

Aggregate Optimization Chart

PLANT #: **P-101**

Sample Date: 6/28/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 6/29/2021 through 7/5/2021

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"	99.2	100.0	100.0	99.7	0.3	0.3
1"	50.0	100.0	100.0	82.6	17.1	17.4
3/4"	14.8	98.4	100.0	69.9	12.7	30.1
1/2"	3.3	79.6	100.0	61.0	8.9	39.0
3/8"	2.4	56.5	100.0	54.6	6.3	45.4
#4	1.8	12.7	99.0	42.6	12.0	57.4
#8	1.6	3.7	79.7	32.7	10.0	67.3
#16	1.6	2.5	63.4	26.0	6.7	74.0
#30	1.6	2.2	50.1	20.7	5.3	79.3
#50	1.4	2.1	28.6	12.2	8.5	87.8
#100	1.4	2.0	8.0	4.1	8.1	95.9
LBW	1.2	1.8	0.9	1.2	2.9	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

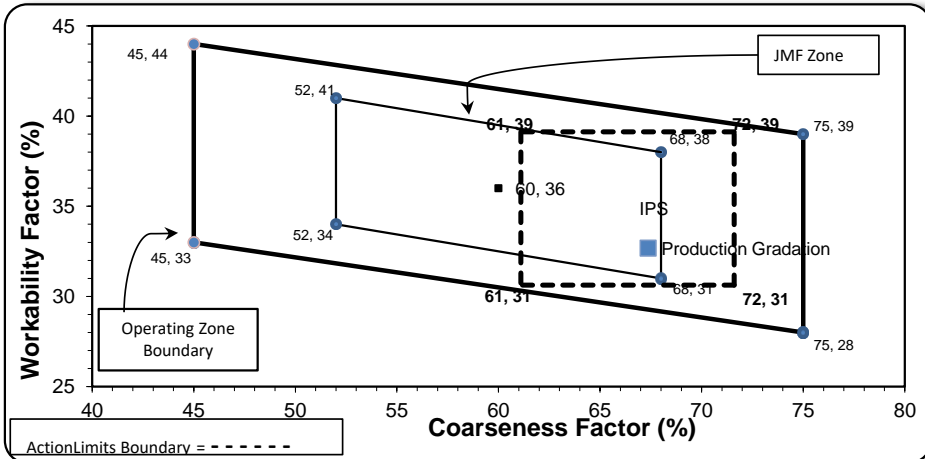
Coarseness Factor:	67	Workability Factor:	33
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Initial Production Sample (IPS)

Coarseness Factor:	66
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Workability Factor:	35
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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: 6/28/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 6/29/2021 through 7/5/2021

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%



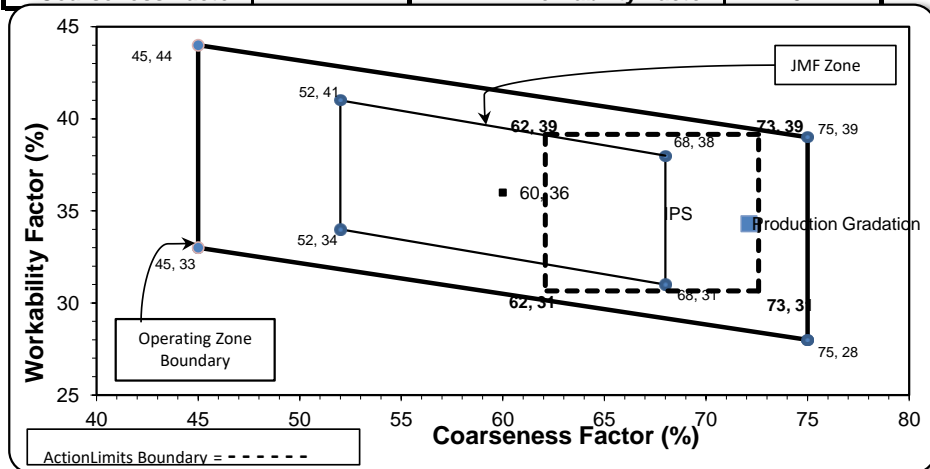
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 Suite 500
 Farmington Hills, MI 48336

