

Aggregate Optimization Chart

PLANT #: **P-101**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	75-051	Mid-Michigan	1200	7.23	2.66	39.1
Total Wt			3070	18.67		100.0

<---- 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"	98.2	100.0	100.0	99.4	0.6	0.6
1"	48.1	100.0	100.0	81.9	17.5	18.1
3/4"	14.2	98.2	100.0	69.6	12.3	30.4
1/2"	3.6	78.6	100.0	60.8	8.8	39.2
3/8"	2.6	53.8	100.0	54.0	6.8	46.0
#4	2.1	14.4	99.2	43.3	10.8	56.7
#8	1.9	2.4	83.8	34.0	9.2	66.0
#16	1.8	2.0	68.6	28.0	6.1	72.0
#30	1.7	1.9	52.8	21.7	6.2	78.3
#50	1.6	1.7	26.8	11.5	10.2	88.5
#100	1.5	1.6	6.0	3.3	8.2	96.7
LBW	1.3	1.5	0.7	1.1	2.2	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.

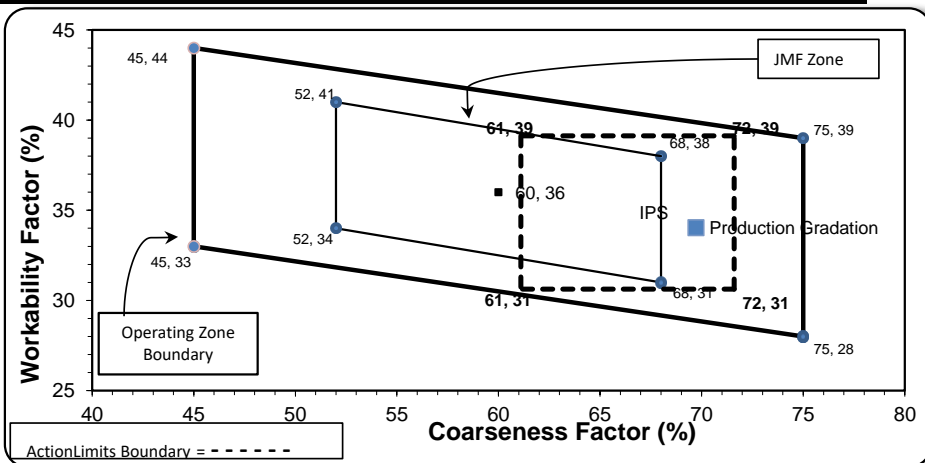
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	70	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:	66
Workability Factor:	35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	84.3	15.3	15.7
3/4"	74.8	9.6	25.2
1/2"	64.3	10.4	35.7
3/8"	56.8	7.5	43.2
#4	43.0	13.8	57.0
#8	34.9	8.1	65.1
#16	26.4	8.5	73.6
#30	19.9	6.5	80.1
#50	10.4	9.5	89.6
#100	3.4	7.0	96.6
LBW	1.2	2.2	98.8



PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-102**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1420	8.46	2.69	45.5
IA	58-003	Stoneco	500	2.98	2.69	16.0
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



