

# Aggregate Optimization Chart

## Production Gradation Report

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

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

Sample Date: 6/1/20

Concrete Grade: **DM**

Dates Test Represents: 6/2/2020 through 6/8/2020

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1660	10.15	2.62	57.0
26A	71-47	Presque Isle	100	0.61	2.62	3.4
2NS	75-051	Mid-Michigan	1150	6.93	2.66	39.5
<b>Total Wt</b>			<b>2910</b>	<b>17.69</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"	98.8	100.0	100.0	99.3	0.7	0.7
3/4"	85.5	100.0	100.0	91.7	7.6	8.3
1/2"	47.8	96.8	100.0	70.1	21.6	29.9
3/8"	28.6	83.3	100.0	58.7	11.4	41.3
#4	5.4	20.2	97.8	42.4	16.3	57.6
#8	2.4	4.7	81.2	33.6	8.8	66.4
#16	1.9	2.4	65.8	27.2	6.5	72.8
#30	1.7	1.9	50.2	20.9	6.3	79.1
#50	1.7	1.8	27.8	12.0	8.9	88.0
#100	1.6	1.7	6.6	3.6	8.4	96.4
LBW	1.5	1.5	1.0	1.3	2.3	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.

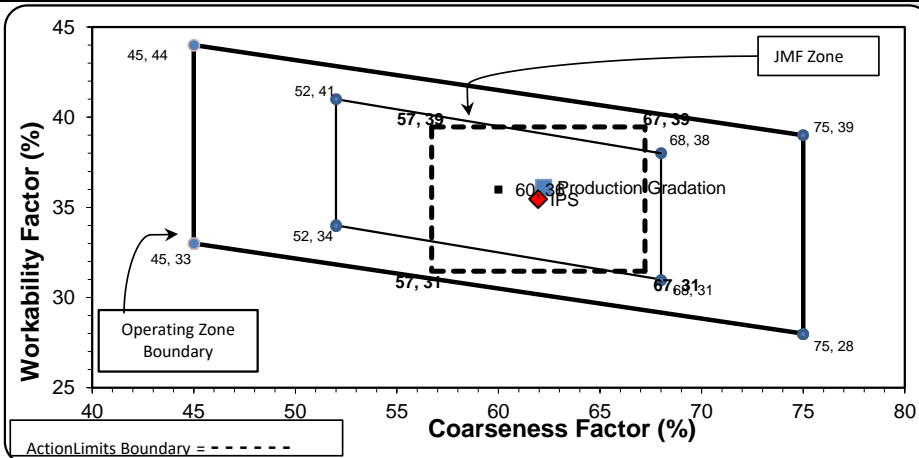
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>62</b>	<b>Workability Factor:</b>	<b>34</b>	<b>Adjusted WF</b>	<b>36.1</b>
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<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"	95.0	5.0	5.0
1/2"	70.5	24.5	29.5
3/8"	60.0	10.5	40.0
#4	44.4	15.6	55.6
#8	35.5	9.0	64.5
#16	28.5	7.0	71.5
#30	21.5	7.0	78.5
#50	10.2	11.3	89.8
#100	3.1	7.1	96.9
LBW	1.3	1.8	98.7



PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

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

Sample Date: 6/1/20 Concrete Grade: DM  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	50.8
26A	58-003	Stoneco	305	1.82	2.69	10.3
2NS	63-114	Highland	1150	6.95	2.65	38.9
<b>Total Wt</b>			<b>2955</b>	<b>17.71</b>		<b>100.0</b>