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"	68.3	100.0	100.0	85.6	14.4	14.4
3/4"	38.9	100.0	100.0	72.2	13.4	27.8
1/2"	15.8	94.4	100.0	60.8	11.4	39.2
3/8"	1.4	84.4	100.0	52.6	8.2	47.4
#4	1.1	26.2	99.1	42.8	9.8	57.2
#8	1.0	6.3	85.4	34.3	8.5	65.7
#16	1.0	2.6	66.9	26.6	7.7	73.4
#30	0.9	1.6	46.8	18.7	7.9	81.3
#50	0.9	1.3	22.3	9.2	9.5	90.8
#100	0.8	1.2	5.5	2.7	6.5	97.3
LBW	0.8	0.9	0.9	0.9	1.8	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 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:	72	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: 6/28/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 6/29/2021 through 7/5/2021

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%



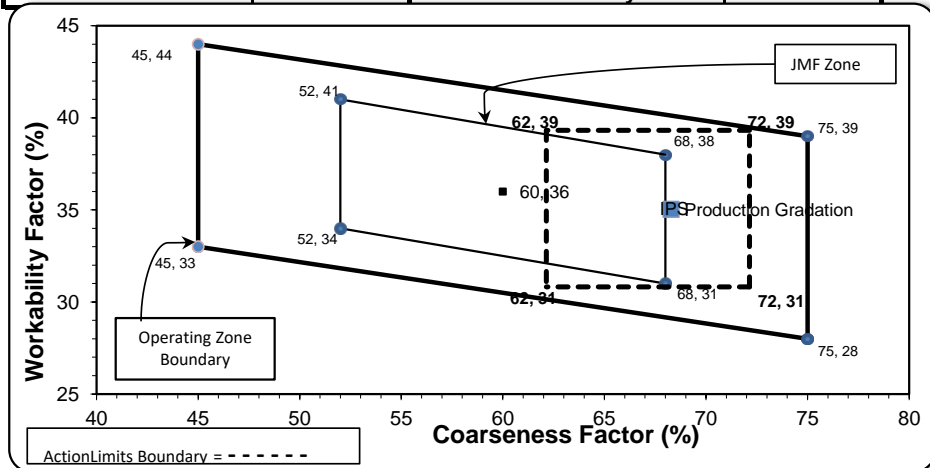
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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.7	100.0	100.0	98.9	1.1	1.1
1"	41.8	100.0	100.0	80.7	18.2	19.3
3/4"	9.3	98.2	100.0	69.4	11.3	30.6
1/2"	3.0	79.9	100.0	62.5	6.9	37.5
3/8"	2.5	54.1	100.0	55.6	6.9	44.4
#4	2.3	12.2	96.8	43.4	12.3	56.6
#8	2.2	5.4	80.8	35.0	8.3	65.0
#16	2.2	3.6	65.4	28.3	6.7	71.7
#30	2.2	2.9	48.5	21.2	7.1	78.8
#50	2.1	2.6	25.0	11.6	9.7	88.4
#100	2.1	2.2	5.9	3.7	7.9	96.3
LBW	1.9	1.6	0.9	1.4	2.3	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:	68	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

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Aggregate Optimization Chart

PLANT #: **P-20**

Contractor: _____

Sample Date: 6/28/21

Concrete Grade: **P1M**

Dates Test Represents: 6/29/2021 through 7/5/2021

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%



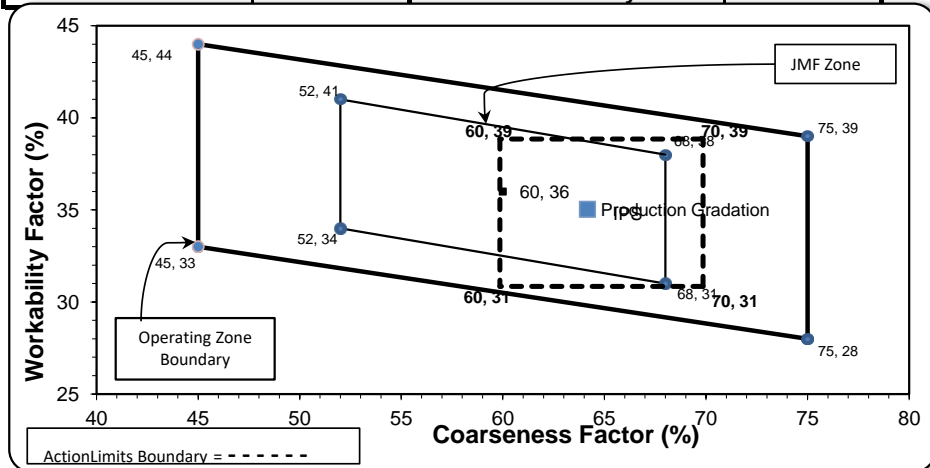
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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	97.2	100.0	100.0	99.1	0.9	0.9
1"	47.1	100.0	100.0	83.6	15.5	16.4
3/4"	13.7	99.1	100.0	73.0	10.6	27.0
1/2"	2.9	82.3	100.0	64.6	8.4	35.4
3/8"	2.1	62.0	100.0	58.3	6.3	41.7
#4	1.6	17.3	98.0	44.0	14.3	56.0
#8	1.5	4.5	85.0	35.0	8.9	65.0
#16	1.4	2.8	69.4	28.4	6.6	71.6
#30	1.4	2.4	49.2	20.4	8.0	79.6
#50	1.3	2.2	21.9	9.6	10.8	90.4
#100	1.2	2.1	3.1	2.2	7.4	97.8
LBW	1.1	1.9	0.7	1.2	1.0	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:** **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"	99.1	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: 6/28/21 Concrete Grade: **P1M**
 Dates Test Represents: 6/29/2021 through 7/5/2021

Contractor: _____

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	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



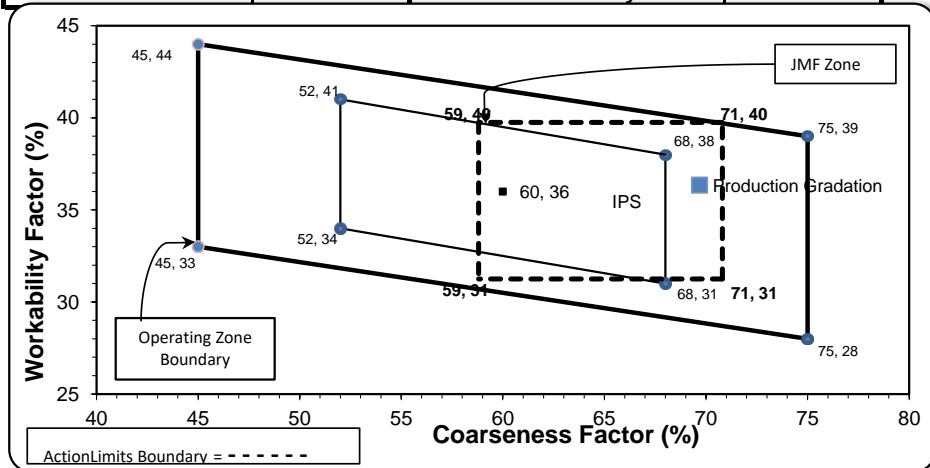
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 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.7	100.0	100.0	98.9	1.1	1.1
1"	41.8	100.0	100.0	80.7	18.2	19.3
3/4"	9.3	98.2	100.0	69.4	11.3	30.6
1/2"	3.0	79.9	100.0	62.5	6.9	37.5
3/8"	2.5	54.1	100.0	55.6	6.9	44.4
#4	2.3	12.2	96.0	43.0	12.6	57.0
#8	2.2	5.4	84.0	36.3	6.7	63.7
#16	2.2	3.6	68.8	29.7	6.7	70.3
#30	2.2	2.9	49.4	21.6	8.1	78.4
#50	2.1	2.6	23.4	10.9	10.7	89.1
#100	2.1	2.2	6.2	3.8	7.1	96.2
LBW	1.9	1.6	1.4	1.6	2.2	98.4

*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

Coarseness Factor: **70** **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: 6/28/21 Concrete Grade: **P1M**

Dates Test Represents: 6/29/2021 through 7/5/2021

Contractor: _____

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%



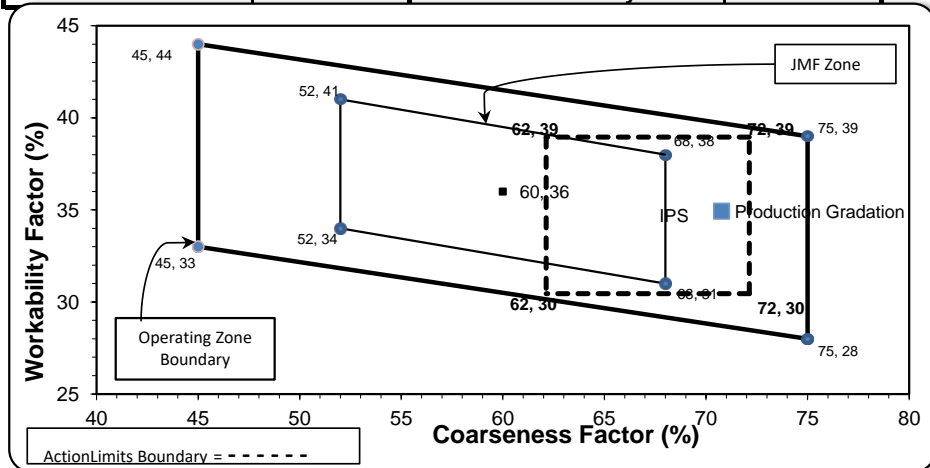
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	68.3	100.0	100.0	86.1	13.9	13.9
3/4"	38.9	100.0	100.0	73.2	12.9	26.8
1/2"	15.8	94.4	100.0	62.0	11.1	38.0
3/8"	1.4	84.4	100.0	54.0	8.1	46.0
#4	1.1	26.2	98.1	42.8	11.1	57.2
#8	1.0	6.3	86.8	34.9	7.9	65.1
#16	1.0	2.6	70.2	27.9	7.0	72.1
#30	0.9	1.6	49.5	19.7	8.2	80.3
#50	0.9	1.3	17.2	7.2	12.5	92.8
#100	0.8	1.2	2.8	1.6	5.6	98.4
LBW	0.8	0.9	0.9	0.9	0.8	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 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: **71** **Workability Factor:** **35**



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: 6/28/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 6/29/2021 through 7/5/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1050	6.42	2.62	34.2
IA	71-47	Presque Isle	820	5.02	2.62	26.7
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



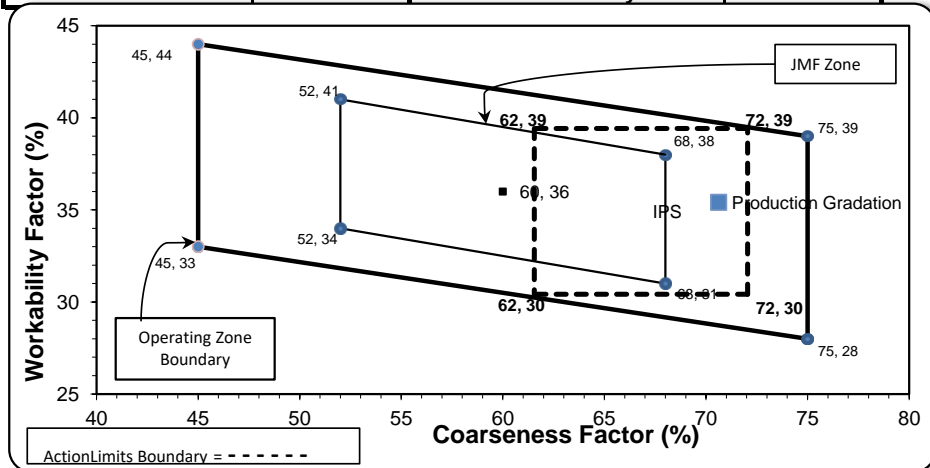
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.7	100.0	100.0	98.9	1.1	1.1
1"	41.8	100.0	100.0	80.1	18.8	19.9
3/4"	9.3	98.2	100.0	68.5	11.6	31.5
1/2"	3.0	79.9	100.0	61.5	7.0	38.5
3/8"	2.5	54.1	100.0	54.4	7.1	45.6
#4	2.3	12.2	98.0	42.4	12.0	57.6
#8	2.2	5.4	85.0	35.4	6.9	64.6
#16	2.2	3.6	69.4	28.8	6.6	71.2
#30	2.2	2.9	49.2	20.8	8.1	79.2
#50	2.1	2.6	21.9	10.0	10.8	90.0
#100	2.1	2.2	3.1	2.5	7.5	97.5
LBW	1.9	1.6	0.7	1.4	1.2	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: **71** **Workability Factor:** **35**



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: 6/28/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 6/29/2021 through 7/5/2021

