

# Aggregate Optimization Chart

**PLANT #:** **P-101**

Sample Date: 9/7/20 Concrete Grade: **S2M**  
 Dates Test Represents: 9/8/2020 through 9/14/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1725	10.55	2.62	56.5
26A	71-47	Presque Isle	100	0.61	2.62	3.3
2NS	75-051	Mid-Michigan	1230	7.41	2.66	40.3
<b>Total Wt</b>			<b>3055</b>	<b>18.57</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	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"	97.5	100.0	100.0	98.6	1.4	1.4
3/4"	78.6	100.0	100.0	87.9	10.7	12.1
1/2"	38.5	98.9	100.0	65.2	22.7	34.8
3/8"	21.6	89.7	100.0	55.4	9.8	44.6
#4	4.2	21.2	97.6	42.4	13.0	57.6
#8	2.1	5.2	79.7	33.4	8.9	66.6
#16	1.7	2.6	63.1	26.5	7.0	73.5
#30	1.7	2.2	47.1	20.0	6.5	80.0
#50	1.6	2.0	23.0	10.2	9.8	89.8
#100	1.5	1.9	5.5	3.1	7.1	96.9
LBW	1.4	1.6	0.9	1.2	1.9	98.8

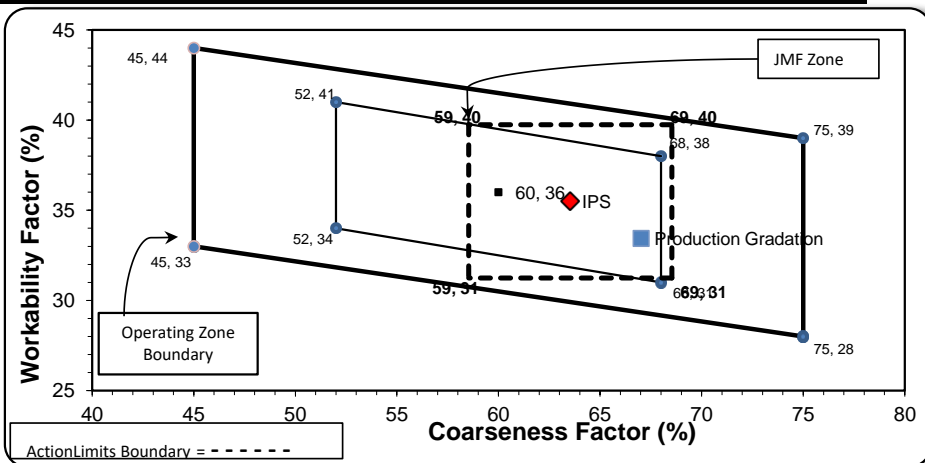
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2"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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>67</b>	<b>Workability Factor:</b>	<b>33</b>
---------------------------	-----------	----------------------------	-----------

Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>64</b>		
<b>Workability Factor:</b>	<b>35</b>		
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"	93.9	6.1	6.1
1/2"	71.4	22.5	28.6
3/8"	59.0	12.4	41.0
#4	45.1	13.9	54.9
#8	35.5	9.6	64.5
#16	28.3	7.2	71.7
#30	21.3	6.9	78.7
#50	11.0	10.3	89.0
#100	3.4	7.6	96.6
LBW	1.1	2.3	98.9



PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-102**

Sample Date: 9/7/20

Concrete Grade: **S2M**

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

Dates Test Represents: 9/8/2020 through 9/14/2020

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1640	9.77	2.69	52.9
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	63-114	Highland	1210	7.32	2.65	39.0
<b>Total Wt</b>			<b>3100</b>	<b>18.58</b>		<b>100.0</b>

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



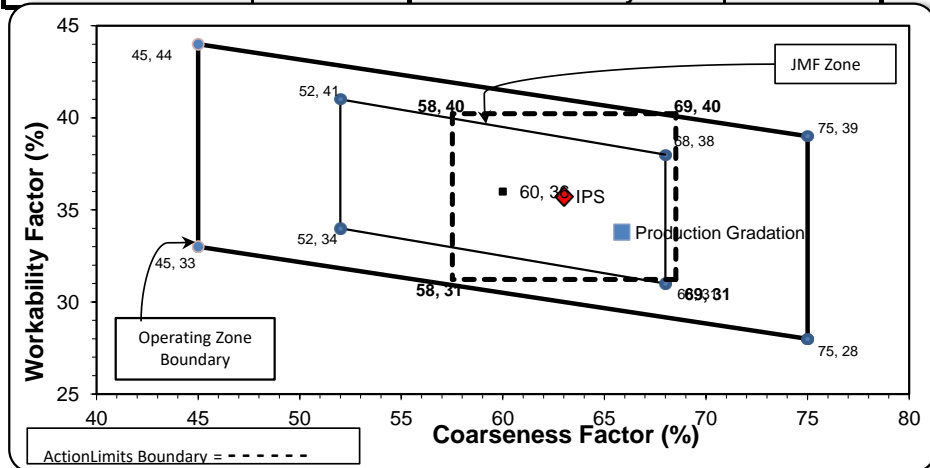
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	78.6	100.0	100.0	88.7	11.3	11.3
1/2"	41.4	99.7	100.0	69.0	19.7	31.0
3/8"	19.3	88.7	100.0	56.4	12.6	43.6
#4	3.8	21.4	99.0	42.4	14.0	57.6
#8	1.5	5.5	83.4	33.8	8.6	66.2
#16	1.3	2.5	64.8	26.2	7.6	73.8
#30	1.1	1.8	46.5	18.9	7.3	81.1
#50	0.9	1.6	19.8	8.3	10.5	91.7
#100	0.6	1.6	3.9	2.0	6.4	98.0
LBW	0.7	1.3	0.3	0.6	1.4	99.4

\*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.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>34</b>
---------------------------	-----------	----------------------------	-----------



Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>63</b>		
<b>Workability Factor:</b>	<b>36</b>		
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

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

Sample Date: 9/7/20

Concrete Grade: **S2M**

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

Dates Test Represents: 9/8/2020 through 9/14/2020

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1640	9.77	2.69	52.9
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	63-114	Highland	1210	7.32	2.65	39.0
<b>Total Wt</b>			<b>3100</b>	<b>18.58</b>		<b>100.0</b>

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



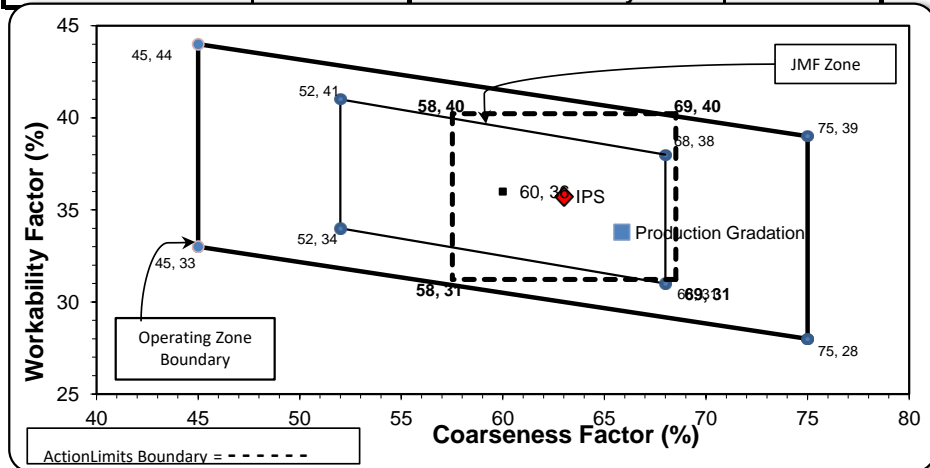
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	78.6	100.0	100.0	88.7	11.3	11.3
1/2"	41.4	99.7	100.0	69.0	19.7	31.0
3/8"	19.3	88.7	100.0	56.4	12.6	43.6
#4	3.8	21.4	99.0	42.4	14.0	57.6
#8	1.5	5.5	83.4	33.8	8.6	66.2
#16	1.3	2.5	64.8	26.2	7.6	73.8
#30	1.1	1.8	46.5	18.9	7.3	81.1
#50	0.9	1.6	19.8	8.3	10.5	91.7
#100	0.6	1.6	3.9	2.0	6.4	98.0
LBW	0.7	1.3	0.3	0.6	1.4	99.4

\*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.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>34</b>
---------------------------	-----------	----------------------------	-----------



Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>63</b>		
<b>Workability Factor:</b>	<b>36</b>		
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY:  
 SM, LLC Technical Service

Approved BY:

# Aggregate Optimization Chart

**PLANT #:** **P-12**

Sample Date: 9/7/20

Concrete Grade: **S2M**

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

Dates Test Represents: 9/8/2020 through 9/14/2020

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	220	1.35	2.62	7.2
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

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



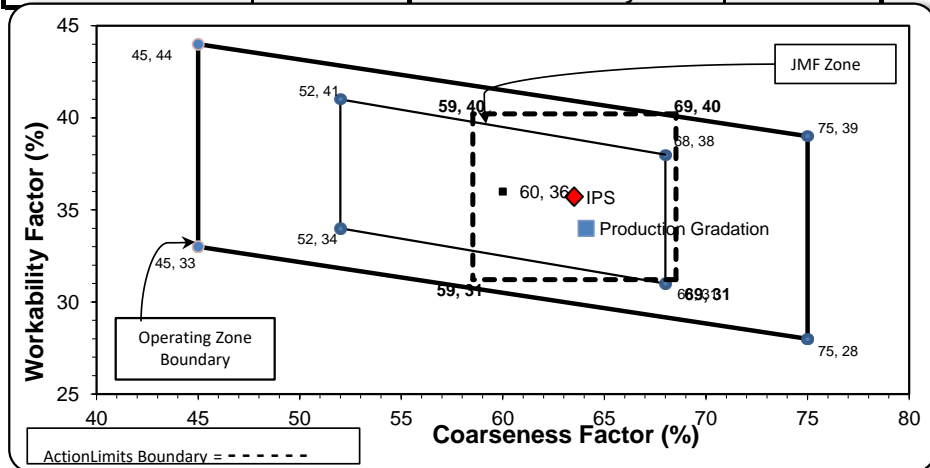
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	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"	97.5	100.0	100.0	98.7	1.3	1.3
3/4"	72.5	100.0	100.0	85.6	13.1	14.4
1/2"	35.4	96.9	100.0	65.9	19.7	34.1
3/8"	21.7	82.9	100.0	57.7	8.2	42.3
#4	6.3	21.1	97.3	44.1	13.6	55.9
#8	3.5	7.0	78.5	34.0	10.1	66.0
#16	2.6	4.0	60.8	26.2	7.8	73.8
#30	2.3	3.3	44.6	19.4	6.7	80.6
#50	2.2	2.9	21.2	9.9	9.5	90.1
#100	2.0	2.7	4.6	3.1	6.8	96.9
LBW	1.5	2.3	0.5	1.2	1.9	98.8

\*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.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor:** **64**      **Workability Factor:** **34**



Initial Production Sample (IPS)

<b>Coarseness Factor:</b> <b>64</b>		<b>Workability Factor:</b> <b>36</b>	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.2	12.1	40.8
#4	41.5	17.7	58.5
#8	35.7	5.8	64.3
#16	27.9	7.9	72.1
#30	18.3	9.5	81.7
#50	7.3	11.0	92.7
#100	2.0	5.3	98.0
LBW	0.9	1.1	99.1

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-32**

Sample Date: 9/7/20 Concrete Grade: **S2M**  
 Dates Test Represents: 9/8/2020 through 9/14/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

<----- 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"	97.6	100.0	100.0	98.7	1.3	1.3
3/4"	80.4	100.0	100.0	89.6	9.1	10.4
1/2"	42.7	96.9	100.0	69.4	20.2	30.6
3/8"	23.8	82.9	100.0	58.4	11.0	41.6
#4	3.5	21.1	96.5	42.2	16.2	57.8
#8	2.3	7.0	83.2	35.2	6.9	64.8
#16	2.0	4.0	67.6	28.6	6.6	71.4
#30	1.9	3.3	47.1	20.2	8.4	79.8
#50	1.8	2.9	21.5	9.8	10.4	90.2
#100	1.7	2.7	5.6	3.3	6.5	96.7
LBW	1.3	2.3	1.4	1.4	1.9	98.6

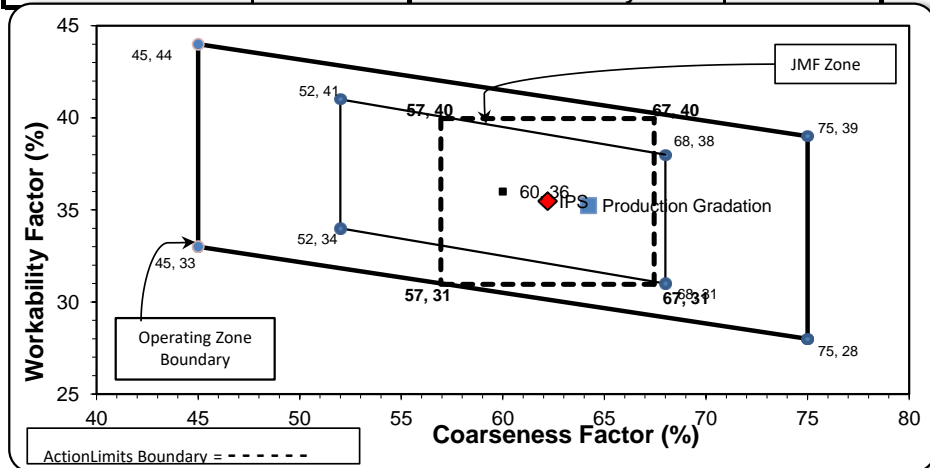


**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

\*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>64</b>	<b>Workability Factor:</b>	<b>35</b>
---------------------------	-----------	----------------------------	-----------



Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>62</b>		
<b>Workability Factor:</b>	<b>35</b>		
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:

# Aggregate Optimization Chart

**PLANT #:** **P-36**

Sample Date: 9/7/20 Concrete Grade: **S2M**

Dates Test Represents: 9/8/2020 through 9/14/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	350	2.14	2.62	11.5
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

<----- 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"	97.5	100.0	100.0	98.8	1.2	1.2
3/4"	72.5	100.0	100.0	86.5	12.3	13.5
1/2"	35.4	96.9	100.0	67.9	18.6	32.1
3/8"	21.7	82.9	100.0	59.5	8.3	40.5
#4	6.3	21.1	97.1	43.7	15.8	56.3
#8	3.5	7.0	84.0	35.6	8.1	64.4
#16	2.6	4.0	68.4	28.6	6.9	71.4
#30	2.3	3.3	48.8	20.7	7.9	79.3
#50	2.2	2.9	19.1	8.9	11.8	91.1
#100	2.0	2.7	2.5	2.3	6.7	97.7
LBW	1.5	2.3	0.4	1.2	1.1	98.8

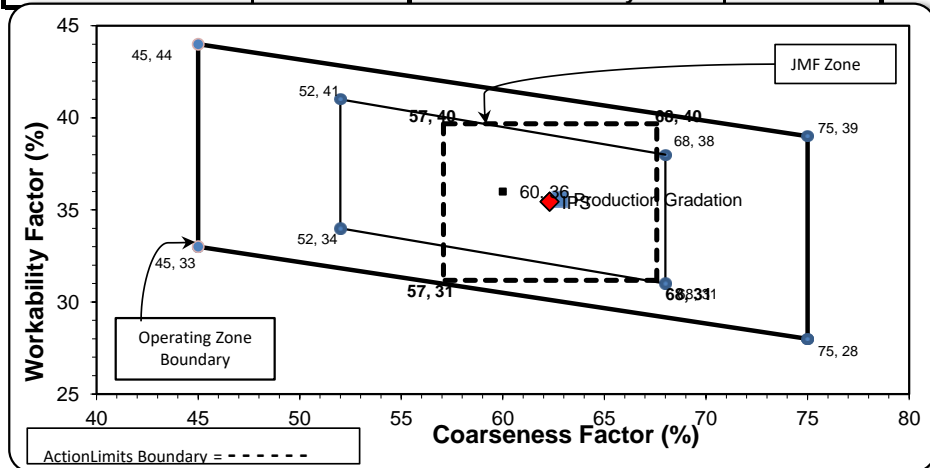
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2"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



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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor:** **63** **Workability Factor:** **36**



Initial 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"	99.1	0.9	0.9
3/4"	90.5	8.6	9.5
1/2"	69.8	20.7	30.2
3/8"	59.8	10.0	40.2
#4	42.2	17.6	57.8
#8	35.4	6.7	64.6
#16	28.8	6.7	71.2
#30	21.4	7.4	78.6
#50	8.8	12.6	91.2
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-39**

Sample Date: 9/7/20

Concrete Grade: **S2M**

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

Dates Test Represents: 9/8/2020 through 9/14/2020

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1650	10.09	2.62	54.1
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	41.0
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

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



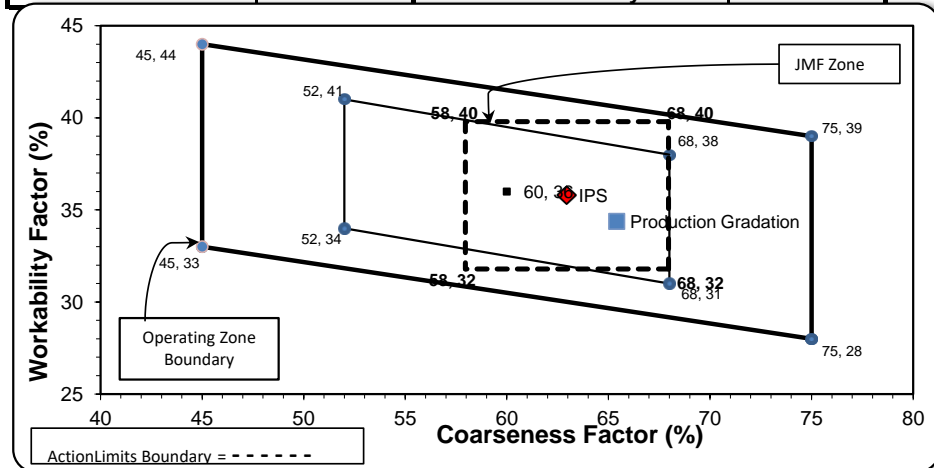
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	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"	97.5	100.0	100.0	98.6	1.4	1.4
3/4"	78.6	100.0	100.0	88.4	10.2	11.6
1/2"	38.5	98.9	100.0	66.7	21.7	33.3
3/8"	21.6	89.7	100.0	57.1	9.6	42.9
#4	4.2	21.2	95.6	42.5	14.6	57.5
#8	2.1	5.2	80.5	34.4	8.1	65.6
#16	1.7	2.6	64.8	27.6	6.8	72.4
#30	1.7	2.2	48.9	21.1	6.5	78.9
#50	1.6	2.0	25.6	11.5	9.6	88.5
#100	1.5	1.9	8.0	4.2	7.3	95.8
LBW	1.4	1.6	1.1	1.3	2.9	98.7

\*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.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>65</b>	<b>Workability Factor:</b>	<b>34</b>
---------------------------	-----------	----------------------------	-----------



Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>63</b>		
<b>Workability Factor:</b>	<b>36</b>		
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"	89.8	10.2	10.2
1/2"	70.7	19.1	29.3
3/8"	59.6	11.1	40.4
#4	43.2	16.4	56.8
#8	35.8	7.4	64.2
#16	29.2	6.6	70.8
#30	21.4	7.8	78.6
#50	9.8	11.6	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-02**

Sample Date: 9/7/20 Concrete Grade: **S2M**  
 Dates Test Represents: 9/8/2020 through 9/14/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	63-115	Ray Rd	1300	7.86	2.65	42.6
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

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



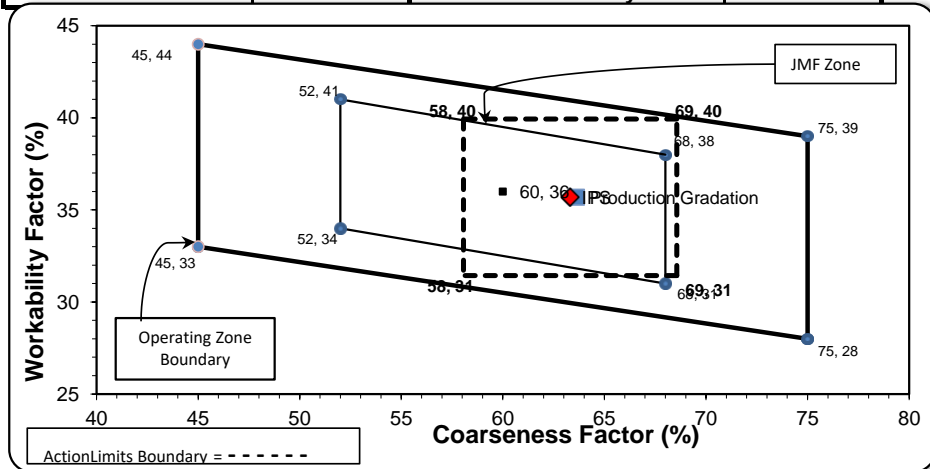
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	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"	97.5	100.0	100.0	98.7	1.3	1.3
3/4"	72.5	100.0	100.0	86.0	12.7	14.0
1/2"	35.4	96.9	100.0	67.0	19.1	33.0
3/8"	21.7	82.9	100.0	59.1	7.9	40.9
#4	6.3	21.1	97.3	46.1	13.0	53.9
#8	3.5	7.0	78.5	35.7	10.4	64.3
#16	2.6	4.0	60.8	27.5	8.2	72.5
#30	2.3	3.3	44.6	20.4	7.1	79.6
#50	2.2	2.9	21.2	10.3	10.1	89.7
#100	2.0	2.7	4.6	3.2	7.2	96.8
LBW	1.5	2.3	0.5	1.1	2.0	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.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>64</b>	<b>Workability Factor:</b>	<b>36</b>
---------------------------	-----------	----------------------------	-----------



Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>63</b>		
<b>Workability Factor:</b>	<b>36</b>		
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"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1

PREPARED BY:  
 SM, LLC Technical Service

Approved By: