

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 11/17/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Contractor: _____

Dates Test Represents: 11/18/2025 through 11/24/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	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%

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"	67.8	100.0	100.0	85.3	14.7	14.7
3/4"	44.6	100.0	100.0	74.8	10.6	25.2
1/2"	18.3	93.2	100.0	61.7	13.1	38.3
3/8"	14.2	75.4	100.0	57.0	4.7	43.0
#4	3.3	20.0	99.2	42.9	14.1	57.1
#8	2.6	2.4	85.4	34.4	8.4	65.6
#16	2.4	2.1	68.4	27.7	6.7	72.3
#30	1.9	1.9	49.6	20.2	7.5	79.8
#50	1.6	1.5	22.4	9.6	10.7	90.4
#100	1.4	1.4	3.7	2.3	7.3	97.7
LBW	1.3	1.0	0.6	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.



Superior Materials, LLC

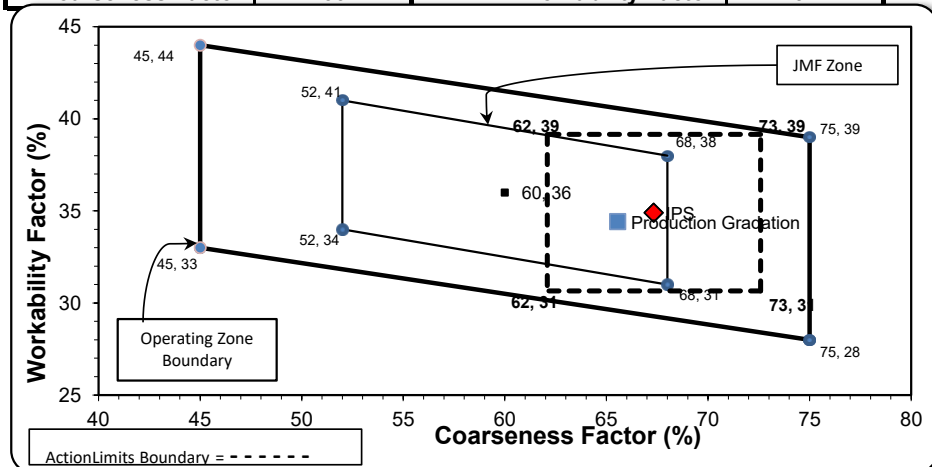
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	66	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

Production Gradation Report

PLANT #: **P-103**

Sample Date: 11/17/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Contractor: _____

Dates Test Represents: 11/18/2025 through 11/24/2025

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%

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"	67.8	100.0	100.0	85.3	14.7	14.7
3/4"	44.6	100.0	100.0	74.8	10.6	25.2
1/2"	18.3	93.2	100.0	61.7	13.1	38.3
3/8"	14.2	75.4	100.0	57.0	4.7	43.0
#4	3.3	20.0	99.2	42.9	14.1	57.1
#8	2.6	2.4	85.4	34.4	8.4	65.6
#16	2.4	2.1	68.4	27.7	6.7	72.3
#30	1.9	1.9	49.6	20.2	7.5	79.8
#50	1.6	1.5	22.4	9.6	10.7	90.4
#100	1.4	1.4	3.7	2.3	7.3	97.7
LBW	1.3	1.0	0.6	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.



Superior Materials, LLC

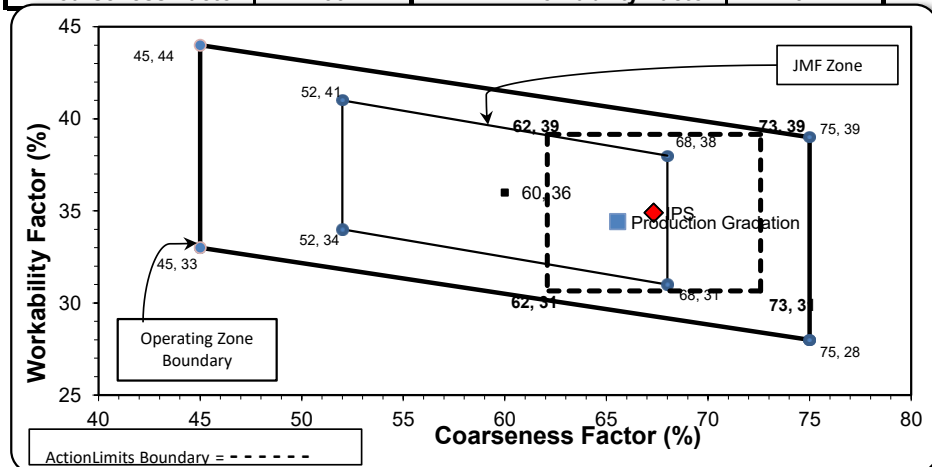
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Coarseness Factor:	66	Workability Factor:	34
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Initial Production Sample (IPS)

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

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SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P11**

Sample Date: 11/17/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Contractor: _____

Dates Test Represents: 11/18/2025 through 11/24/2025

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	970	5.93	2.62	31.6
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"	94.2	100.0	100.0	98.3	1.7	1.7
1"	35.4	100.0	100.0	81.1	17.2	18.9
3/4"	7.3	97.9	100.0	72.2	8.9	27.8
1/2"	1.8	79.6	100.0	64.8	7.4	35.2
3/8"	1.6	54.2	100.0	56.7	8.1	43.3
#4	1.5	12.3	97.5	42.4	14.2	57.6
#8	1.4	3.7	82.6	33.9	8.6	66.1
#16	1.4	2.5	63.2	25.9	8.0	74.1
#30	1.3	2.3	44.9	18.7	7.2	81.3
#50	1.2	2.2	22.1	9.7	9.0	90.3
#100	1.2	2.2	5.3	3.1	6.6	96.9
LBW	1.0	2.1	1.1	1.4	1.7	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.



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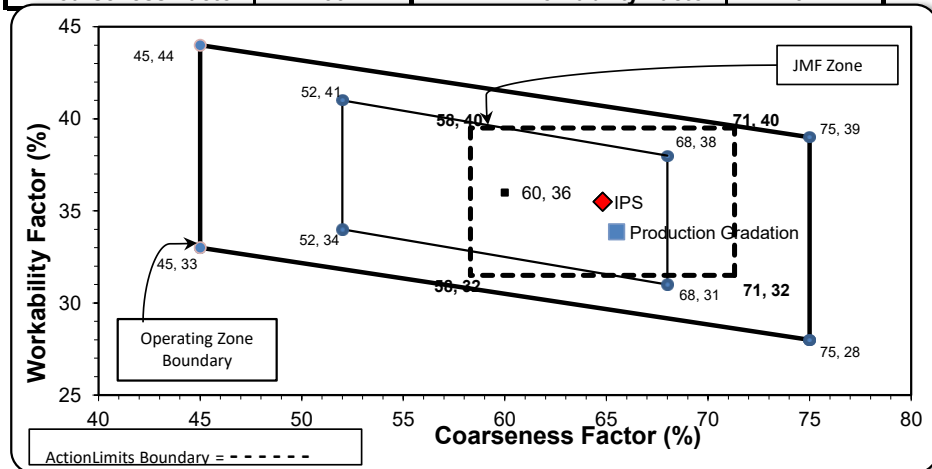
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Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	34
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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

Production Gradation Report

PLANT #: **P-O2**

Sample Date: 11/17/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Contractor: _____

Dates Test Represents: 11/18/2025 through 11/24/2025

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	970	5.93	2.62	31.6
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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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"	94.2	100.0	100.0	98.3	1.7	1.7
1"	35.4	100.0	100.0	81.1	17.2	18.9
3/4"	7.3	97.9	100.0	72.2	8.9	27.8
1/2"	1.8	79.6	100.0	64.8	7.4	35.2
3/8"	1.6	54.2	100.0	56.7	8.1	43.3
#4	1.5	12.3	97.5	42.4	14.2	57.6
#8	1.4	3.7	82.6	33.9	8.6	66.1
#16	1.4	2.5	63.2	25.9	8.0	74.1
#30	1.3	2.3	44.9	18.7	7.2	81.3
#50	1.2	2.2	22.1	9.7	9.0	90.3
#100	1.2	2.2	5.3	3.1	6.6	96.9
LBW	1.0	2.1	1.1	1.4	1.7	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.,

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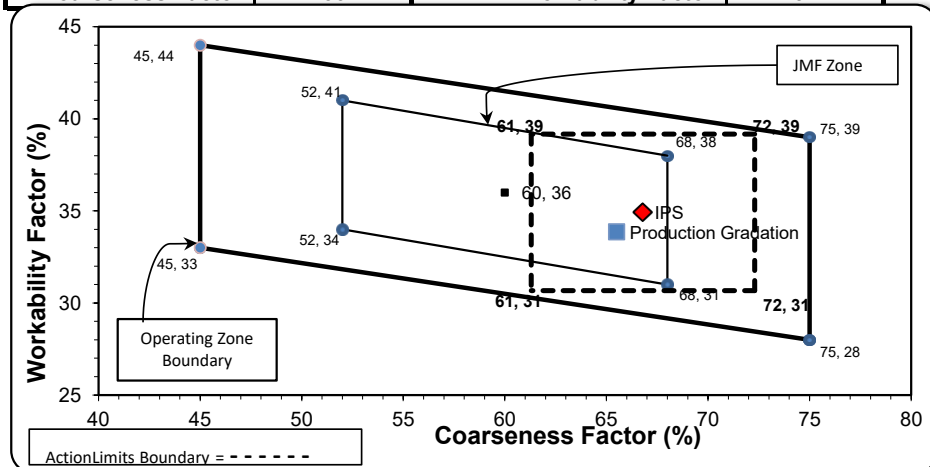
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Initial Production Sample (IPS)

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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"	85.0	15.0	15.0
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3/8"	56.5	8.0	43.5
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#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

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