

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 9/9/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/10/2026 through 9/16/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	52.3
26A	71-47	Presque Isle	220	1.37	2.57	7.7
2NS	63-115	Ray Rd	1150	6.90	2.67	40.1
Total Wt			2870	17.63		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"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	85.7	100.0	100.0	92.5	6.9	7.5
1/2"	49.0	97.3	100.0	73.1	19.4	26.9
3/8"	26.6	82.9	100.0	60.3	12.8	39.7
#4	4.2	18.8	96.4	42.3	18.1	57.7
#8	2.2	5.7	82.1	34.5	7.8	65.5
#16	1.9	3.0	60.8	25.6	8.9	74.4
#30	1.8	2.3	44.2	18.8	6.8	81.2
#50	1.7	2.1	22.0	9.9	9.0	90.1
#100	1.6	1.9	5.2	3.1	6.8	96.9
LBW	1.4	1.7	0.8	1.2	1.9	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 4% for the 3/4" sieve when

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

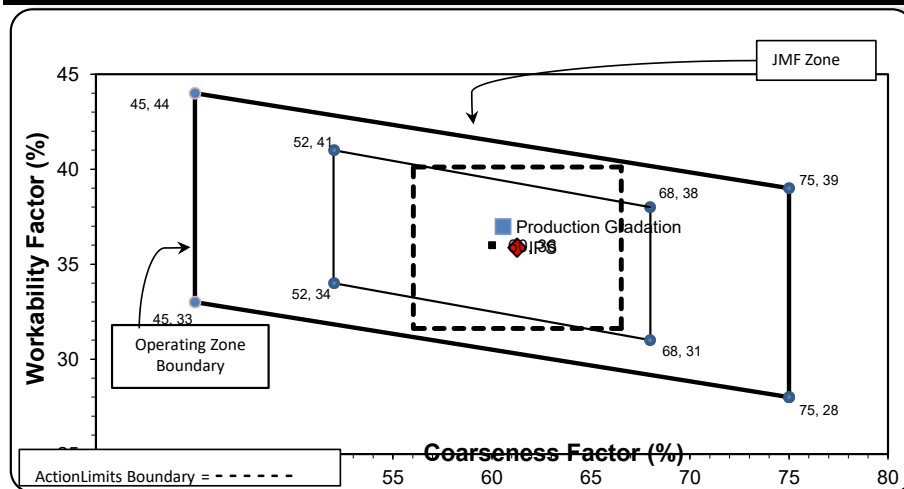
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	34	37.0
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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-21**

Sample Date: 9/9/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/10/2026 through 9/16/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1380	8.61	2.57	46.3
26A	71-47	Presque Isle	300	1.87	2.57	10.1
2NS	81-019	Pleasant Lk	1300	7.86	2.65	43.6
Total Wt			2980	18.34		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"	99.9	100.0	100.0	100.0	0.0	0.0
3/4"	86.4	100.0	100.0	93.7	6.3	6.3
1/2"	46.6	98.5	100.0	75.1	18.6	24.9
3/8"	29.3	78.6	100.0	65.1	10.0	34.9
#4	4.9	9.4	98.1	46.0	19.1	54.0
#8	2.2	2.2	85.2	38.4	7.6	61.6
#16	1.7	1.5	64.4	29.0	9.4	71.0
#30	1.5	1.4	42.0	19.2	9.9	80.8
#50	1.4	1.3	14.5	7.1	12.1	92.9
#100	1.4	1.2	3.1	2.1	5.0	97.9
LBW	1.1	1.1	0.9	1.0	1.1	99.0



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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.

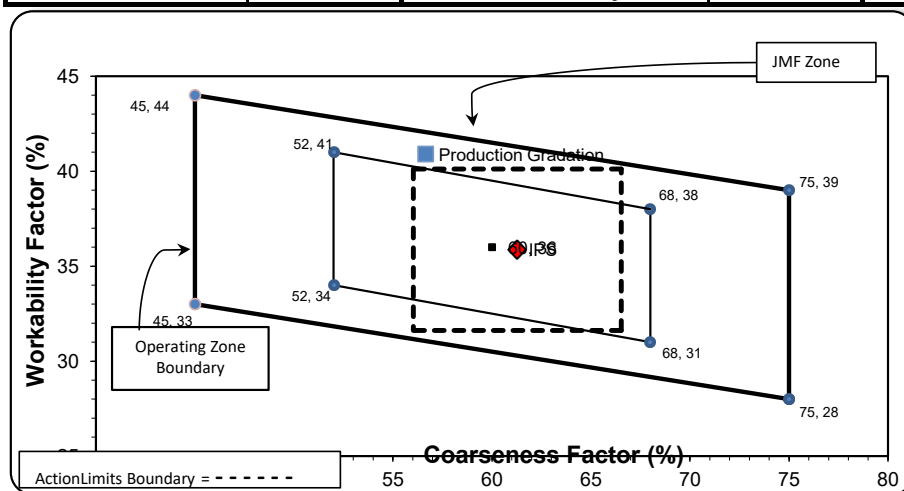
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	57	Workability Factor:	38	40.9
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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-35**

Sample Date: 9/9/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/10/2026 through 9/16/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1480	8.82	2.69	50.2
26A	58-003	StoneCo	270	1.61	2.69	9.2
2NS	81-019	Pleasant Lk	1200	7.26	2.65	40.7
Total Wt			2950	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	86.4	100.0	100.0	93.2	6.8	6.8
1/2"	46.6	98.5	100.0	73.1	20.1	26.9
3/8"	29.3	78.6	100.0	62.6	10.5	37.4
#4	4.9	9.4	98.1	43.2	19.3	56.8
#8	2.2	2.2	85.2	36.0	7.3	64.0
#16	1.7	1.5	64.4	27.2	8.8	72.8
#30	1.5	1.4	42.0	18.0	9.2	82.0
#50	1.4	1.3	14.5	6.7	11.2	93.3
#100	1.4	1.2	3.1	2.1	4.6	97.9
LBW	1.1	1.1	0.9	1.0	1.1	99.0



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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.

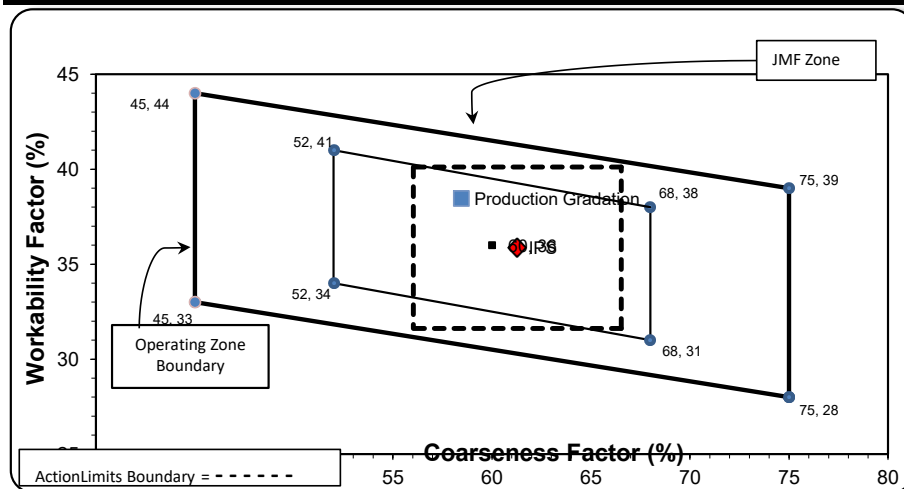
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	36	38.5
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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-102**

Sample Date: 9/9/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/10/2026 through 9/16/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	51.0
1A	58-003	StoneCo	320	1.91	2.69	10.9
2NS	63-114	Highland	1120	6.75	2.66	38.1
Total Wt			2940	17.59		100.0

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



Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	86.4	100.0	100.0	93.1	6.9	6.9
1/2"	46.6	90.1	100.0	71.7	21.4	28.3
3/8"	29.3	75.0	100.0	61.2	10.5	38.8
#4	4.9	18.7	98.6	42.1	19.1	57.9
#8	2.2	2.7	84.0	33.4	8.7	66.6
#16	1.7	1.7	66.2	26.3	7.1	73.7
#30	1.5	1.5	46.7	18.7	7.6	81.3
#50	1.4	1.4	21.9	9.2	9.5	90.8
#100	1.4	1.3	4.4	2.5	6.7	97.5
LBW	1.1	1.1	0.4	0.8	1.7	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 4% for the 3/4" sieve when

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

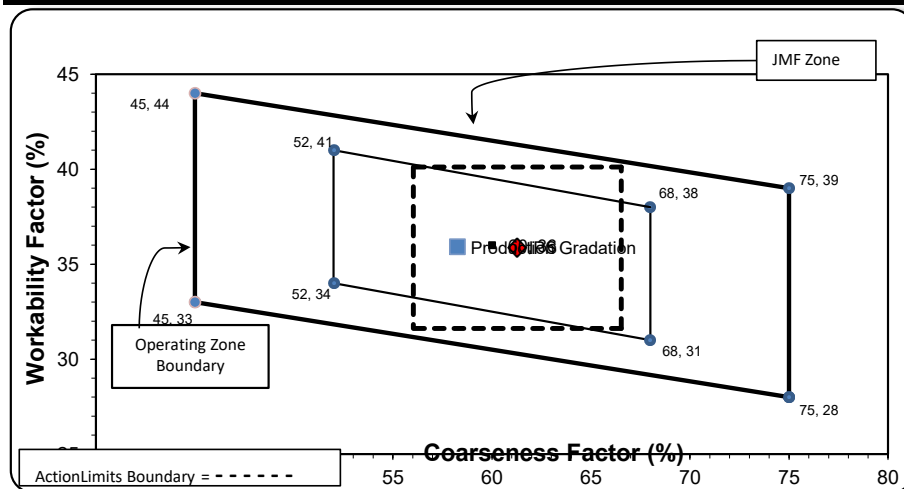
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	33	35.9
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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-103**

Sample Date: 9/9/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/10/2026 through 9/16/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	51.0
1A	58-003	StoneCo	320	1.91	2.69	10.9
2NS	63-114	Highland	1120	6.75	2.66	38.1
Total Wt			2940	17.59		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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	86.4	100.0	100.0	93.1	6.9	6.9
1/2"	46.6	90.1	100.0	71.7	21.4	28.3
3/8"	29.3	75.0	100.0	61.2	10.5	38.8
#4	4.9	18.7	98.6	42.1	19.1	57.9
#8	2.2	2.7	84.0	33.4	8.7	66.6
#16	1.7	1.7	66.2	26.3	7.1	73.7
#30	1.5	1.5	46.7	18.7	7.6	81.3
#50	1.4	1.4	21.9	9.2	9.5	90.8
#100	1.4	1.3	4.4	2.5	6.7	97.5
LBW	1.1	1.1	0.4	0.8	1.7	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 4% for the 3/4" sieve when

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

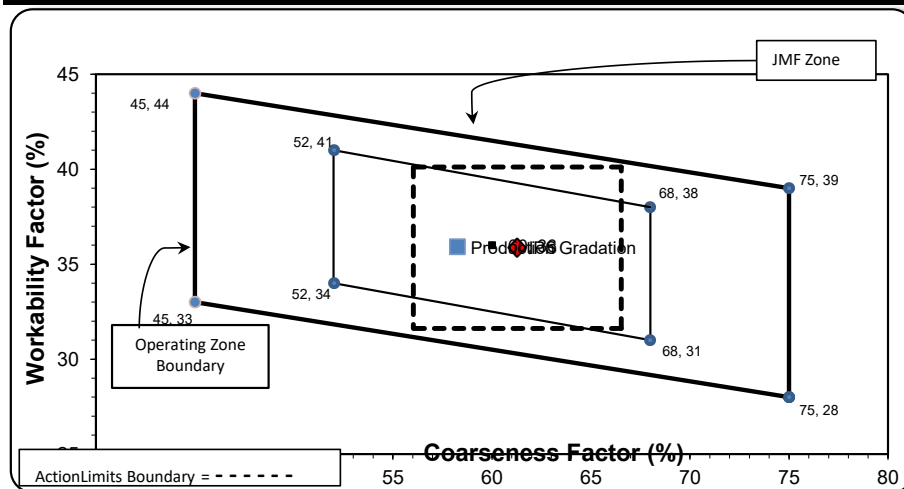
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	33	35.9
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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
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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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