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



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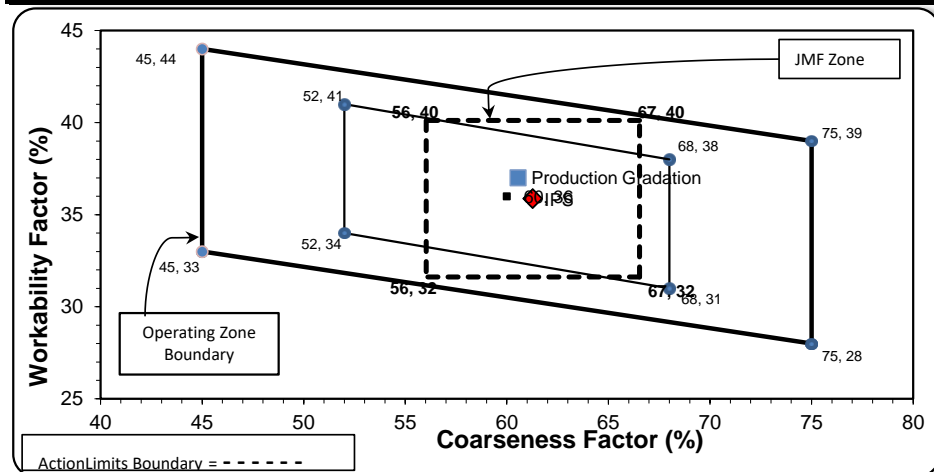
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	83.5	100.0	100.0	91.6	8.4	8.4
1/2"	43.3	99.5	100.0	71.2	20.5	28.8
3/8"	24.5	87.1	100.0	60.3	10.8	39.7
#4	6.0	16.7	99.4	43.5	16.9	56.5
#8	2.5	3.1	84.6	34.5	8.9	65.5
#16	2.3	1.5	67.8	27.7	6.8	72.3
#30	1.8	1.3	50.5	20.7	7.0	79.3
#50	1.5	1.2	21.6	9.3	11.4	90.7
#100	1.3	1.1	4.2	2.4	6.9	97.6
LBW	1.1	0.8	0.4	0.8	1.6	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  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>61</b>	<b>Workability Factor:</b>	<b>35</b>	<b>Adjusted WF</b>	<b>37.0</b>
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<b>Coarseness Factor:</b>	<b>61</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"	99.3	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

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

Sample Date: 6/1/20 Concrete Grade: **DM**  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	250	1.53	2.62	8.6
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
<b>Total Wt</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

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



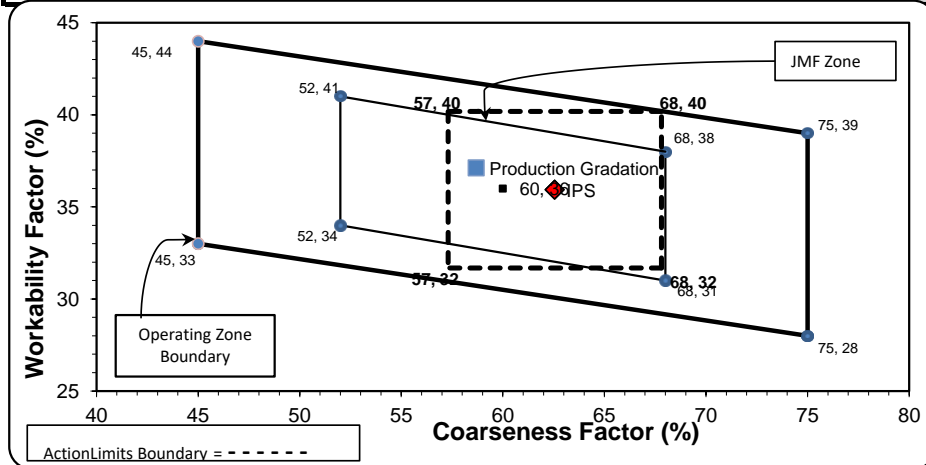
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

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"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	82.2	100.0	100.0	90.8	8.7	9.2
1/2"	48.6	96.9	100.0	73.1	17.7	26.9
3/8"	28.3	85.8	100.0	61.6	11.5	38.4
#4	8.0	28.4	98.6	45.6	16.0	54.4
#8	3.7	10.1	80.4	34.6	11.0	65.4
#16	2.8	5.6	62.5	26.7	7.9	73.3
#30	2.6	4.6	46.5	20.2	6.5	79.8
#50	2.4	4.2	24.2	11.2	9.0	88.8
#100	2.1	3.5	5.5	3.6	7.6	96.4
LBW	1.6	2.8	0.5	1.3	2.3	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  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b> 59	<b>Workability Factor:</b> 35	<b>Adjusted WF</b> 37.1	<b>Coarseness Factor:</b> 63
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<b>Coarseness Factor:</b> 63	<b>Workability Factor:</b> 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"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

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

Sample Date: 6/1/20 Concrete Grade: **DM**  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
<b>Total Wt</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