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%



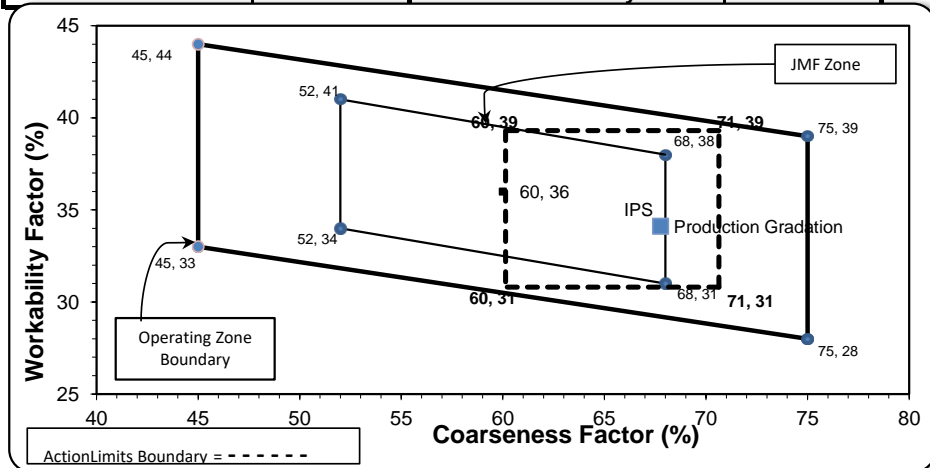
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	99.2	100.0	100.0	99.7	0.3	0.3
1"	50.0	100.0	100.0	82.6	17.1	17.4
3/4"	14.8	98.4	100.0	69.9	12.7	30.1
1/2"	3.3	79.6	100.0	61.3	8.6	38.7
3/8"	2.4	56.5	100.0	55.4	6.0	44.6
#4	1.8	12.7	97.0	43.2	12.1	56.8
#8	1.6	3.7	80.2	34.1	9.1	65.9
#16	1.6	2.5	64.1	27.3	6.8	72.7
#30	1.6	2.2	47.4	20.4	6.9	79.6
#50	1.4	2.1	24.1	10.8	9.6	89.2
#100	1.4	2.0	7.6	4.1	6.7	95.9
LBW	1.2	1.8	1.5	1.5	2.6	98.5

*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: **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: 6/28/21 Concrete Grade: **P1M**
 Dates Test Represents: 6/29/2021 through 7/5/2021

Contractor: _____

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%



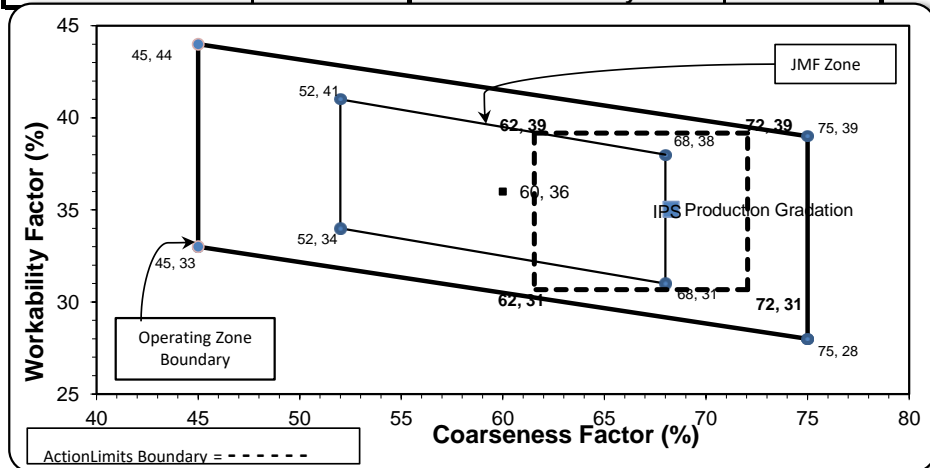
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.7	100.0	100.0	98.9	1.1	1.1
1"	41.8	100.0	100.0	80.7	18.2	19.3
3/4"	9.3	98.2	100.0	69.4	11.3	30.6
1/2"	3.0	79.9	100.0	62.5	6.9	37.5
3/8"	2.5	54.1	100.0	55.6	6.9	44.4
#4	2.3	12.2	96.8	43.4	12.3	56.6
#8	2.2	5.4	80.8	35.0	8.3	65.0
#16	2.2	3.6	65.4	28.3	6.7	71.7
#30	2.2	2.9	48.5	21.2	7.1	78.8
#50	2.1	2.6	25.0	11.6	9.7	88.4
#100	2.1	2.2	5.9	3.7	7.9	96.3
LBW	1.9	1.6	0.9	1.4	2.3	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:	68	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: