

# Aggregate Optimization Chart

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

Sample Date: 8/26/19

Concrete Grade: **TM**

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

Dates Test Represents: 8/27/2019 through 9/2/2019

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	50.2
26A	71-47	Presque Isle	290	1.77	2.62	10.0
2NS	63-92	Grange Hall	1150	6.95	2.65	39.8
<b>Total Wt</b>			<b>2890</b>	<b>17.60</b>		<b>100.0</b>

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



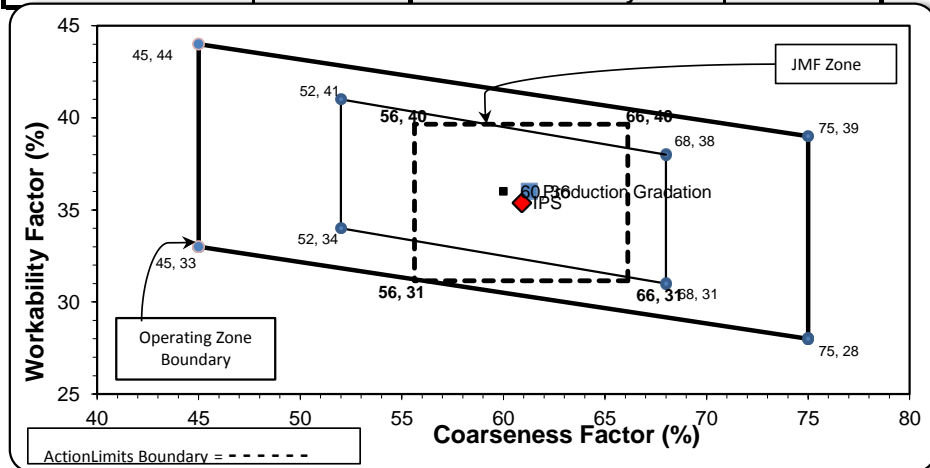
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

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"	98.2	100.0	100.0	99.1	0.9	0.9
3/4"	82.1	100.0	100.0	91.0	8.1	9.0
1/2"	43.2	96.8	100.0	71.2	19.8	28.8
3/8"	24.1	88.7	100.0	60.8	10.4	39.2
#4	4.2	22.7	97.7	43.3	17.5	56.7
#8	2.2	5.2	86.4	36.0	7.3	64.0
#16	1.8	2.7	71.7	29.7	6.3	70.3
#30	1.7	2.2	52.9	22.1	7.6	77.9
#50	1.6	2.0	20.3	9.1	13.0	90.9
#100	1.5	1.9	1.8	1.7	7.4	98.3
LBW	1.1	1.6	0.3	0.8	0.8	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 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>61</b>	<b>Workability Factor:</b>	<b>36</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>61</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"	99.1	0.9	0.9
3/4"	90.8	8.3	9.2
1/2"	70.6	20.2	29.4
3/8"	60.7	9.9	39.3
#4	42.3	18.4	57.7
#8	35.4	6.9	64.6
#16	28.7	6.7	71.3
#30	21.3	7.4	78.7
#50	8.8	12.5	91.2
#100	1.8	7.0	98.2
LBW	0.8	1.0	99.2

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

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

Sample Date: 8/26/19

Concrete Grade: **TM**

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

Dates Test Represents: 8/27/2019 through 9/2/2019

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1740	10.64	2.62	60.2
26A	71-47	Presque Isle	0	0.00	2.62	0.0
2NS	44-051	Krake Willis Rd	1150	6.95	2.65	39.8
<b>Total Wt</b>			<b>2890</b>	<b>17.60</b>		<b>100.0</b>

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



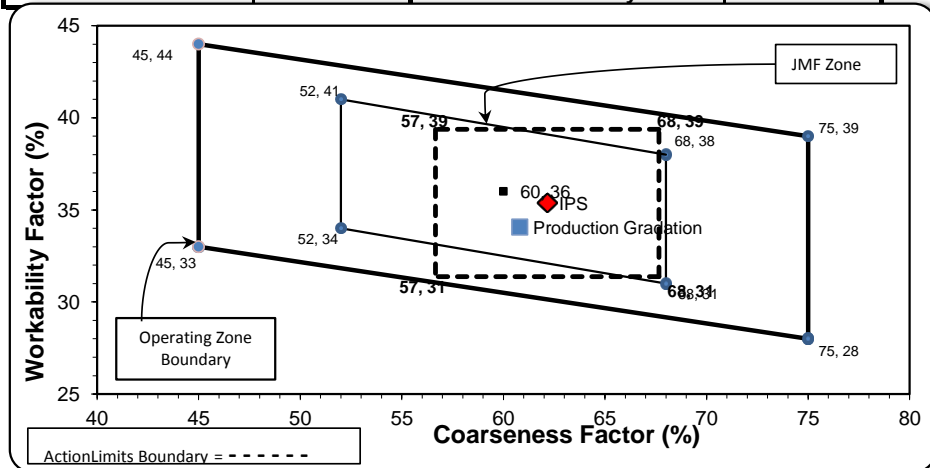
**Superior Materials, LLC**  
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Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.0	100.0	100.0	98.8	1.2	1.2
3/4"	84.0	100.0	100.0	90.4	8.4	9.6
1/2"	51.8	99.1	100.0	71.0	19.4	29.0
3/8"	33.4	91.7	100.0	59.9	11.1	40.1
#4	6.6	22.6	95.6	42.0	17.9	58.0
#8	2.7	5.2	81.5	34.1	8.0	65.9
#16	2.2	2.3	66.6	27.8	6.2	72.2
#30	2.1	1.8	52.2	22.0	5.8	78.0
#50	2.0	1.6	24.8	11.1	11.0	88.9
#100	2.0	1.5	6.8	3.9	7.2	96.1
LBW	1.8	1.3	1.5	1.7	2.2	98.3

\*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>61</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

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"	89.9	10.1	10.1
1/2"	70.9	19.0	29.1
3/8"	59.8	11.1	40.2
#4	42.8	17.0	57.2
#8	35.4	7.4	64.6
#16	28.8	6.5	71.2
#30	21.1	7.7	78.9
#50	9.7	11.4	90.3
#100	3.7	6.1	96.3
LBW	1.2	2.4	98.8

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