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



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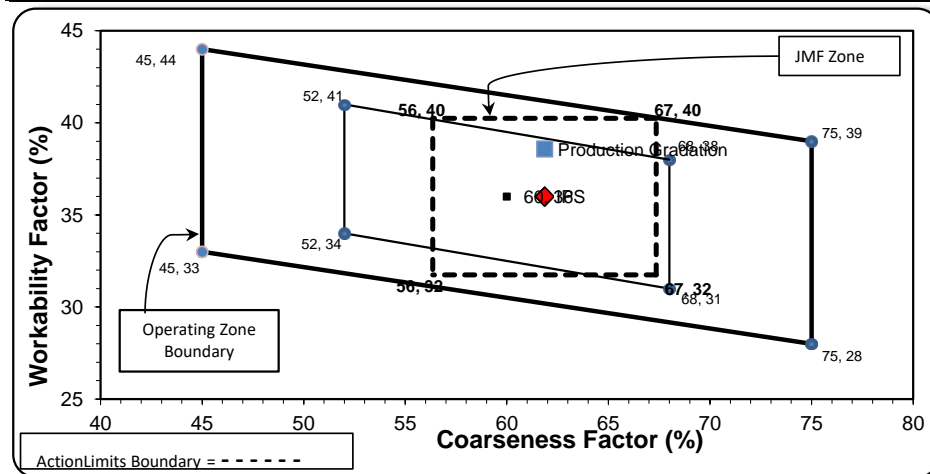
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	86.1	100.0	100.0	93.0	6.7	7.0
1/2"	49.0	96.9	100.0	74.1	18.9	25.9
3/8"	24.0	85.8	100.0	60.5	13.7	39.5
#4	4.5	28.4	96.3	43.3	17.2	56.7
#8	2.4	10.1	85.5	36.1	7.2	63.9
#16	2.0	5.6	71.7	30.0	6.1	70.0
#30	1.9	4.6	51.3	21.7	8.2	78.3
#50	1.7	4.2	20.9	9.6	12.2	90.4
#100	1.5	3.5	5.2	3.2	6.4	96.8
LBW	1.1	2.8	1.3	1.4	1.8	98.6

\*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  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>62</b>	<b>Workability Factor:</b>	<b>36</b>	<b>Adjusted WF</b>	<b>38.6</b>
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<b>Coarseness Factor:</b>	<b>62</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"	95.0	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:

# Aggregate Optimization Chart

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

Sample Date: 6/1/20 Concrete Grade: **DM**  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1505	8.97	2.69	50.9
26A	58-003	Stoneco	350	2.09	2.69	11.8
2NS	81-093	Burmeister	1100	6.65	2.65	37.2
<b>Total Wt</b>			<b>2955</b>	<b>17.70</b>		<b>100.0</b>

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



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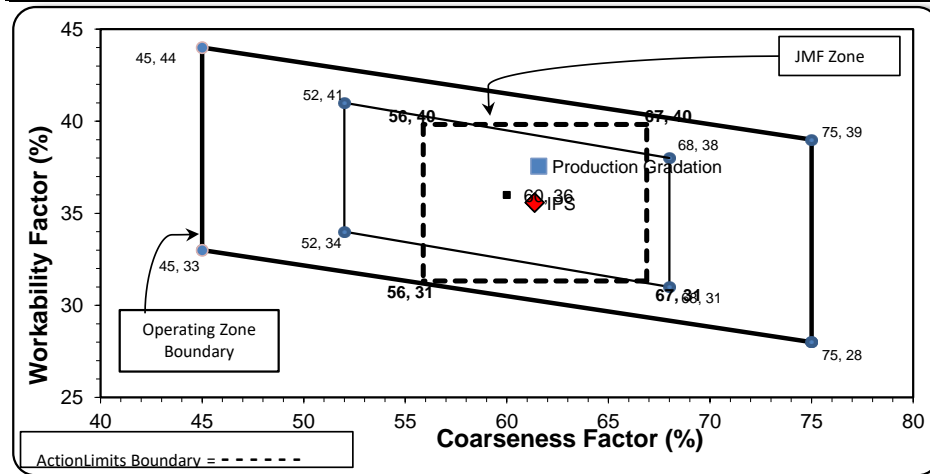
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	83.5	100.0	100.0	91.6	8.4	8.4
1/2"	43.3	99.5	100.0	71.1	20.5	28.9
3/8"	24.5	87.1	100.0	60.0	11.0	40.0
#4	6.0	16.7	98.4	41.7	18.4	58.3
#8	2.5	3.1	89.8	35.1	6.6	64.9
#16	2.3	1.5	66.6	26.1	8.9	73.9
#30	1.8	1.3	48.2	19.0	7.1	81.0
#50	1.5	1.2	20.8	8.6	10.4	91.4
#100	1.3	1.1	3.8	2.2	6.4	97.8
LBW	1.1	0.8	0.8	1.0	1.3	99.0

\*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  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>62</b>	<b>Workability Factor:</b>	<b>35</b>	<b>Adjusted WF</b>	<b>37.6</b>
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<b>Coarseness Factor:</b>	<b>61</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"	99.3	0.7	0.7
3/4"	89.1	10.2	10.9
1/2"	70.5	18.6	29.5
3/8"	60.5	10.0	39.5
#4	44.1	16.4	55.9
#8	35.6	8.5	64.4
#16	27.7	7.9	72.3
#30	20.6	7.1	79.4
#50	8.7	11.8	91.3
#100	1.6	7.1	98.4
LBW	1.1	0.6	98.9

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

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

Sample Date: 6/1/20 Concrete Grade: DM  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1555	9.51	2.62	53.5
26A	71-47	Presque Isle	250	1.53	2.62	8.6
2NS	63-92	Grange Hall	1100	6.65	2.65	37.9
<b>Total Wt</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

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



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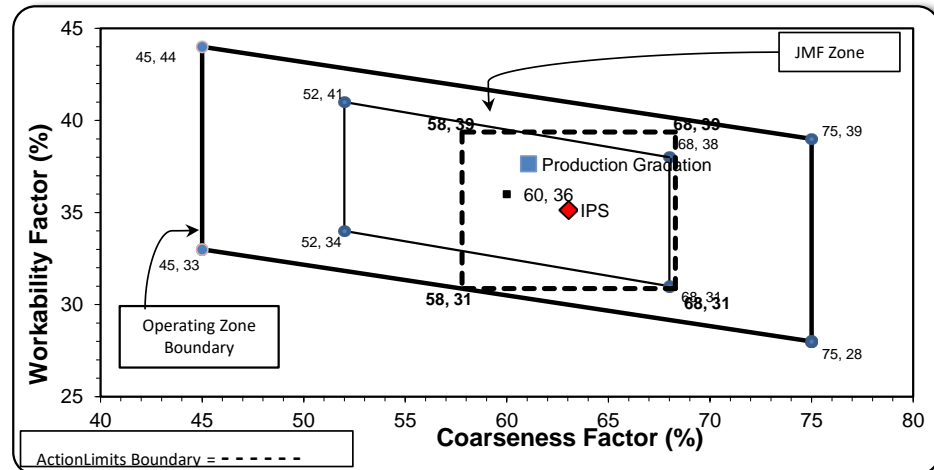
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	82.2	100.0	100.0	90.5	8.9	9.5
1/2"	48.6	96.9	100.0	72.2	18.3	27.8
3/8"	28.3	85.8	100.0	60.4	11.8	39.6
#4	8.0	28.4	97.5	43.6	16.8	56.4
#8	3.7	10.1	85.3	35.1	8.5	64.9
#16	2.8	5.6	71.3	29.0	6.2	71.0
#30	2.6	4.6	51.4	21.3	7.7	78.7
#50	2.4	4.2	22.7	10.2	11.0	89.8
#100	2.1	3.5	2.8	2.5	7.8	97.5
LBW	1.6	2.8	0.7	1.4	1.1	98.6

\*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  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>61</b>	<b>Workability Factor:</b>	<b>35</b>	<b>Adjusted WF</b>	<b>37.6</b>
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<b>Coarseness Factor:</b>	<b>63</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"	90.3	8.8	9.7
1/2"	69.2	21.1	30.8
3/8"	59.1	10.1	40.9
#4	41.8	17.3	58.2
#8	35.1	6.6	64.9
#16	28.5	6.6	71.5
#30	21.2	7.3	78.8
#50	8.7	12.5	91.3
#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: 6/1/20 Concrete Grade: **DM**  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	44-051	Krake Willis Rd	1100	6.65	2.65	37.9
<b>Total Wt</b>			<b>2905</b>	<b>17.69</b>		<b>100.0</b>

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



**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
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 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"	98.8	100.0	100.0	99.3	0.7	0.7
3/4"	85.5	100.0	100.0	92.0	7.3	8.0
1/2"	47.8	96.8	100.0	70.9	21.0	29.1
3/8"	28.6	83.3	100.0	59.4	11.5	40.6
#4	5.4	20.2	95.4	40.5	18.9	59.5
#8	2.4	4.7	81.2	32.4	8.1	67.6
#16	1.9	2.4	66.3	26.3	6.1	73.7
#30	1.7	1.9	50.6	20.2	6.1	79.8
#50	1.7	1.8	25.1	10.6	9.7	89.4
#100	1.6	1.7	7.5	3.8	6.7	96.2
LBW	1.5	1.5	0.8	1.2	2.6	98.8

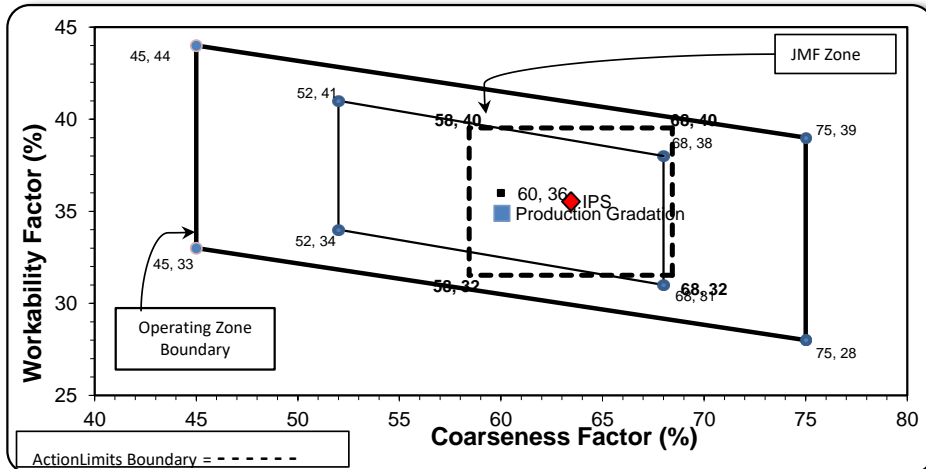
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2"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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	<b>60</b>	Workability Factor:	<b>32</b>	Adjusted WF	<b>34.9</b>
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Coarseness Factor:	<b>63</b>
Workability Factor:	<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"	89.7	10.3	10.3
1/2"	70.3	19.4	29.7
3/8"	59.1	11.2	40.9
#4	42.8	16.3	57.2
#8	35.5	7.3	64.5
#16	29.0	6.5	71.0
#30	21.2	7.7	78.8
#50	9.8	11.5	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: 6/1/20 Concrete Grade: **DM**  
 Dates Test Represents: 6/2/2020 through 6/8/2020

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1555	9.51	2.62	53.5
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
<b>Total Wt</b>			<b>2905</b>	<b>17.69</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"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	82.2	100.0	100.0	90.5	8.9	9.5
1/2"	48.6	96.9	100.0	72.3	18.2	27.7
3/8"	28.3	85.8	100.0	60.6	11.6	39.4
#4	8.0	28.4	98.6	45.3	15.4	54.7
#8	3.7	10.1	80.4	34.5	10.8	65.5
#16	2.8	5.6	62.5	26.6	7.9	73.4
#30	2.6	4.6	46.5	20.1	6.5	79.9
#50	2.4	4.2	24.2	11.2	9.0	88.8
#100	2.1	3.5	5.5	3.5	7.6	96.5
LBW	1.6	2.8	0.5	1.2	2.3	98.8

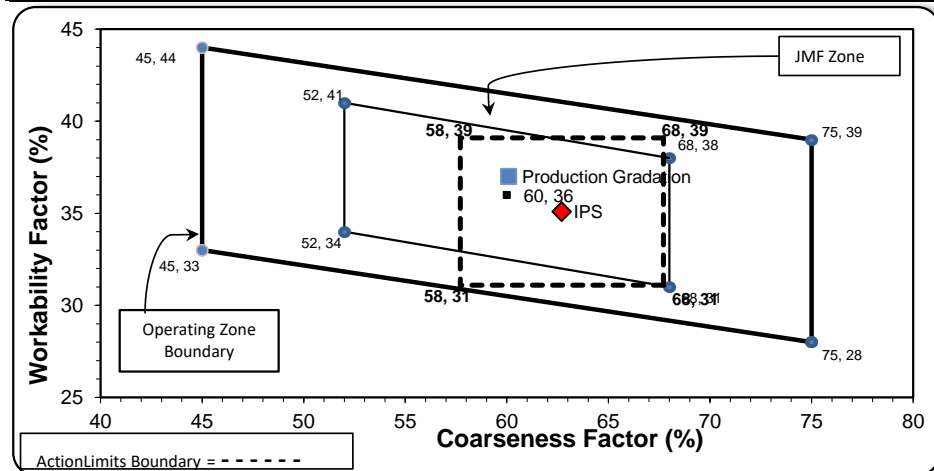
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2"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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>60</b>	<b>Workability Factor:</b>	<b>35</b>	<b>Adjusted WF</b>	<b>37.0</b>
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<b>Coarseness Factor:</b>	<b>63</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"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

PREPARED BY:  
 SM, LLC Technical Service

Approved By: