

# Aggregate Optimization Chart

**PLANT #:** **P-35**

Sample Date: 6/26/26

Concrete Grade: **P1M, 350HP**

Contractor: \_\_\_\_\_

Dates Test Represents: 6/27/2026 through 7/3/2026

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stone Co	1350	8.04	2.69	42.7
IA	58-003	Stone Co	700	4.17	2.69	22.2
2NS	81-019	Pleasant Lk	1110	6.71	2.65	35.1
<b>Total Wt</b>			<b>3160</b>	<b>18.93</b>		<b>100.0</b>

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



**Superior Materials, LLC**

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	99.9	100.0	100.0	100.0	0.0	0.0
1"	62.5	100.0	100.0	84.0	16.0	16.0
3/4"	35.2	100.0	100.0	72.3	11.7	27.7
1/2"	13.1	90.3	100.0	60.7	11.6	39.3
3/8"	8.1	74.3	100.0	55.0	5.7	45.0
#4	2.5	17.6	97.6	39.3	15.8	60.7
#8	1.6	2.6	86.2	31.5	7.7	68.5
#16	1.3	1.6	69.9	25.5	6.1	74.5
#30	1.2	1.4	51.6	18.9	6.5	81.1
#50	1.1	1.2	17.9	7.0	11.9	93.0
#100	1.1	1.1	2.2	1.5	5.5	98.5
LBW	1.1	1.3	0.5	0.9	0.6	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.

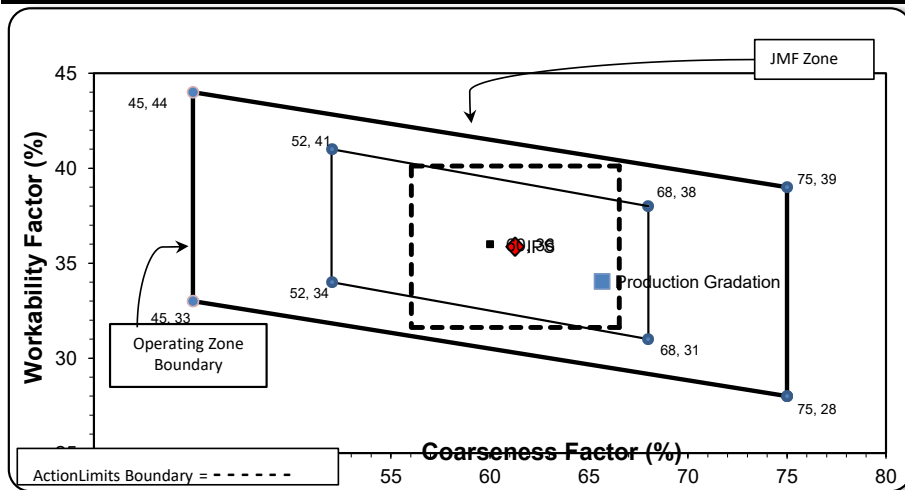
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>32</b>	<b>34.0</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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:  
Nancy Donahue

# Aggregate Optimization Chart

**PLANT #:** **P-38**

Sample Date: 6/26/26

Concrete Grade: **P1M, 350HP**

Contractor: \_\_\_\_\_

Dates Test Represents: 6/27/2026 through 7/3/2026

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stone Co	1350	8.04	2.69	42.7
IA	58-003	Stone Co	700	4.17	2.69	22.2
2NS	81-019	Pleasant Lk	1110	6.71	2.65	35.1
<b>Total Wt</b>			<b>3160</b>	<b>18.93</b>		<b>100.0</b>

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



**Superior Materials, LLC**

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	99.9	100.0	100.0	100.0	0.0	0.0
1"	62.5	100.0	100.0	84.0	16.0	16.0
3/4"	35.2	100.0	100.0	72.3	11.7	27.7
1/2"	13.1	90.3	100.0	60.7	11.6	39.3
3/8"	8.1	74.3	100.0	55.0	5.7	45.0
#4	2.5	17.6	97.6	39.3	15.8	60.7
#8	1.6	2.6	86.2	31.5	7.7	68.5
#16	1.3	1.6	69.9	25.5	6.1	74.5
#30	1.2	1.4	51.6	18.9	6.5	81.1
#50	1.1	1.2	17.9	7.0	11.9	93.0
#100	1.1	1.1	2.2	1.5	5.5	98.5
LBW	1.1	1.3	0.5	0.9	0.6	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.

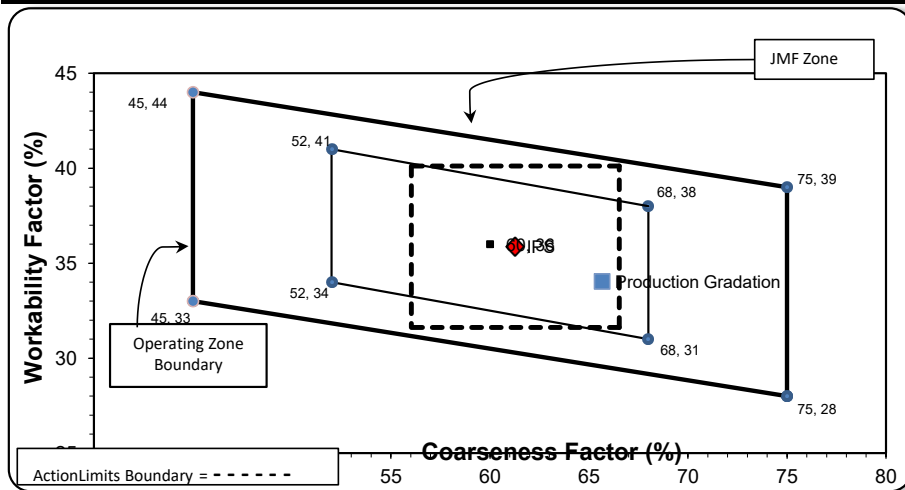
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>32</b>	<b>34.0</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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:  
Nancy Donahue

# Aggregate Optimization Chart

**PLANT #:** **P-103**

Sample Date: 6/26/26

Concrete Grade: **P1M, 350HP**

Contractor: \_\_\_\_\_

Dates Test Represents: 6/27/2026 through 7/3/2026

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stone Co	1340	7.98	2.69	41.9
IA	58-003	Stone Co	620	3.69	2.69	19.4
2NS	63-114	Highland	1240	7.47	2.66	38.8
<b>Total Wt</b>			<b>3200</b>	<b>19.15</b>		<b>100.0</b>

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



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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	99.9	100.0	100.0	100.0	0.0	0.0
1"	62.5	100.0	100.0	84.3	15.7	15.7
3/4"	35.2	100.0	100.0	72.9	11.4	27.1
1/2"	13.1	90.3	100.0	61.7	11.1	38.3
3/8"	8.1	74.3	100.0	56.5	5.2	43.5
#4	2.5	17.6	98.5	42.6	13.9	57.4
#8	1.6	2.6	83.8	33.6	9.0	66.4
#16	1.3	1.6	65.7	26.3	7.3	73.7
#30	1.2	1.4	45.1	18.3	8.1	81.8
#50	1.1	1.2	20.4	8.6	9.7	91.4
#100	1.1	1.1	3.9	2.2	6.4	97.8
LBW	1.1	1.3	0.3	0.8	1.4	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.

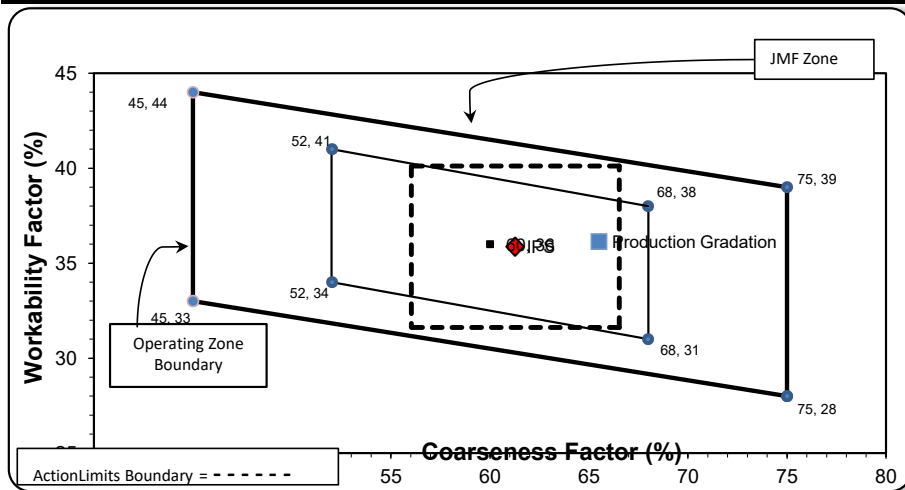
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>34</b>	<b>36.1</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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
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#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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