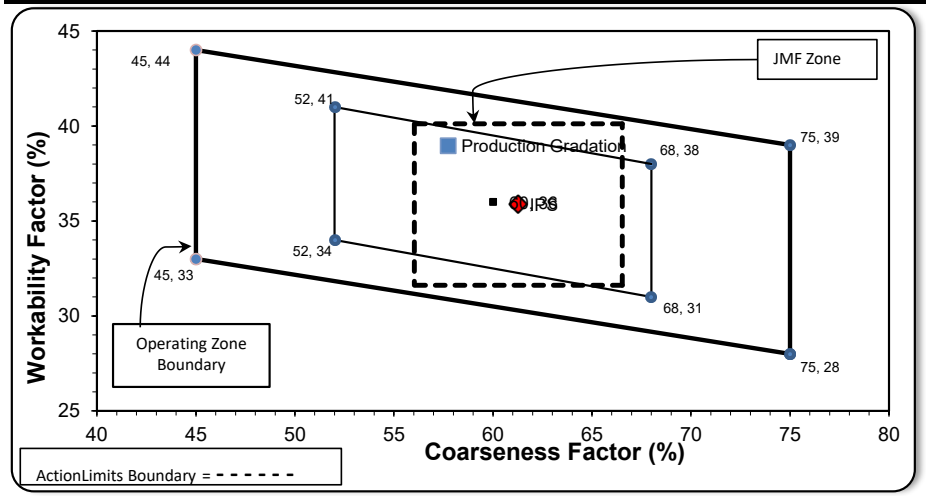
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	58	Workability Factor:	36	Adjusted WF: 39.0

Intial Production Sample (IPS)

Coarseness Factor:	61
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"	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:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor: _____

Sample Date: 6/13/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/14/2026 through 6/21/2026

1 inch slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	49.0
IA	58-003	StoneCo	280	1.67	2.69	9.2
2NS	63-114	Highland	1280	7.71	2.66	41.8
		Total Wt	**3060**	**18.32**		100.0

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

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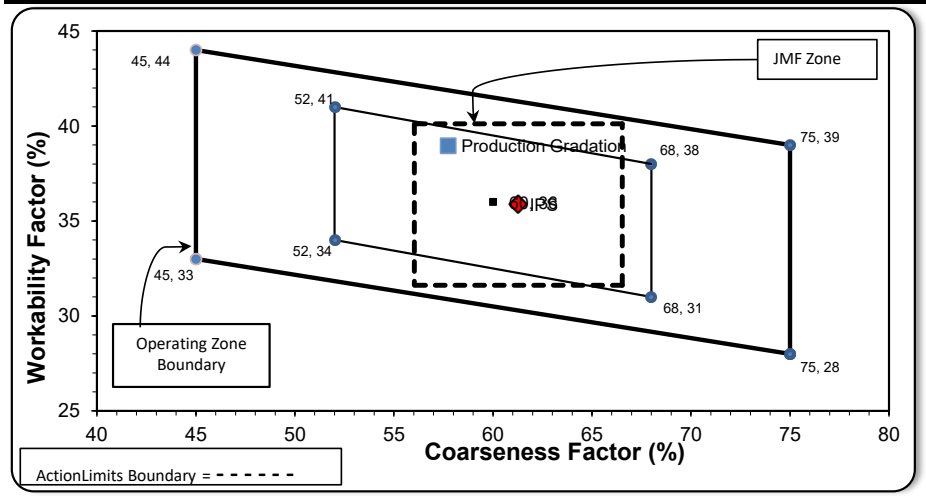
Sieve	6AA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	87.3	100.0	100.0	93.8	6.2	6.2
1/2"	48.4	87.1	100.0	73.5	20.2	26.5
3/8"	30.8	69.8	100.0	63.3	10.2	36.7
#4	4.1	15.9	98.7	44.8	18.6	55.2
#8	1.6	2.3	84.8	36.5	8.3	63.5
#16	1.1	1.7	67.4	28.9	7.6	71.1
#30	1.0	1.5	47.8	20.6	8.3	79.4
#50	1.0	1.5	23.9	10.6	10.0	89.4
#100	0.9	1.1	5.1	2.7	7.9	97.3
LBW	0.9	0.9	0.6	0.8	1.9	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.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	58	Workability Factor:	36	Adjusted WF 39.0



Intial Production Sample (IPS)

Coarseness Factor:	61
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"	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

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