

Aggregate Optimization Chart

PLANT #: **P-101**

Sample Date: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

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"	98.8	100.0	100.0	99.6	0.4	0.4
1"	49.7	100.0	100.0	82.5	17.1	17.5
3/4"	11.2	99.0	100.0	68.8	13.7	31.2
1/2"	3.4	80.2	100.0	61.2	7.6	38.8
3/8"	2.5	55.6	100.0	54.4	6.7	45.6
#4	2.1	11.7	99.3	42.6	11.9	57.4
#8	1.9	3.6	83.5	34.2	8.4	65.8
#16	1.9	2.0	68.3	27.9	6.4	72.1
#30	1.8	1.8	52.3	21.5	6.3	78.5
#50	1.7	1.6	26.1	11.2	10.3	88.8
#100	1.7	1.5	5.6	3.2	8.0	96.8
LBW	1.5	1.4	0.6	1.1	2.1	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

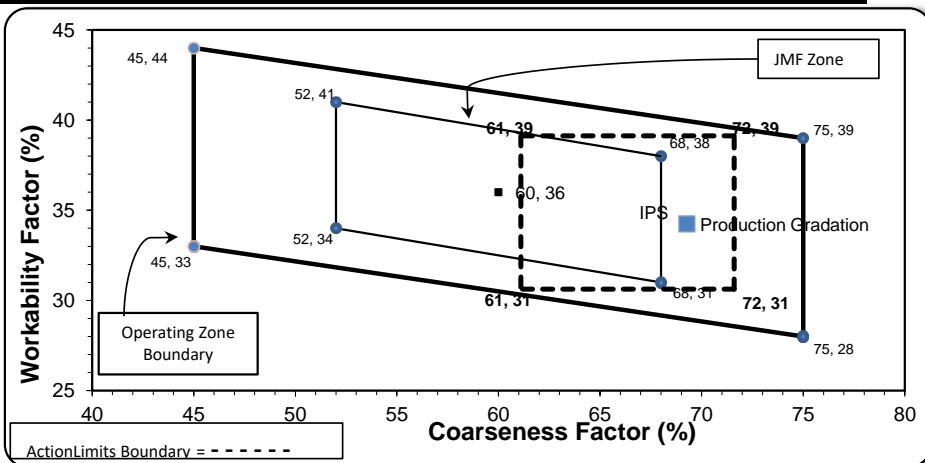
Coarseness Factor: **69** **Workability Factor:** **34**

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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

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%



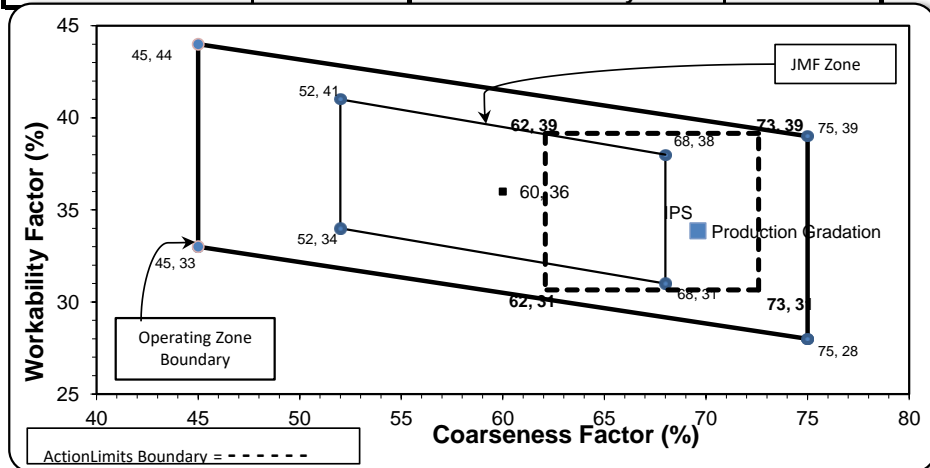
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 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	68.3	100.0	100.0	85.6	14.4	14.4
3/4"	56.4	100.0	100.0	80.2	5.4	19.8
1/2"	17.1	94.1	100.0	61.3	18.8	38.7
3/8"	4.7	83.4	100.0	54.0	7.4	46.0
#4	1.8	27.0	98.8	43.1	10.8	56.9
#8	1.4	7.9	83.1	33.9	9.3	66.1
#16	1.3	3.7	64.2	25.9	8.0	74.1
#30	1.3	2.4	45.7	18.6	7.3	81.4
#50	1.2	2.3	24.4	10.3	8.3	89.7
#100	1.2	2.1	5.9	3.2	7.1	96.8
LBW	1.1	2.0	0.9	1.2	2.0	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: **70** **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"	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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	820	5.02	2.62	26.7
IA	71-47	Presque Isle	1000	6.12	2.62	32.6
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



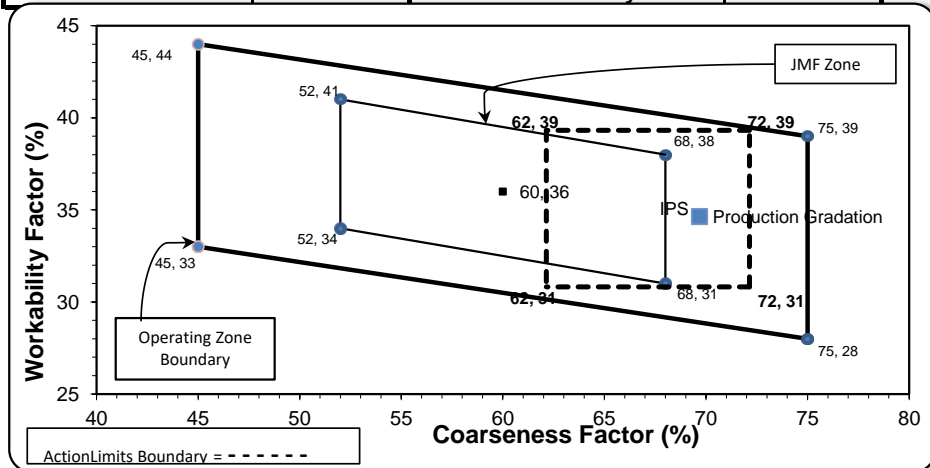
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 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.1	100.0	100.0	98.4	1.6	1.6
1"	38.1	100.0	100.0	83.5	15.0	16.5
3/4"	16.5	97.6	100.0	76.9	6.6	23.1
1/2"	4.6	66.7	100.0	63.7	13.2	36.3
3/8"	3.9	39.0	100.0	54.5	9.2	45.5
#4	3.4	8.0	96.5	42.8	11.7	57.2
#8	3.0	3.4	80.4	34.6	8.2	65.4
#16	2.7	2.8	65.1	28.1	6.5	71.9
#30	2.3	2.7	48.7	21.3	6.8	78.7
#50	1.9	2.6	24.9	11.5	9.8	88.5
#100	1.6	2.4	5.8	3.6	7.9	96.4
LBW	1.3	2.0	0.8	1.3	2.2	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:	70	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**

Sample Date: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

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%



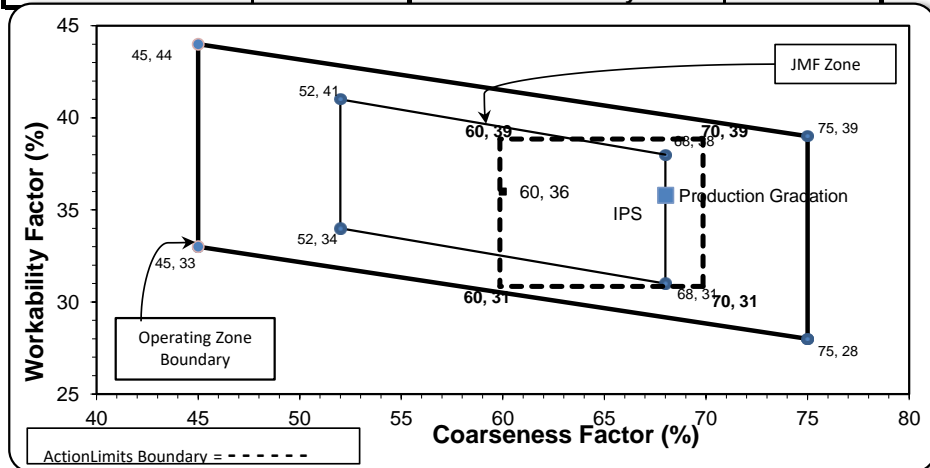
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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.8	100.0	100.0	99.0	1.0	1.0
1"	41.8	100.0	100.0	82.0	17.0	18.0
3/4"	11.9	98.6	100.0	72.3	9.7	27.7
1/2"	2.7	79.2	100.0	63.7	8.7	36.3
3/8"	2.0	55.5	100.0	56.3	7.3	43.7
#4	1.6	13.8	98.4	43.1	13.2	56.9
#8	1.5	6.0	85.8	35.8	7.3	64.2
#16	1.4	3.7	70.3	29.0	6.8	71.0
#30	1.4	3.0	49.8	20.8	8.2	79.2
#50	1.3	2.8	20.0	9.1	11.7	90.9
#100	1.2	2.6	3.0	2.3	6.7	97.7
LBW	1.0	2.3	0.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **68** **Workability Factor:** **36**



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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	700	4.28	2.62	22.8
IA	71-47	Presque Isle	1120	6.85	2.62	36.5
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



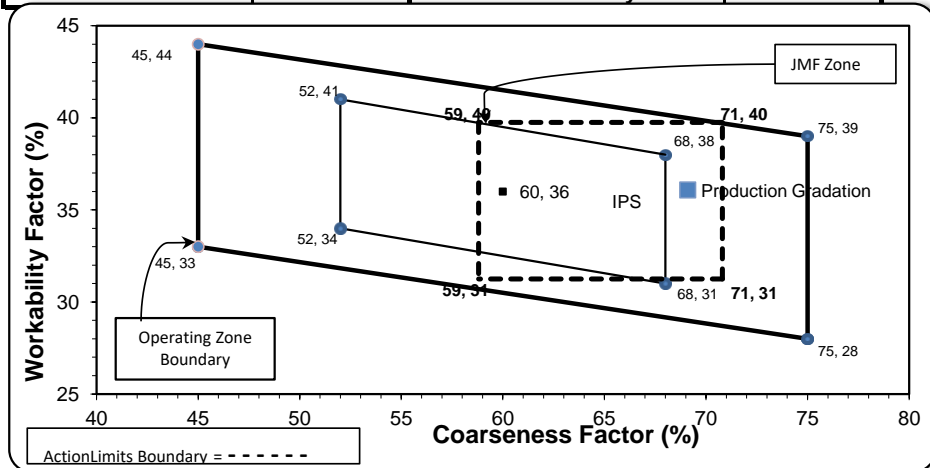
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 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.1	100.0	100.0	98.7	1.3	1.3
1"	38.1	100.0	100.0	85.9	12.8	14.1
3/4"	16.5	97.6	100.0	80.1	5.8	19.9
1/2"	4.6	66.7	100.0	66.1	14.0	33.9
3/8"	3.9	39.0	100.0	55.8	10.3	44.2
#4	3.4	8.0	96.2	42.9	13.0	57.1
#8	3.0	3.4	83.9	36.1	6.8	63.9
#16	2.7	2.8	71.2	30.6	5.5	69.4
#30	2.3	2.7	47.9	21.0	9.6	79.0
#50	1.9	2.6	21.0	9.9	11.1	90.1
#100	1.6	2.4	5.2	3.4	6.6	96.6
LBW	1.3	2.0	1.7	1.7	1.6	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

Coarseness Factor: **69** **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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

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%



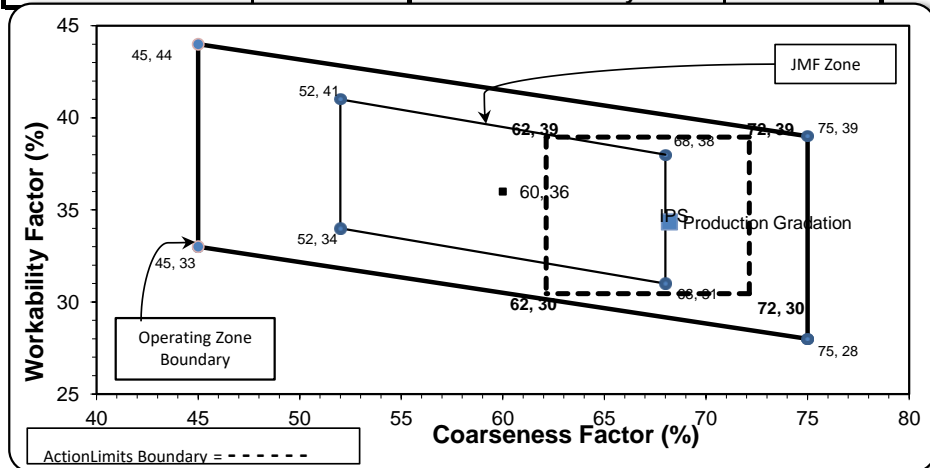
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	68.3	100.0	100.0	86.1	13.9	13.9
3/4"	56.4	100.0	100.0	80.9	5.2	19.1
1/2"	17.1	94.1	100.0	62.6	18.3	37.4
3/8"	4.7	83.4	100.0	55.2	7.3	44.8
#4	1.8	27.0	98.8	43.6	11.7	56.5
#8	1.4	7.9	84.1	34.4	9.2	65.6
#16	1.3	3.7	65.1	26.3	8.1	73.7
#30	1.3	2.4	43.9	17.9	8.4	82.1
#50	1.2	2.3	15.7	7.0	10.9	93.0
#100	1.2	2.1	2.6	1.9	5.1	98.1
LBW	1.1	2.0	0.8	1.1	0.8	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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	720	4.40	2.62	23.5
IA	71-47	Presque Isle	1150	7.03	2.62	37.5
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



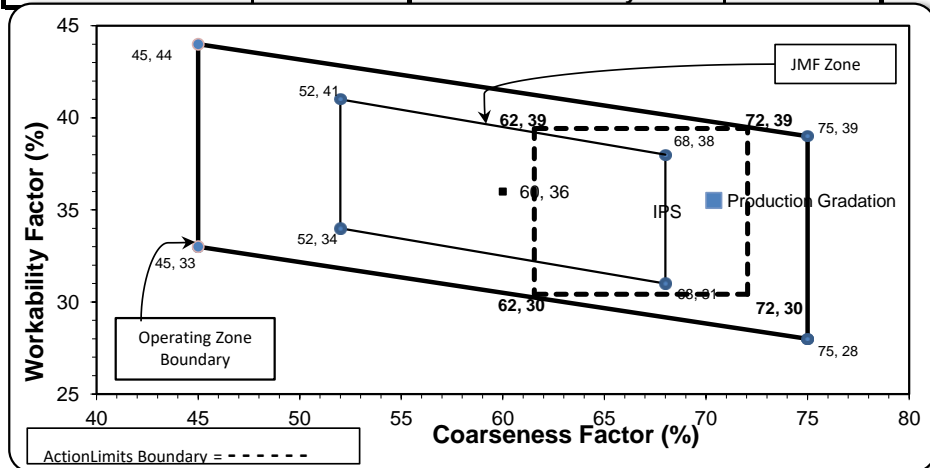
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.1	100.0	100.0	98.6	1.4	1.4
1"	38.1	100.0	100.0	85.5	13.1	14.5
3/4"	16.5	97.6	100.0	79.5	6.0	20.5
1/2"	4.6	66.7	100.0	65.2	14.4	34.8
3/8"	3.9	39.0	100.0	54.6	10.5	45.4
#4	3.4	8.0	98.4	42.3	12.4	57.7
#8	3.0	3.4	85.8	35.5	6.7	64.5
#16	2.7	2.8	70.3	29.2	6.4	70.8
#30	2.3	2.7	49.8	21.0	8.1	79.0
#50	1.9	2.6	20.0	9.2	11.8	90.8
#100	1.6	2.4	3.0	2.4	6.8	97.6
LBW	1.3	2.0	0.5	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:	70	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: 7/19/21

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

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%



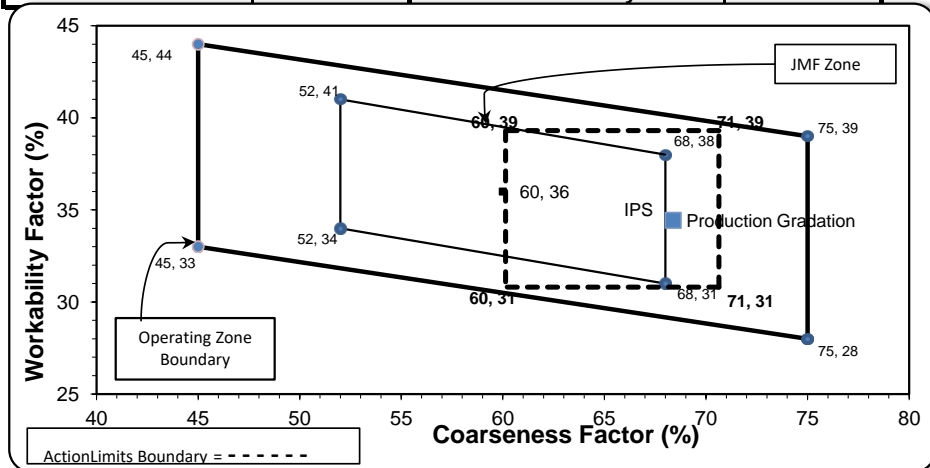
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	98.8	100.0	100.0	99.6	0.4	0.4
1"	49.7	100.0	100.0	82.5	17.1	17.5
3/4"	11.2	99.0	100.0	68.8	13.7	31.2
1/2"	3.4	80.2	100.0	61.5	7.3	38.5
3/8"	2.5	55.6	100.0	55.2	6.3	44.8
#4	2.1	11.7	97.3	43.2	12.0	56.8
#8	1.9	3.6	80.8	34.4	8.8	65.6
#16	1.9	2.0	66.3	28.1	6.3	71.9
#30	1.8	1.8	50.6	21.7	6.5	78.3
#50	1.7	1.6	25.8	11.5	10.2	88.5
#100	1.7	1.5	7.8	4.1	7.4	95.9
LBW	1.5	1.4	1.5	1.5	2.7	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
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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: 7/19/21

Concrete Grade: P1M

Contractor: _____

Dates Test Represents: 7/20/2021 through 7/26/2021

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	750	4.59	2.62	24.4
IA	71-47	Presque Isle	1070	6.54	2.62	34.9
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



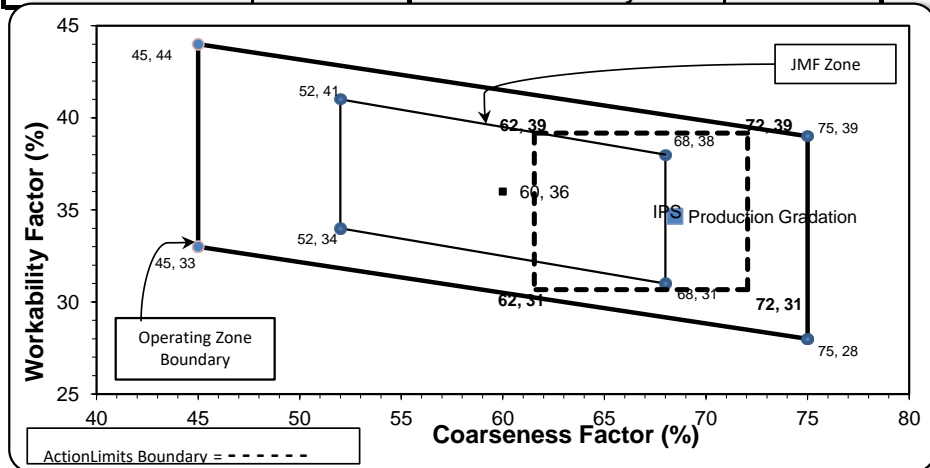
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.1	100.0	100.0	98.6	1.4	1.4
1"	38.1	100.0	100.0	84.9	13.7	15.1
3/4"	16.5	97.6	100.0	78.8	6.1	21.2
1/2"	4.6	66.7	100.0	65.1	13.7	34.9
3/8"	3.9	39.0	100.0	55.3	9.8	44.7
#4	3.4	8.0	96.5	42.9	12.4	57.1
#8	3.0	3.4	80.4	34.7	8.3	65.3
#16	2.7	2.8	65.1	28.1	6.5	71.9
#30	2.3	2.7	48.7	21.3	6.8	78.7
#50	1.9	2.6	24.9	11.5	9.8	88.5
#100	1.6	2.4	5.8	3.6	7.9	96.4
LBW	1.3	2.0	0.8	1.3	2.2	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: 68 **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"	72.3	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: