

Aggregate Optimization Chart

PLANT #: **P-101**

Sample Date: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

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"	94.0	100.0	100.0	97.9	2.1	2.1
1"	34.6	100.0	100.0	77.2	20.7	22.8
3/4"	8.8	98.5	100.0	67.8	9.4	32.2
1/2"	3.2	83.2	100.0	61.9	5.9	38.1
3/8"	3.0	63.7	100.0	56.7	5.2	43.3
#4	2.5	17.3	96.2	43.0	13.8	57.0
#8	2.4	4.5	81.4	33.8	9.2	66.2
#16	2.4	2.7	66.4	27.5	6.3	72.5
#30	2.3	2.3	51.4	21.5	6.0	78.5
#50	2.2	2.1	28.0	12.3	9.2	87.7
#100	2.0	1.9	7.5	4.1	8.1	95.9
LBW	1.6	1.7	1.1	1.4	2.7	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.

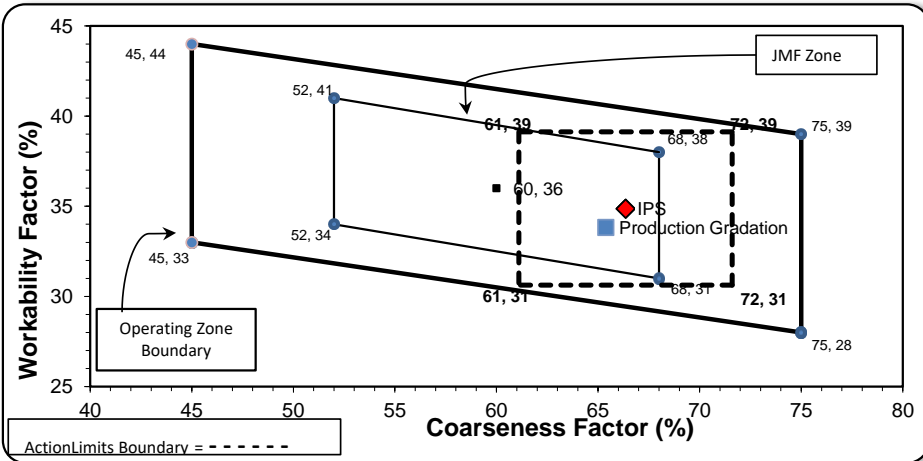
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	65	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: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

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	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



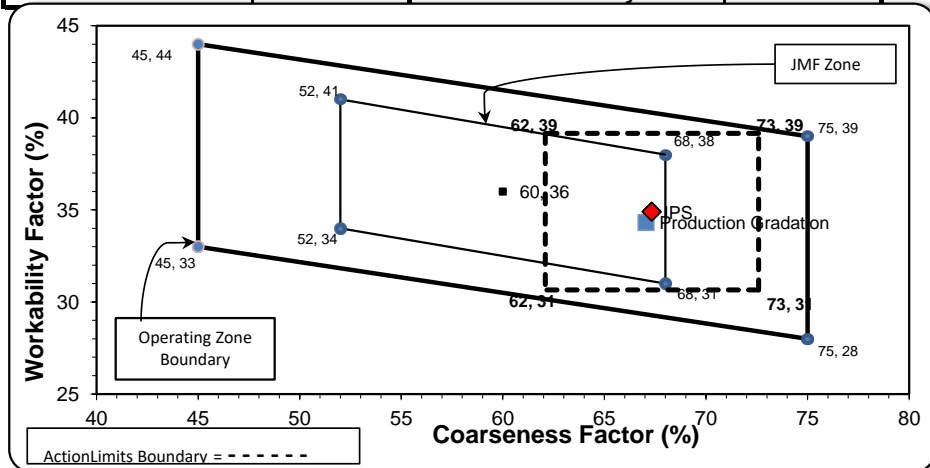
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 Suite 500
 Farmington Hills, MI 48336

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"	62.4	100.0	100.0	83.5	16.5	16.5
3/4"	32.6	100.0	100.0	70.4	13.1	29.6
1/2"	15.1	93.0	100.0	61.5	8.9	38.5
3/8"	9.5	75.6	100.0	56.0	5.5	44.0
#4	3.0	16.4	99.1	42.3	13.6	57.7
#8	2.2	4.2	84.8	34.3	8.0	65.7
#16	2.0	2.7	65.5	26.5	7.8	73.5
#30	1.9	2.2	46.0	18.9	7.6	81.1
#50	1.8	2.0	19.2	8.5	10.4	91.5
#100	1.7	1.9	3.6	2.5	6.1	97.5
LBW	1.5	1.6	0.6	1.2	1.3	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

Coarseness Factor: **67** **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-103**

Sample Date: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

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	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



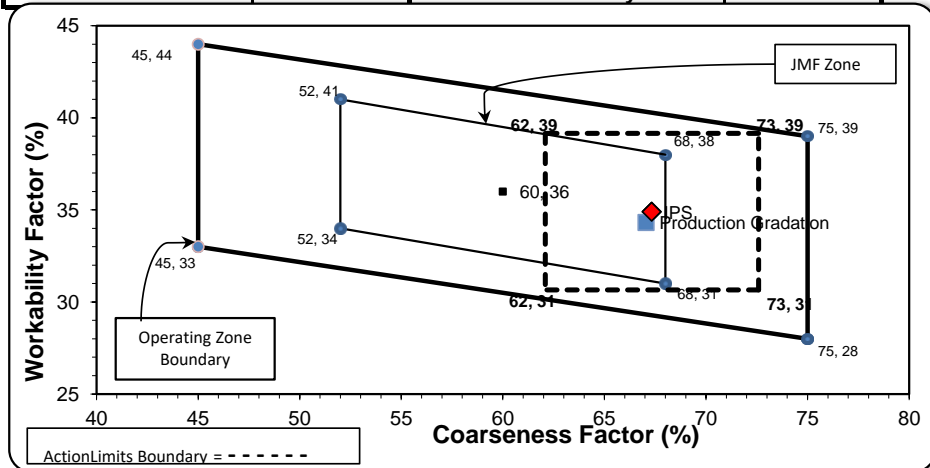
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 Suite 500
 Farmington Hills, MI 48336

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"	62.4	100.0	100.0	83.5	16.5	16.5
3/4"	32.6	100.0	100.0	70.4	13.1	29.6
1/2"	15.1	93.0	100.0	61.5	8.9	38.5
3/8"	9.5	75.6	100.0	56.0	5.5	44.0
#4	3.0	16.4	99.1	42.3	13.6	57.7
#8	2.2	4.2	84.8	34.3	8.0	65.7
#16	2.0	2.7	65.5	26.5	7.8	73.5
#30	1.9	2.2	46.0	18.9	7.6	81.1
#50	1.8	2.0	19.2	8.5	10.4	91.5
#100	1.7	1.9	3.6	2.5	6.1	97.5
LBW	1.5	1.6	0.6	1.2	1.3	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

Coarseness Factor: **67** **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:
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Aggregate Optimization Chart

PLANT #: 12

Sample Date: 4/22/24

Dates Test Represents: 4/23/2024 through 4/29/2024

Concrete Grade: **P1M, 3500HP**

Contractor: _____

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	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



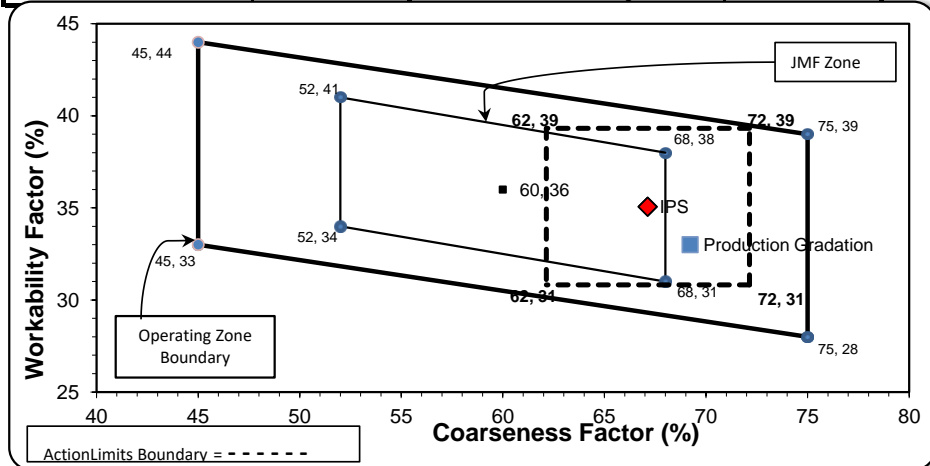
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 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.8	100.0	100.0	98.5	1.5	1.5
1"	45.6	100.0	100.0	81.0	17.5	19.0
3/4"	10.3	100.0	100.0	68.7	12.3	31.3
1/2"	1.0	80.1	100.0	60.3	8.4	39.7
3/8"	0.9	54.6	100.0	53.6	6.7	46.4
#4	0.8	9.6	96.8	40.6	13.0	59.4
#8	0.8	2.6	82.0	33.0	7.6	67.0
#16	0.8	2.0	65.3	26.3	6.7	73.7
#30	0.7	1.9	48.6	19.7	6.6	80.3
#50	0.7	1.8	23.5	9.9	9.8	90.1
#100	0.7	1.7	3.3	2.0	7.9	98.0
LBW	0.6	1.5	0.5	0.8	1.2	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

Coarseness Factor:	69	Workability Factor:	33
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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 #: 20

Sample Date: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

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%



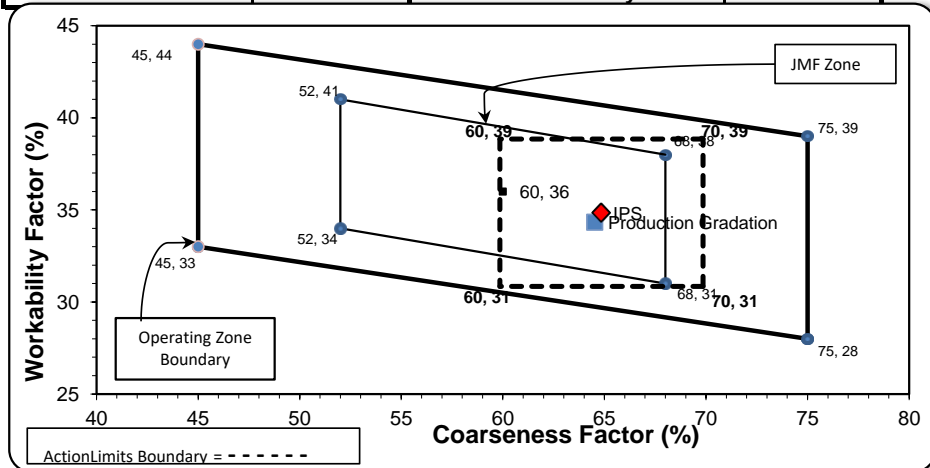
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 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.9	100.0	100.0	99.0	1.0	1.0
1"	43.1	100.0	100.0	82.4	16.6	17.6
3/4"	12.8	99.2	100.0	72.8	9.6	27.2
1/2"	3.6	82.2	100.0	64.8	7.9	35.2
3/8"	2.8	59.0	100.0	57.6	7.2	42.4
#4	2.1	12.2	97.7	42.5	15.1	57.5
#8	1.8	4.2	83.2	34.3	8.2	65.7
#16	1.8	2.4	67.7	27.7	6.6	72.3
#30	1.7	2.0	48.7	20.2	7.6	79.8
#50	1.7	1.8	21.0	9.3	10.9	90.7
#100	1.5	1.7	3.6	2.4	6.9	97.6
LBW	1.3	1.5	0.7	1.1	1.3	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: 65 **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"	99.1	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 #: P11

Sample Date: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

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	95-013	Smelter Bay	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



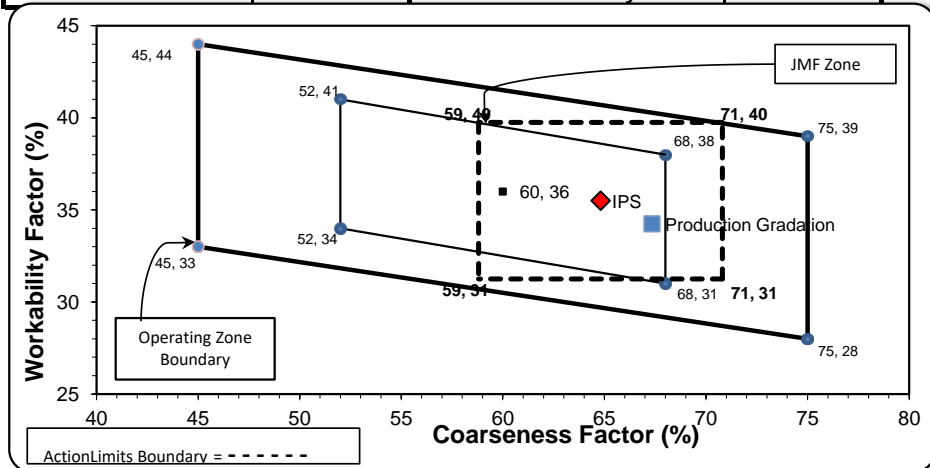
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.8	100.0	100.0	98.7	1.3	1.3
1"	45.6	100.0	100.0	83.2	15.5	16.8
3/4"	10.3	100.0	100.0	72.2	10.9	27.8
1/2"	1.0	80.1	100.0	63.4	8.8	36.6
3/8"	0.9	54.6	100.0	55.7	7.7	44.3
#4	0.8	9.6	97.6	41.3	14.5	58.7
#8	0.8	2.6	85.0	34.3	7.0	65.7
#16	0.8	2.0	70.6	28.4	5.8	71.6
#30	0.7	1.9	49.4	20.1	8.3	79.9
#50	0.7	1.8	23.7	10.0	10.1	90.0
#100	0.7	1.7	7.3	3.6	6.4	96.4
LBW	0.6	1.5	1.4	1.2	2.4	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:** 34



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: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

MDOT No.: _____



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

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	81-019	Pleasant Lake	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

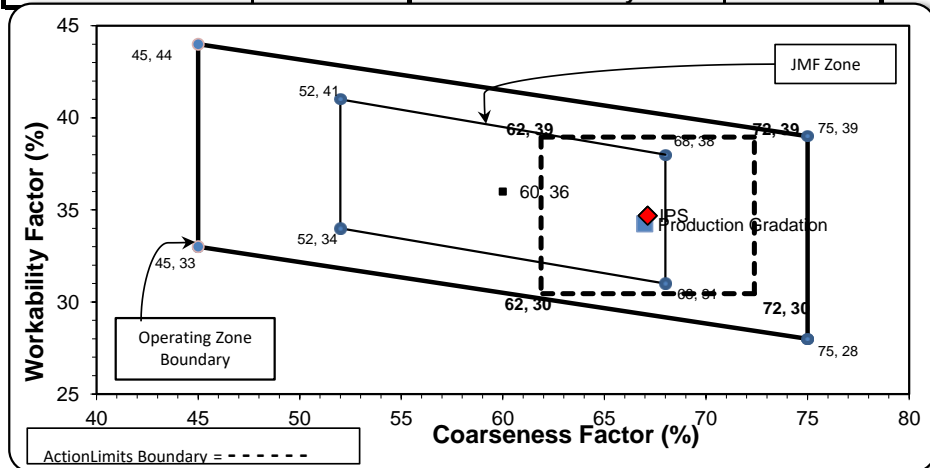
<----- Verify this number is 100%

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"	62.4	100.0	100.0	83.5	16.5	16.5
3/4"	32.6	100.0	100.0	70.4	13.1	29.6
1/2"	15.1	93.0	100.0	61.5	8.9	38.5
3/8"	9.5	75.6	100.0	56.0	5.5	44.0
#4	3.0	16.4	98.4	42.1	13.9	57.9
#8	2.2	4.2	84.6	34.2	7.8	65.8
#16	2.0	2.7	65.8	26.7	7.6	73.3
#30	1.9	2.2	45.4	18.7	8.0	81.3
#50	1.8	2.0	20.9	9.2	9.5	90.8
#100	1.7	1.9	3.9	2.6	6.6	97.4
LBW	1.5	1.6	0.8	1.2	1.3	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

Coarseness Factor:	67	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"	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: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

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	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



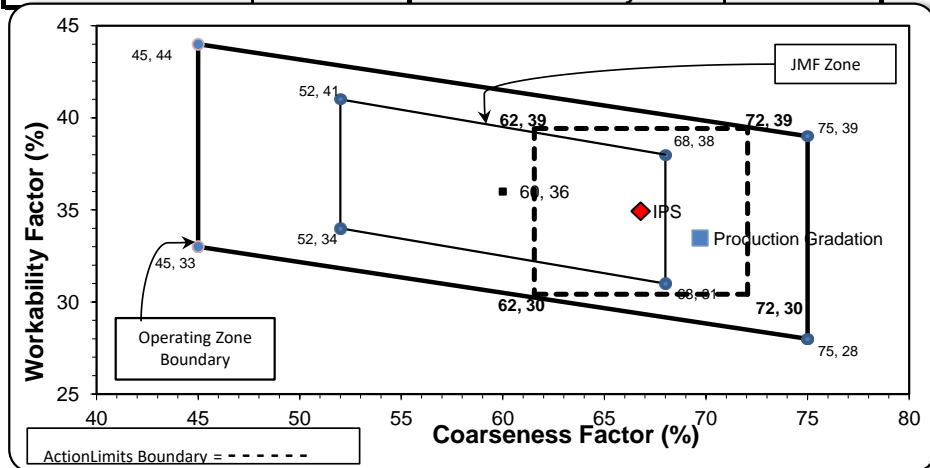
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.8	100.0	100.0	98.5	1.5	1.5
1"	45.6	100.0	100.0	81.0	17.5	19.0
3/4"	10.3	100.0	100.0	68.7	12.3	31.3
1/2"	1.0	80.1	100.0	60.3	8.4	39.7
3/8"	0.9	54.6	100.0	53.6	6.7	46.4
#4	0.8	9.6	97.7	41.0	12.7	59.0
#8	0.8	2.6	83.2	33.5	7.5	66.5
#16	0.8	2.0	67.7	27.3	6.2	72.7
#30	0.7	1.9	48.7	19.8	7.5	80.2
#50	0.7	1.8	21.0	8.9	10.9	91.1
#100	0.7	1.7	3.6	2.1	6.8	97.9
LBW	0.6	1.5	0.7	0.9	1.2	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: **70** **Workability Factor:** **33**



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-02**

Sample Date: 4/22/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/23/2024 through 4/29/2024

Contractor: _____

MDOT No.: _____



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

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	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

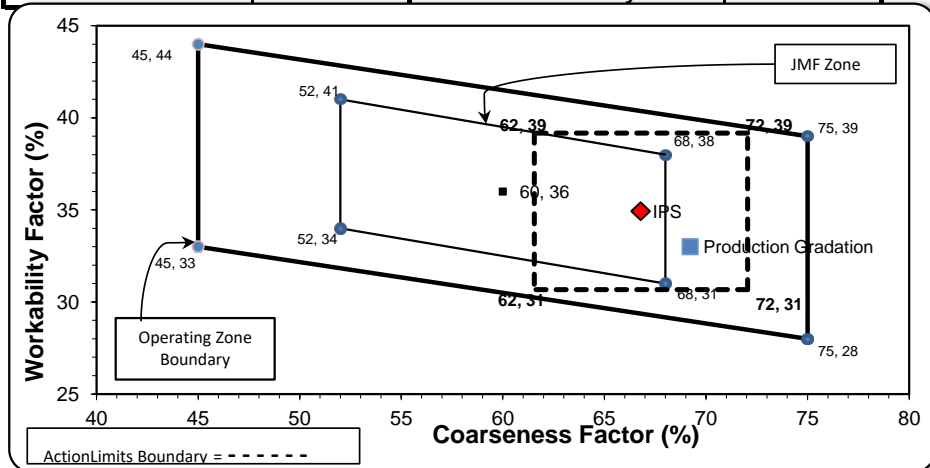
<----- Verify this number is 100%

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.8	100.0	100.0	98.5	1.5	1.5
1"	45.6	100.0	100.0	81.0	17.5	19.0
3/4"	10.3	100.0	100.0	68.7	12.3	31.3
1/2"	1.0	80.1	100.0	60.3	8.4	39.7
3/8"	0.9	54.6	100.0	53.6	6.7	46.4
#4	0.8	9.6	96.8	40.6	13.0	59.4
#8	0.8	2.6	82.0	33.0	7.6	67.0
#16	0.8	2.0	65.3	26.3	6.7	73.7
#30	0.7	1.9	48.6	19.7	6.6	80.3
#50	0.7	1.8	23.5	9.9	9.8	90.1
#100	0.7	1.7	3.3	2.0	7.9	98.0
LBW	0.6	1.5	0.5	0.8	1.2	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

Coarseness Factor:	69	Workability Factor:	33
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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
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#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: