

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-11**

Sample Date: 10/7/26

Concrete Grade: **S2M-3500HP**

Contractor: _____

Dates Test Represents: 10/8/2026 through 10/14/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	49.2
26A	71-47	Presque Isle	370	2.31	2.57	12.1
2NS	63-115	Ray Rd	1180	7.08	2.67	38.7
Total Wt			3050	18.74		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.6	100.0	100.0	93.4	6.6	6.6
1/2"	45.7	97.1	100.0	72.9	20.5	27.1
3/8"	24.2	83.9	100.0	60.8	12.2	39.2
#4	3.8	17.1	96.6	41.3	19.5	58.7
#8	2.1	5.2	83.7	34.0	7.3	66.0
#16	1.8	3.0	63.1	25.7	8.4	74.3
#30	1.7	2.3	46.6	19.1	6.5	80.9
#50	1.6	2.2	24.7	10.6	8.5	89.4
#100	1.5	1.9	6.2	3.4	7.2	96.6
LBW	1.3	1.7	1.0	1.2	2.1	98.8



Superior Materials, LLC

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

*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.

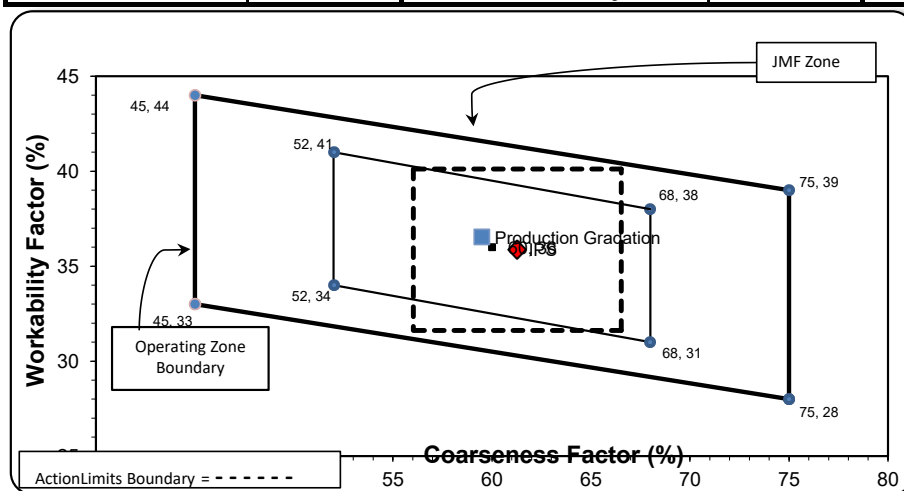
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	34	36.5
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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-21**

Sample Date: 10/7/26

Concrete Grade: **S2M-3500HP**

Contractor: _____

Dates Test Represents: 10/8/2026 through 10/14/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	49.2
26A	71-47	Presque Isle	370	2.31	2.57	12.1
2NS	81-019	Pleasant Lk	1180	7.14	2.65	38.7
Total Wt			3050	18.80		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.6	100.0	100.0	93.4	6.6	6.6
1/2"	45.7	97.1	100.0	72.9	20.5	27.1
3/8"	24.2	83.9	100.0	60.8	12.2	39.2
#4	3.8	17.1	98.1	41.9	18.9	58.1
#8	2.1	5.2	84.7	34.4	7.5	65.6
#16	1.8	3.0	63.2	25.7	8.7	74.3
#30	1.7	2.3	41.4	17.1	8.6	82.9
#50	1.6	2.2	14.3	6.6	10.5	93.4
#100	1.5	1.9	3.4	2.3	4.3	97.7
LBW	1.3	1.7	1.1	1.3	1.0	98.7



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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

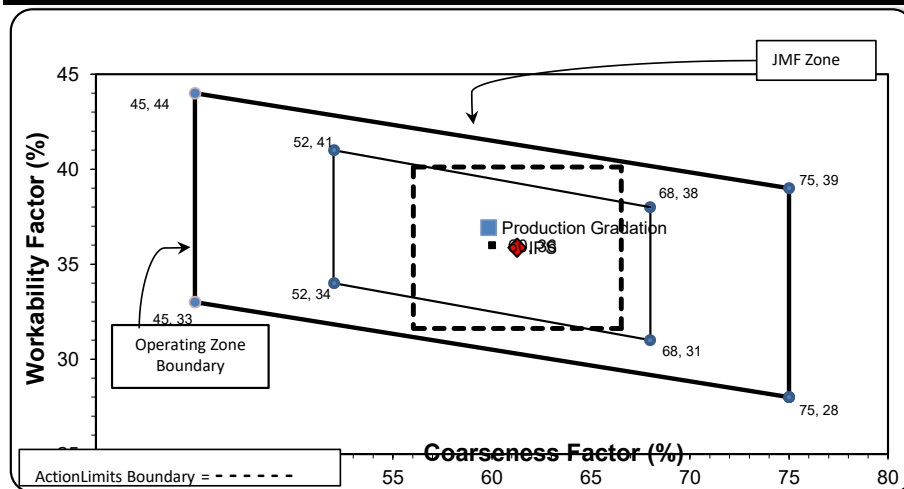
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	34	36.9
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Coarseness Factor:		61	
Workability Factor:		36	
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: 10/7/26

Concrete Grade: **S2M-3500HP**

Contractor: _____

Dates Test Represents: 10/8/2026 through 10/14/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	49.2
26A	58-003	StoneCo	370	2.20	2.69	12.1
2NS	81-019	Pleasant Lk	1180	7.14	2.65	38.7
Total Wt			3050	18.28		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	79.9	100.0	100.0	90.1	9.9	9.9
1/2"	41.1	97.6	100.0	70.7	19.4	29.3
3/8"	23.9	79.9	100.0	60.1	10.6	39.9
#4	4.9	19.7	98.1	42.8	17.4	57.2
#8	2.2	3.4	84.7	34.3	8.5	65.7
#16	1.4	2.3	63.2	25.4	8.8	74.6
#30	1.1	2.0	41.4	16.8	8.6	83.2
#50	1.0	1.8	14.3	6.2	10.6	93.8
#100	1.0	1.8	3.4	2.0	4.2	98.0
LBW	1.0	1.5	1.1	1.1	0.9	98.9



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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

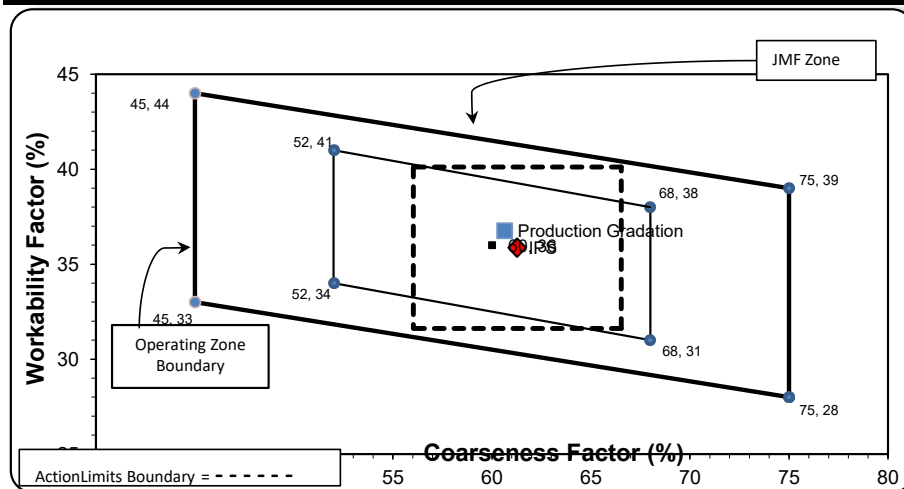
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	34	36.8
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Coarseness Factor:		61	
Workability Factor:		36	
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:
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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Sample Date: 10/7/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 10/8/2026 through 10/14/2026

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	49.2
26A	71-47	Presque Isle	370	2.31	2.57	12.1
2NS	63-115	Ray Rd.	1180	7.14	2.65	38.7
Total Wt			3050	18.80		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.6	100.0	100.0	93.4	6.6	6.6
1/2"	45.7	97.1	100.0	72.9	20.5	27.1
3/8"	24.2	83.9	100.0	60.8	12.2	39.2
#4	3.8	17.1	96.6	41.3	19.5	58.7
#8	2.1	5.2	83.7	34.0	7.3	66.0
#16	1.8	3.0	63.1	25.7	8.4	74.3
#30	1.7	2.3	46.6	19.1	6.5	80.9
#50	1.6	2.2	24.7	10.6	8.5	89.4
#100	1.5	1.9	6.2	3.4	7.2	96.6
LBW	1.3	1.7	1.0	1.2	2.1	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.

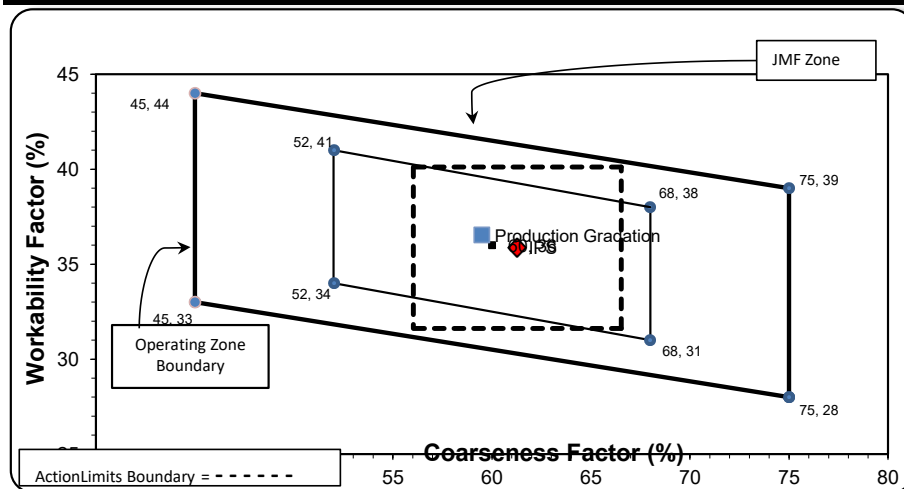
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	34	36.5
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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-39**

Sample Date: 10/7/26

Concrete Grade: **S2M-3500HP**

Contractor: _____

Dates Test Represents: 10/8/2026 through 10/14/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	49.2
26A	71-47	Presque Isle	370	2.31	2.57	12.1
2NS	63-0009	Koenig	1180	7.14	2.65	38.7
Total Wt			3050	18.80		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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	86.6	100.0	100.0	93.4	6.6	6.6
1/2"	45.7	97.1	100.0	72.9	20.5	27.1
3/8"	24.2	83.9	100.0	60.8	12.2	39.2
#4	3.8	17.1	97.5	41.7	19.1	58.3
#8	2.1	5.2	84.5	34.4	7.3	65.6
#16	1.8	3.0	69.1	28.0	6.4	72.0
#30	1.7	2.3	49.1	20.1	7.9	79.9
#50	1.6	2.2	20.7	9.1	11.0	90.9
#100	1.5	1.9	1.6	1.6	7.5	98.4
LBW	1.3	1.7	0.4	1.0	0.6	99.0



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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

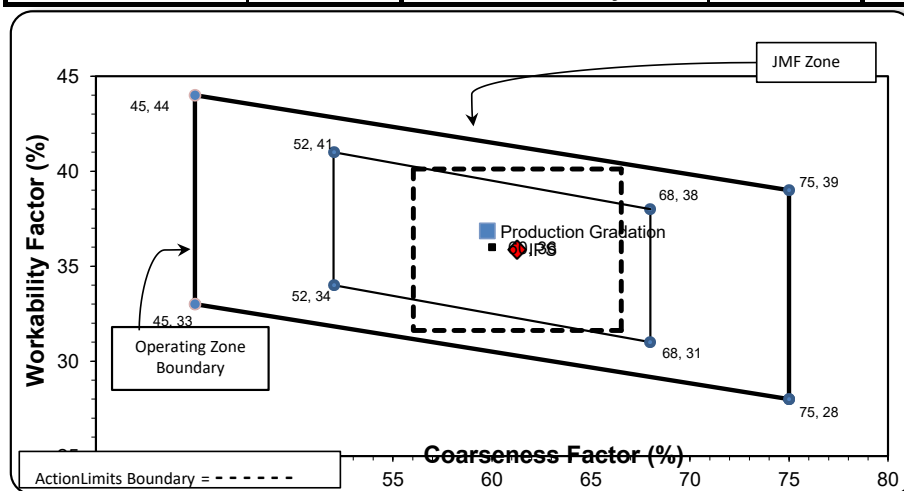
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	34	36.9
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Coarseness Factor:		61	
Workability Factor:		36	
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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