Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-11**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/5/2026 through 11/11/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.73	2.57	45.9
26A	71-47	Presque Isle	500	3.12	2.57	16.4
2NS	63-115	Ray Rd	1150	6.90	2.67	37.7
		Total Wt	**3050**	**18.75**		100.0

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

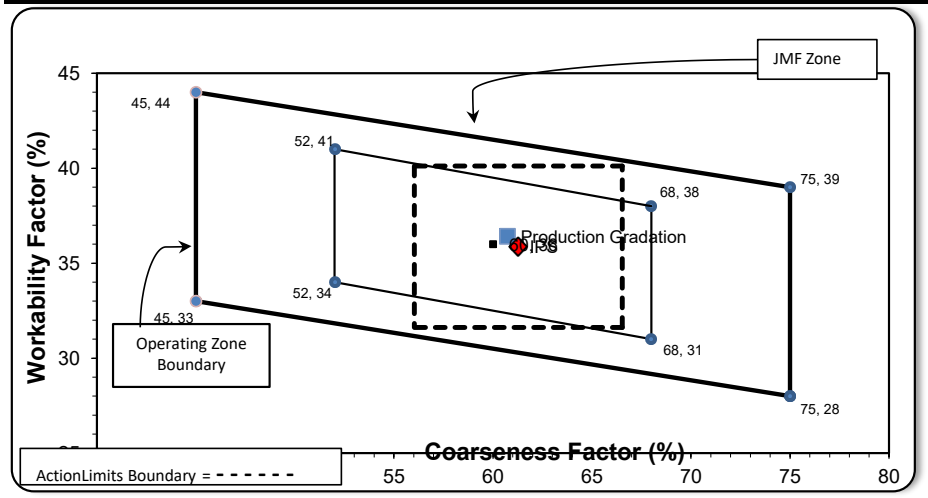
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	88.9	100.0	100.0	94.9	4.5	5.1
1/2"	39.6	97.1	100.0	71.8	23.1	28.2
3/8"	18.6	83.1	100.0	59.9	11.9	40.1
#4	3.0	16.1	97.2	40.7	19.2	59.3
#8	1.8	5.0	85.6	33.9	6.7	66.1
#16	1.4	2.8	65.5	25.8	8.1	74.2
#30	1.3	2.4	49.5	19.7	6.1	80.3
#50	1.2	2.2	24.7	10.2	9.4	89.8
#100	1.1	2.1	5.5	2.9	7.3	97.1
LBW	1.0	1.8	1.1	1.2	1.8	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

Coarseness Factor:	61	Workability Factor:	34	Adjusted WF 36.4



Intial Production Sample (IPS)

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-21**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/5/2026 through 11/11/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.73	2.57	45.9
26A	71-47	Presque Isle	500	3.12	2.57	16.4
2NS	81-019	Pleasant Lk	1150	6.95	2.65	37.7
		Total Wt	**3050**	**18.80**		100.0

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

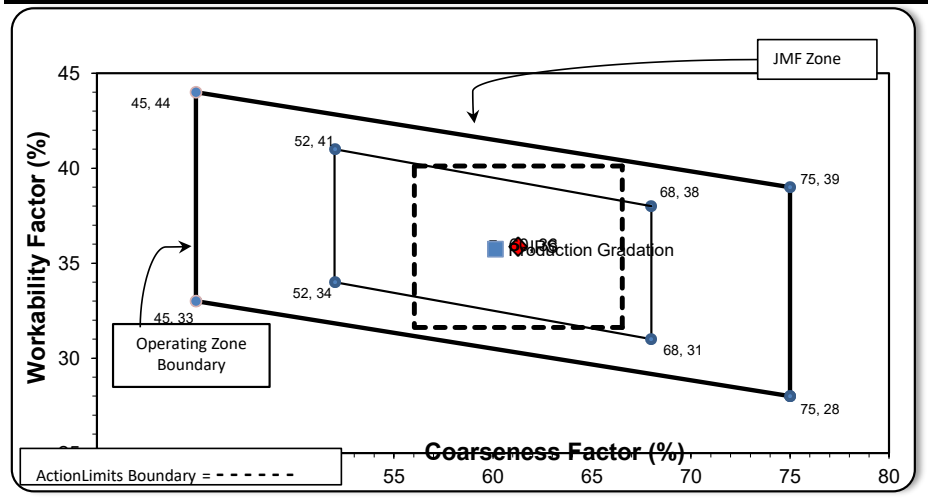
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Farmington Hills, MI 48336

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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	88.9	100.0	100.0	94.9	4.5	5.1
1/2"	39.6	97.1	100.0	71.8	23.1	28.2
3/8"	18.6	83.1	100.0	59.9	11.9	40.1
#4	3.0	16.1	97.6	40.8	19.0	59.2
#8	1.8	5.0	83.8	33.2	7.6	66.8
#16	1.4	2.8	62.8	24.8	8.5	75.2
#30	1.3	2.4	43.3	17.3	7.5	82.7
#50	1.2	2.2	19.3	8.2	9.1	91.8
#100	1.1	2.1	4.7	2.6	5.6	97.4
LBW	1.0	1.8	0.8	1.1	1.6	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 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

Coarseness Factor:	60	Workability Factor:	33	Adjusted WF 35.7



Intial Production Sample (IPS)

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**

Contractor: GM & Sons Inc.

Sample Date: 11/4/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/5/2026 through 11/11/2026

MDOT No.: 82022-201225A

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1600	9.53	2.69	50.8
26A	58-003	StoneCo	370	2.20	2.69	11.7
2NS	81-019	Pleasant Lk	1180	7.14	2.65	37.5
		Total Wt	**3150**	**18.87**		100.0

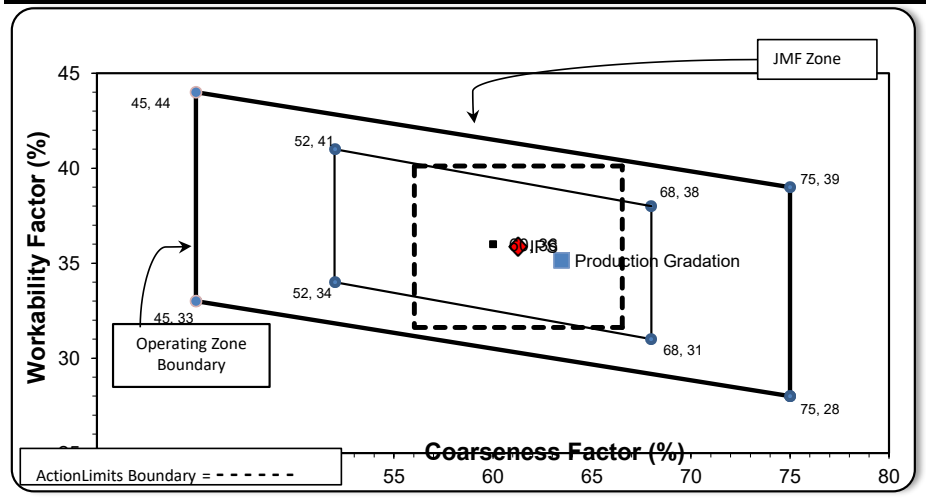
<----- Verify this number is 100%

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"	81.1	100.0	100.0	90.4	9.6	9.6
1/2"	40.3	98.1	100.0	69.5	20.9	30.5
3/8"	20.6	79.4	100.0	57.3	12.2	42.7
#4	4.0	10.4	97.6	39.8	17.4	60.2
#8	2.0	2.0	83.8	32.6	7.2	67.4
#16	1.1	1.6	62.8	24.3	8.4	75.7
#30	1.1	1.5	43.3	17.0	7.3	83.0
#50	1.0	1.4	19.3	7.9	9.1	92.1
#100	1.0	1.3	4.7	2.4	5.5	97.6
LBW	1.1	1.1	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

Coarseness Factor:	63	Workability Factor:	33	Adjusted WF 35.1



Intial Production Sample (IPS)

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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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/5/2026 through 11/11/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1360	8.48	2.57	44.4
26A	71-47	Presque Isle	500	3.12	2.57	16.3
2NS	63-115	Ray Rd	1200	7.20	2.67	39.2
		Total Wt	**3060**	**18.80**		100.0

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

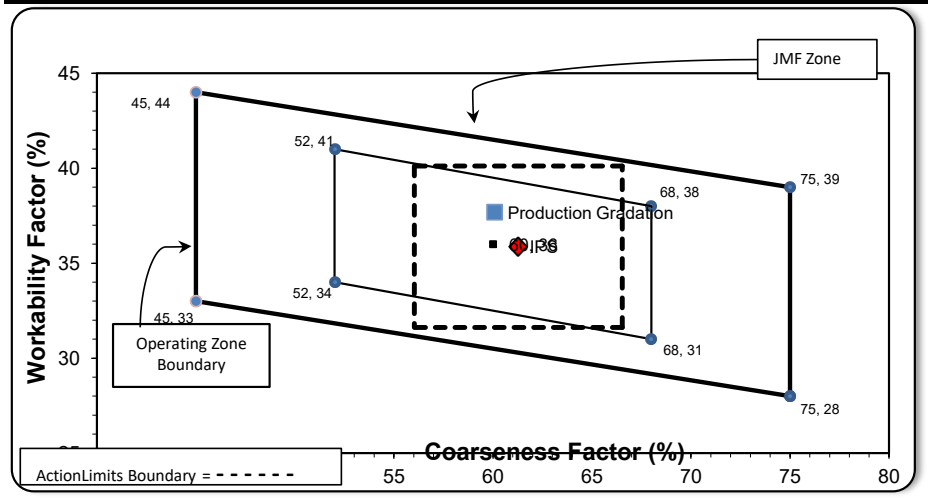
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30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	98.8	100.0	100.0	99.5	0.5	0.5
3/4"	88.9	100.0	100.0	95.1	4.4	4.9
1/2"	39.6	97.1	100.0	72.7	22.4	27.3
3/8"	18.6	83.1	100.0	61.1	11.6	38.9
#4	3.0	16.1	97.2	42.1	19.0	57.9
#8	1.8	5.0	85.6	35.2	6.9	64.8
#16	1.4	2.8	65.5	26.8	8.4	73.2
#30	1.3	2.4	49.5	20.4	6.4	79.6
#50	1.2	2.2	24.7	10.6	9.8	89.4
#100	1.1	2.1	5.5	3.0	7.6	97.0
LBW	1.0	1.8	1.1	1.2	1.8	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

Coarseness Factor:	60	Workability Factor:	35	Adjusted WF 37.7



Intial Production Sample (IPS)

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-39**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/5/2026 through 11/11/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1360	8.48	2.57	44.4
26A	71-47	Presque Isle	500	3.12	2.57	16.3
2NS	63-0009	Koenig	1200	7.26	2.65	39.2
		Total Wt	**3060**	**18.86**		100.0

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

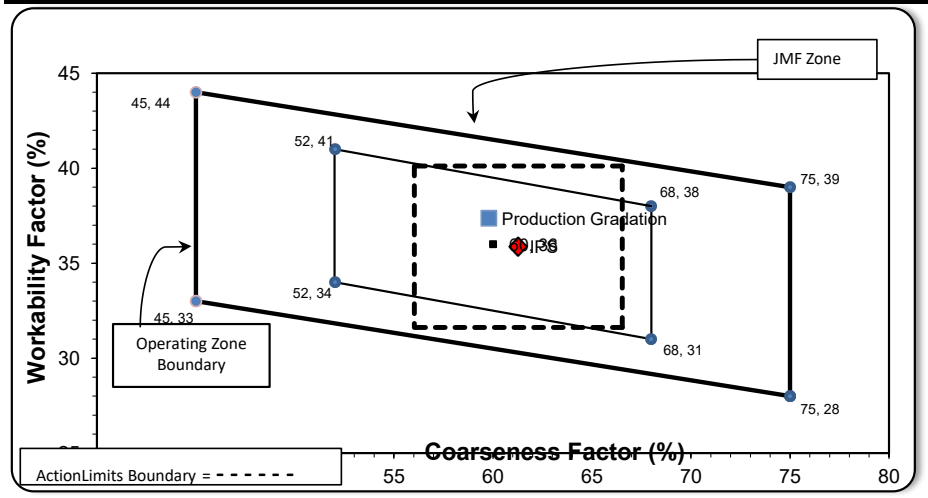
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.8	100.0	100.0	99.5	0.5	0.5
3/4"	88.9	100.0	100.0	95.1	4.4	4.9
1/2"	39.6	97.1	100.0	72.7	22.4	27.3
3/8"	18.6	83.1	100.0	61.1	11.6	38.9
#4	3.0	16.1	97.2	42.1	19.0	57.9
#8	1.8	5.0	84.8	34.9	7.2	65.1
#16	1.4	2.8	70.2	28.6	6.3	71.4
#30	1.3	2.4	51.2	21.0	7.6	79.0
#50	1.2	2.2	25.0	10.7	10.4	89.3
#100	1.1	2.1	5.3	2.9	7.8	97.1
LBW	1.0	1.8	0.3	0.9	2.1	99.1

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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

Coarseness Factor:	60	Workability Factor:	35	Adjusted WF 37.4



Intial Production Sample (IPS)

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