

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 8/19/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/20/2026 through 8/26/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1545	9.63	2.57	52.0
26A	71-47	Presque Isle	245	1.53	2.57	8.2
2NS	63-115	Ray Rd	1180	7.08	2.67	39.7
Total Wt			2970	18.24		100.0

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



Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Sieve	6AA	26A	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"	98.4	100.0	100.0	99.2	0.8	0.8
3/4"	83.5	100.0	100.0	91.4	7.8	8.6
1/2"	46.7	97.6	100.0	72.1	19.3	27.9
3/8"	25.5	83.2	100.0	59.9	12.2	40.1
#4	3.6	20.0	95.4	41.4	18.4	58.6
#8	2.1	6.3	82.3	34.3	7.1	65.7
#16	1.8	3.2	63.3	26.3	8.0	73.7
#30	1.7	2.4	48.0	20.2	6.2	79.8
#50	1.6	2.2	25.8	11.3	8.9	88.7
#100	1.6	1.9	6.9	3.7	7.5	96.3
LBW	1.3	1.7	1.0	1.2	2.5	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

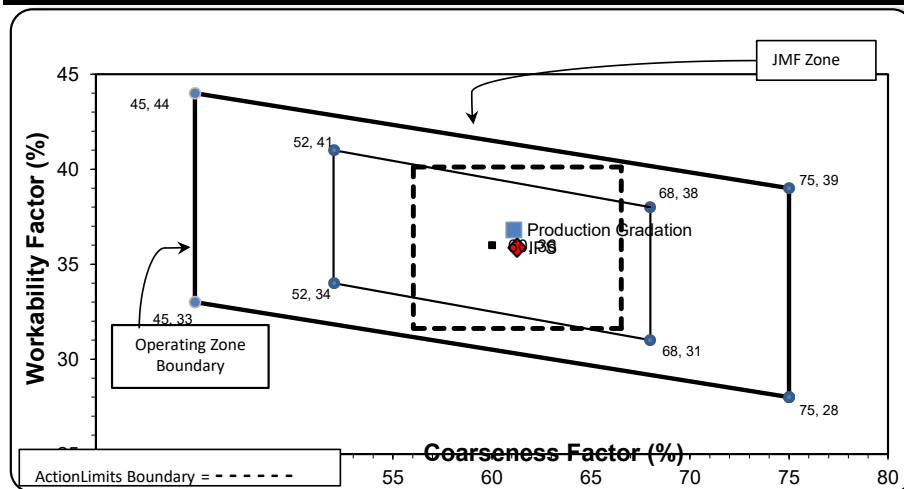
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	34	36.8
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Coarseness Factor:	61
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Workability Factor:	36
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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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 8/19/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/20/2026 through 8/26/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	52.1
26A	71-47	Presque Isle	200	1.25	2.57	6.9
2NS	63-115	Ray Rd	1180	7.08	2.67	41.0
Total Wt			2880	17.68		100.0

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

Sieve	6AA	26A	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"	98.4	100.0	100.0	99.2	0.8	0.8
3/4"	83.5	100.0	100.0	91.4	7.8	8.6
1/2"	46.7	97.6	100.0	72.1	19.3	27.9
3/8"	25.5	83.2	100.0	60.0	12.0	40.0
#4	3.6	20.0	95.4	42.4	17.7	57.6
#8	2.1	6.3	82.3	35.3	7.1	64.7
#16	1.8	3.2	63.3	27.1	8.2	72.9
#30	1.7	2.4	48.0	20.7	6.4	79.3
#50	1.6	2.2	25.8	11.6	9.2	88.4
#100	1.6	1.9	6.9	3.8	7.8	96.2
LBW	1.3	1.7	1.0	1.2	2.6	98.8



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*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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

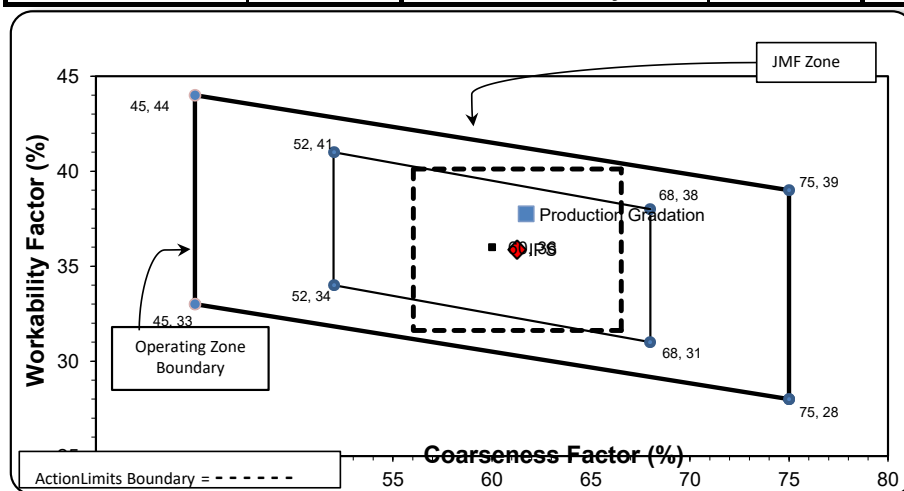
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	35	37.8
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Coarseness Factor:	61
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Workability Factor:	36
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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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
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Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 8/19/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/20/2026 through 8/26/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1380	8.22	2.69	46.3
1A	58-003	StoneCo	300	1.79	2.69	10.1
2NS	63-114	Highland	1300	7.83	2.66	43.6
Total Wt			2980	17.84		100.0

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



Superior Materials, LLC

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Sieve	6AA	1A	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.3	100.0	100.0	93.7	6.3	6.3
1/2"	42.2	87.5	100.0	72.0	21.7	28.0
3/8"	26.7	67.6	100.0	62.8	9.2	37.2
#4	5.4	14.0	98.6	46.9	15.9	53.1
#8	2.1	3.3	83.4	37.7	9.2	62.3
#16	1.7	2.2	65.5	29.6	8.1	70.4
#30	1.5	1.9	45.7	20.8	8.8	79.2
#50	1.4	1.7	19.8	9.5	11.4	90.5
#100	1.3	1.6	4.2	2.6	6.9	97.4
LBW	1.1	1.4	0.8	1.0	1.6	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

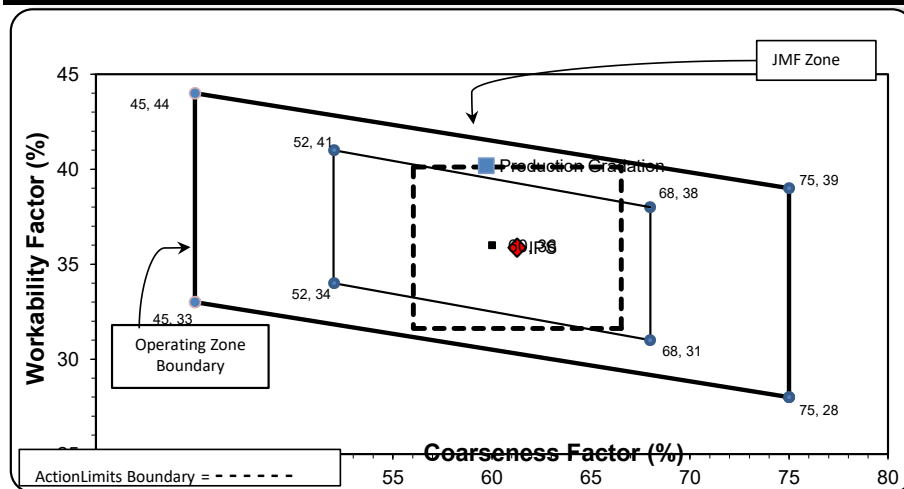
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	38	40.2
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Coarseness Factor:	61
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Workability Factor:	36
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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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 8/19/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/20/2026 through 8/26/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1550	9.23	2.69	52.5
1A	58-003	StoneCo	250	1.49	2.69	8.5
2NS	63-114	Highland	1150	6.93	2.66	39.0
Total Wt			2950	17.65		100.0

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



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Sieve	6AA	1A	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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.3	100.0	100.0	92.8	7.2	7.2
1/2"	42.2	87.5	100.0	68.6	24.2	31.4
3/8"	26.7	67.6	100.0	58.7	9.8	41.3
#4	5.4	14.0	98.6	42.5	16.3	57.5
#8	2.1	3.3	83.4	33.9	8.6	66.1
#16	1.7	2.2	65.5	26.6	7.3	73.4
#30	1.5	1.9	45.7	18.8	7.8	81.2
#50	1.4	1.7	19.8	8.6	10.2	91.4
#100	1.3	1.6	4.2	2.5	6.1	97.5
LBW	1.1	1.4	0.8	1.0	1.4	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

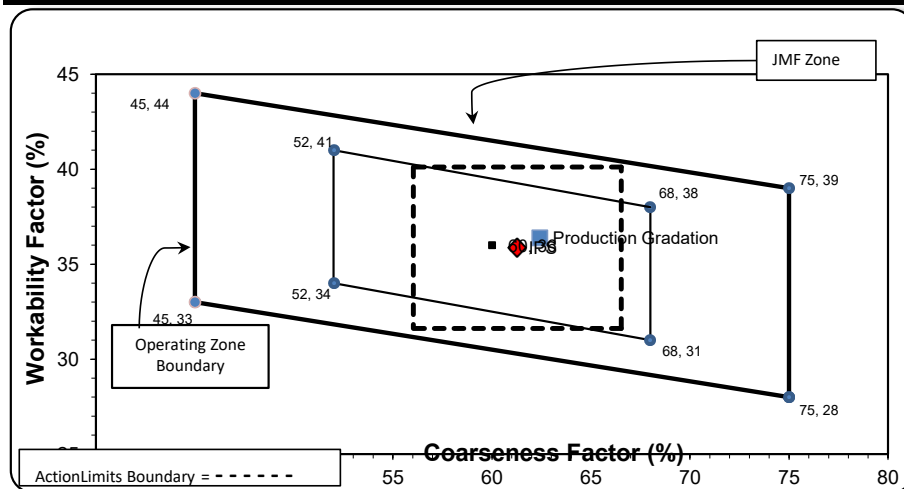
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.4
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Coarseness Factor:	61
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Workability Factor:	36
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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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
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#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

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