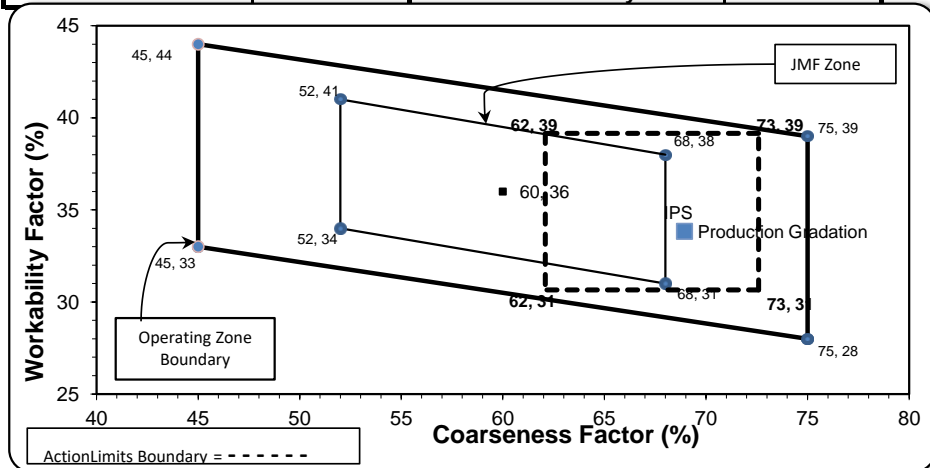
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 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.8	100.0	100.0	84.9	15.1	15.1
3/4"	45.9	100.0	100.0	75.4	9.5	24.6
1/2"	15.4	94.7	100.0	60.6	14.7	39.4
3/8"	5.7	83.2	100.0	54.4	6.3	45.6
#4	2.0	26.3	99.0	43.2	11.2	56.8
#8	1.6	6.2	83.5	33.8	9.4	66.2
#16	1.4	2.9	63.6	25.6	8.3	74.4
#30	1.4	2.3	43.3	17.7	7.9	82.3
#50	1.2	2.1	19.5	8.4	9.3	91.6
#100	1.2	2.0	4.6	2.6	5.7	97.4
LBW	1.2	1.7	0.7	1.1	1.5	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

Coarseness Factor:	69	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:	67		
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"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-12**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



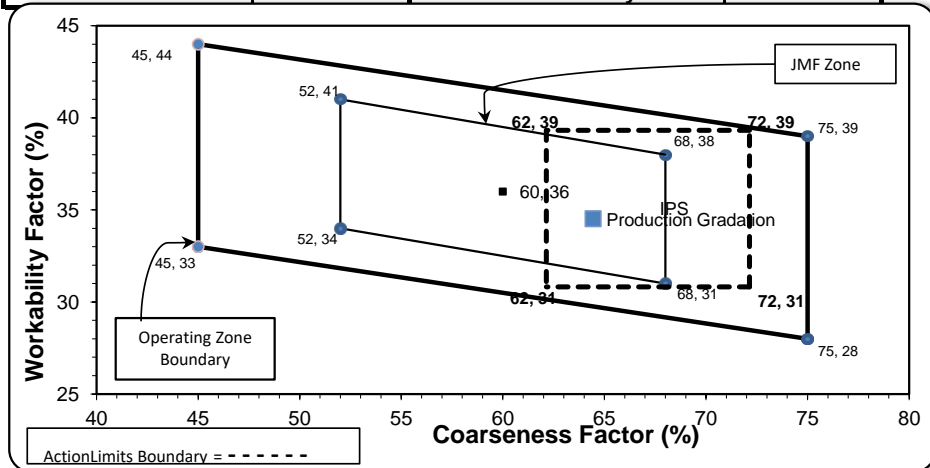
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 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.6	100.0	100.0	98.9	1.1	1.1
1"	34.6	100.0	100.0	78.3	20.6	21.7
3/4"	8.2	97.9	100.0	69.0	9.3	31.0
1/2"	2.5	83.9	100.0	63.4	5.5	36.6
3/8"	2.1	62.9	100.0	57.8	5.6	42.2
#4	1.8	18.2	96.3	44.6	13.3	55.4
#8	1.7	5.3	80.0	34.5	10.0	65.5
#16	1.6	3.3	64.5	27.7	6.9	72.3
#30	1.6	2.7	48.5	21.0	6.7	79.0
#50	1.6	2.4	26.1	11.8	9.2	88.2
#100	1.4	2.1	6.6	3.7	8.1	96.3
LBW	1.0	1.7	0.9	1.1	2.6	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

Coarseness Factor:	64	Workability Factor:	35
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Initial Production Sample (IPS)

Coarseness Factor:	67
Workability Factor:	35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.0	9.8	26.0
1/2"	63.7	10.3	36.3
3/8"	56.4	7.3	43.6
#4	43.0	13.4	57.0
#8	35.1	7.9	64.9
#16	29.0	6.1	71.0
#30	20.9	8.0	79.1
#50	8.1	12.8	91.9
#100	1.6	6.5	98.4
LBW	0.9	0.8	99.1

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-20**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	920	5.63	2.62	30.0
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



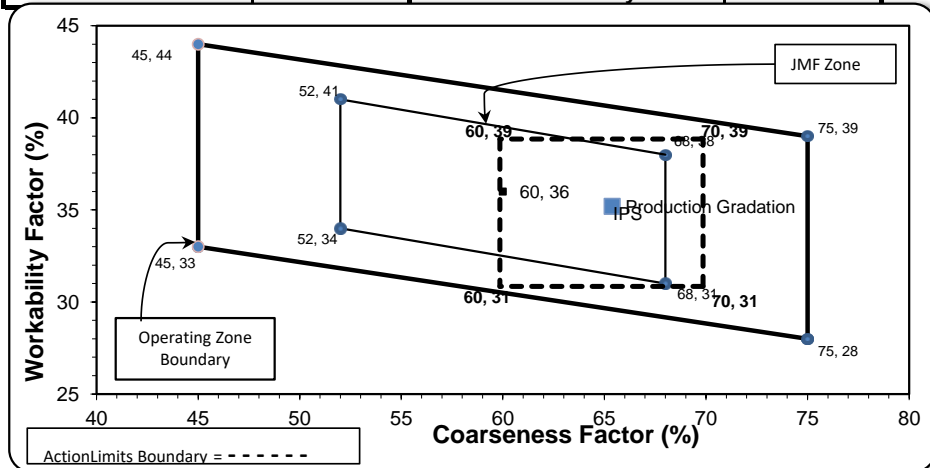
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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	98.2	100.0	100.0	99.4	0.6	0.6
1"	46.5	100.0	100.0	83.4	16.0	16.6
3/4"	11.9	98.8	100.0	72.4	11.1	27.6
1/2"	3.4	80.6	100.0	64.3	8.1	35.7
3/8"	2.5	59.3	100.0	57.6	6.7	42.4
#4	1.8	15.7	98.3	43.7	13.9	56.3
#8	1.7	3.4	86.1	35.2	8.5	64.8
#16	1.6	2.9	71.1	29.2	6.0	70.8
#30	1.5	2.7	51.6	21.4	7.7	78.6
#50	1.4	2.5	23.1	10.2	11.2	89.8
#100	1.3	2.4	3.2	2.4	7.8	97.6
LBW	1.1	2.2	0.4	1.2	1.2	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:	65	Workability Factor:	35
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Initial Production Sample (IPS)

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.1	0.9	0.9
1"	80.8	18.2	19.2
3/4"	71.3	9.6	28.7
1/2"	64.0	7.3	36.0
3/8"	57.7	6.2	42.3
#4	42.8	15.0	57.2
#8	34.8	7.9	65.2
#16	28.4	6.4	71.6
#30	20.2	8.2	79.8
#50	7.6	12.6	92.4
#100	1.6	6.0	98.4
LBW	1.0	0.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-32**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	920	5.63	2.62	30.0
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



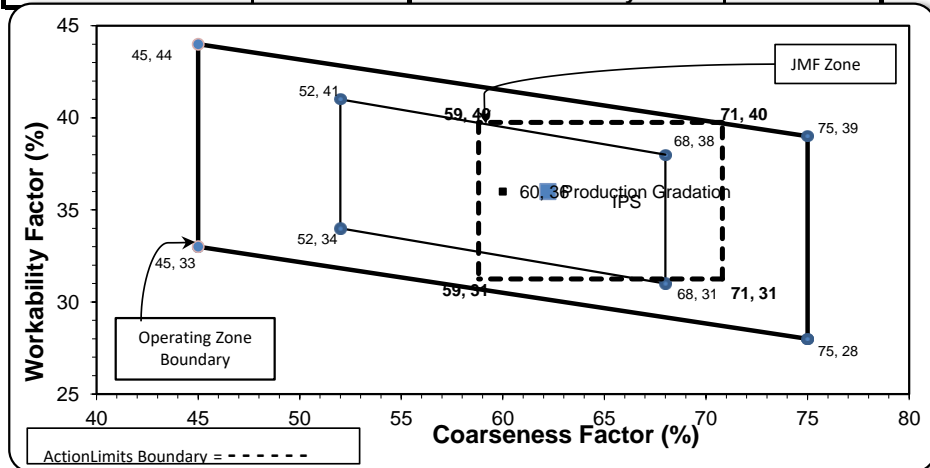
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 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.6	100.0	100.0	99.0	1.0	1.0
1"	34.6	100.0	100.0	80.8	18.2	19.2
3/4"	8.2	97.9	100.0	72.5	8.4	27.5
1/2"	2.5	83.9	100.0	66.6	5.9	33.4
3/8"	2.1	62.9	100.0	60.2	6.4	39.8
#4	1.8	18.2	96.8	45.4	14.8	54.6
#8	1.7	5.3	83.3	36.0	9.4	64.0
#16	1.6	3.3	68.1	29.2	6.8	70.8
#30	1.6	2.7	46.8	20.3	8.9	79.7
#50	1.6	2.4	22.5	10.3	10.0	89.7
#100	1.4	2.1	6.2	3.6	6.8	96.4
LBW	1.0	1.7	1.5	1.4	2.2	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

Coarseness Factor: **62** **Workability Factor:** **36**



Initial Production Sample (IPS)

Coarseness Factor: **65**
Workability Factor: **36**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-35**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-093	Burmeister	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



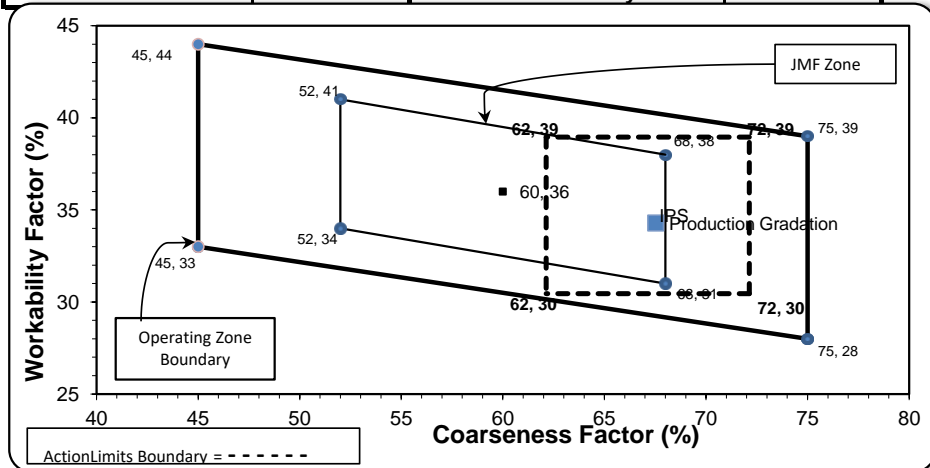
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	66.8	100.0	100.0	85.4	14.6	14.6
3/4"	45.9	100.0	100.0	76.2	9.2	23.8
1/2"	15.4	94.7	100.0	61.9	14.3	38.1
3/8"	5.7	83.2	100.0	55.6	6.3	44.4
#4	2.0	26.3	99.0	43.6	12.0	56.4
#8	1.6	6.2	84.5	34.3	9.3	65.7
#16	1.4	2.9	65.6	26.4	7.9	73.6
#30	1.4	2.3	44.7	18.2	8.1	81.8
#50	1.2	2.1	15.4	6.8	11.4	93.2
#100	1.2	2.0	2.5	1.8	5.0	98.2
LBW	1.2	1.7	0.7	1.1	0.7	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

Coarseness Factor: **68** **Workability Factor:** **34**



Initial Production Sample (IPS)

Coarseness Factor: **67**
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"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-36**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



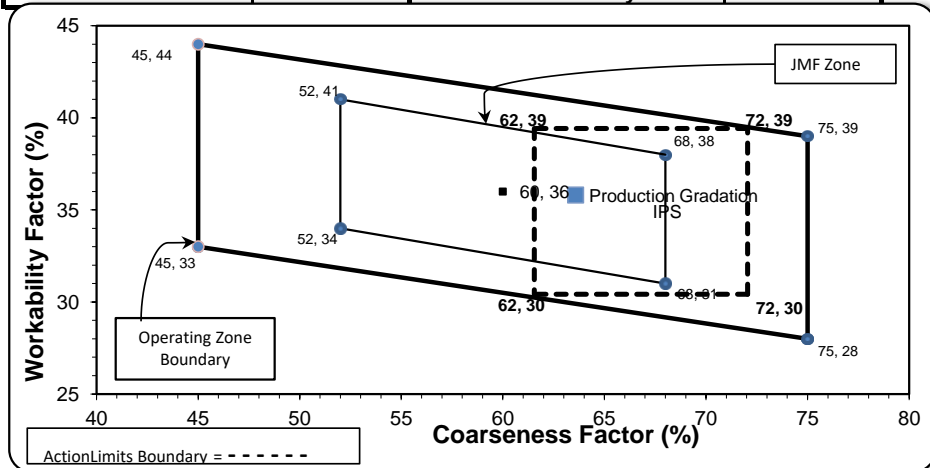
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.6	100.0	100.0	99.0	1.0	1.0
1"	34.6	100.0	100.0	80.4	18.6	19.6
3/4"	8.2	97.9	100.0	71.8	8.6	28.2
1/2"	2.5	83.9	100.0	65.8	6.0	34.2
3/8"	2.1	62.9	100.0	59.2	6.6	40.8
#4	1.8	18.2	98.3	44.6	14.6	55.4
#8	1.7	5.3	86.1	35.8	8.8	64.2
#16	1.6	3.3	71.1	29.3	6.5	70.7
#30	1.6	2.7	51.6	21.5	7.8	78.5
#50	1.6	2.4	23.1	10.3	11.2	89.7
#100	1.4	2.1	3.2	2.3	7.9	97.7
LBW	1.0	1.7	0.4	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

Coarseness Factor:	64	Workability Factor:	36
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Initial Production Sample (IPS)

Coarseness Factor:	67
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"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-39**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	750	4.59	2.62	24.4
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



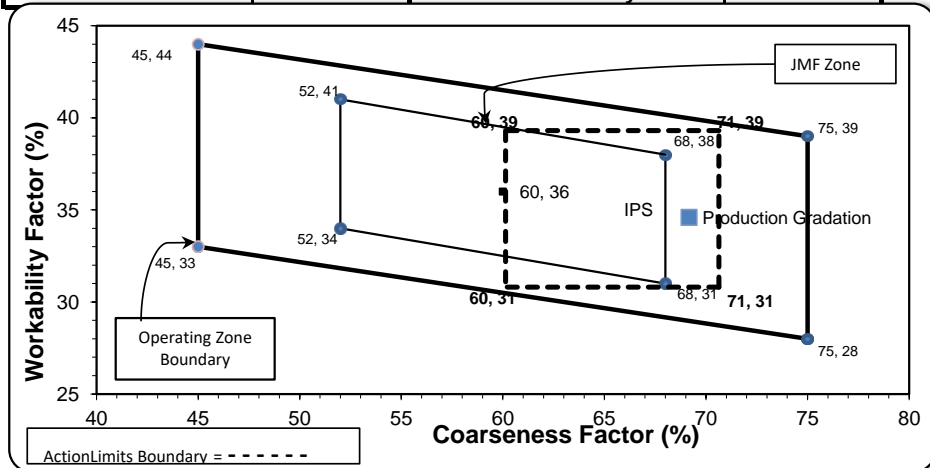
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	98.2	100.0	100.0	99.4	0.6	0.6
1"	48.1	100.0	100.0	81.9	17.5	18.1
3/4"	14.2	98.2	100.0	69.7	12.3	30.3
1/2"	3.6	78.6	100.0	61.2	8.5	38.8
3/8"	2.6	53.8	100.0	54.8	6.4	45.2
#4	2.1	14.4	97.6	44.0	10.8	56.0
#8	1.9	2.4	81.9	34.6	9.4	65.4
#16	1.8	2.0	67.1	28.4	6.2	71.6
#30	1.7	1.9	51.3	21.9	6.5	78.1
#50	1.6	1.7	27.0	12.0	10.0	88.0
#100	1.5	1.6	8.8	4.5	7.5	95.5
LBW	1.3	1.5	1.2	1.3	3.2	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

Coarseness Factor: **69** **Workability Factor:** **35**



Initial Production Sample (IPS)

Coarseness Factor: 65		Workability Factor: 35	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-02**

Sample Date: 7/26/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/27/2021 through 8/2/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	870	5.32	2.62	28.3
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



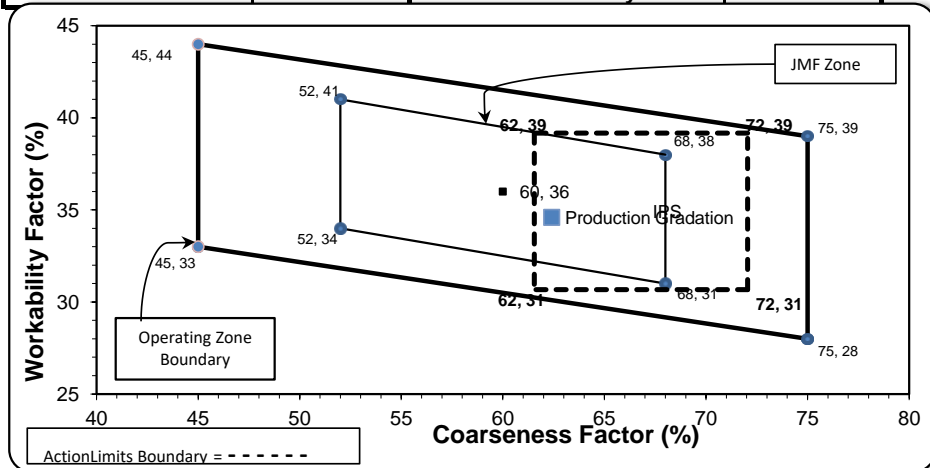
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.6	100.0	100.0	98.9	1.1	1.1
1"	34.6	100.0	100.0	79.8	19.2	20.2
3/4"	8.2	97.9	100.0	71.0	8.8	29.0
1/2"	2.5	83.9	100.0	65.3	5.7	34.7
3/8"	2.1	62.9	100.0	59.2	6.1	40.8
#4	1.8	18.2	96.3	44.9	14.3	55.1
#8	1.7	5.3	80.0	34.6	10.3	65.4
#16	1.6	3.3	64.5	27.7	6.9	72.3
#30	1.6	2.7	48.5	21.0	6.7	79.0
#50	1.6	2.4	26.1	11.8	9.2	88.2
#100	1.4	2.1	6.6	3.7	8.1	96.3
LBW	1.0	1.7	0.9	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

Coarseness Factor:	62	Workability Factor:	35
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Initial Production Sample (IPS)

Coarseness Factor:	67		
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"	85.0	15.0	15.0
3/4"	72.3	12.7	27.7
1/2"	64.5	7.8	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:
 SM, LLC Technical Service

Approved By: