

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 10/27/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 10/28/2025 through 11/3/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	54.2
26A	58-003	Stoneco	200	1.19	2.69	6.8
2NS	63-114	Highland	1150	6.95	2.65	39.0
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"	99.5	100.0	100.0	99.7	0.3	0.3
3/4"	84.2	100.0	100.0	91.4	8.3	8.6
1/2"	44.1	99.4	100.0	69.6	21.8	30.4
3/8"	25.6	87.4	100.0	58.8	10.8	41.2
#4	3.6	9.8	99.0	41.2	17.6	58.8
#8	1.4	2.6	84.2	33.8	7.5	66.2
#16	1.3	2.3	65.9	26.6	7.2	73.4
#30	1.2	2.0	45.1	18.4	8.2	81.6
#50	1.2	1.6	20.6	8.8	9.6	91.2
#100	1.1	1.4	4.0	2.3	6.5	97.7
LBW	0.9	1.5	1.0	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 4% for the 3/4" sieve when

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

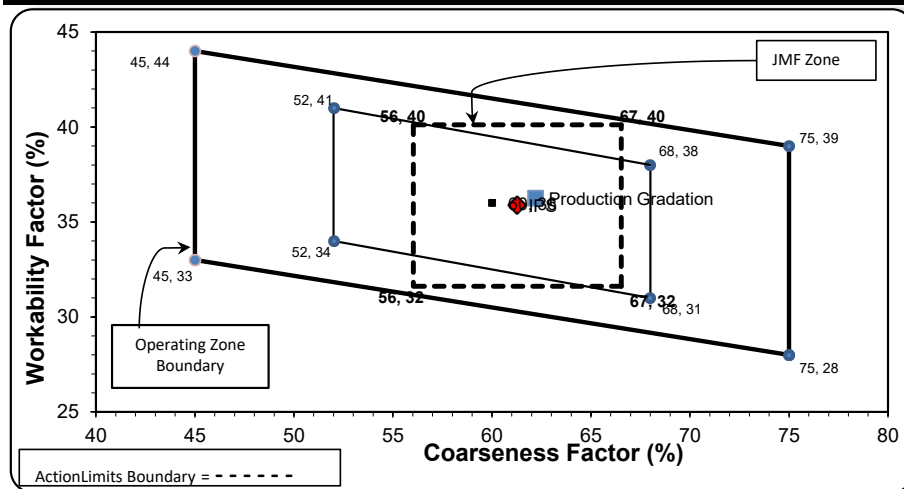
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.3
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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:

[Signature]

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 10/27/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 10/28/2025 through 11/3/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	54.2
26A	58-003	Stoneco	200	1.19	2.69	6.8
2NS	63-114	Highland	1150	6.95	2.65	39.0
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"	99.5	100.0	100.0	99.7	0.3	0.3
3/4"	84.2	100.0	100.0	91.4	8.3	8.6
1/2"	44.1	99.4	100.0	69.6	21.8	30.4
3/8"	25.6	87.4	100.0	58.8	10.8	41.2
#4	3.6	9.8	99.0	41.2	17.6	58.8
#8	1.4	2.6	84.2	33.8	7.5	66.2
#16	1.3	2.3	65.9	26.6	7.2	73.4
#30	1.2	2.0	45.1	18.4	8.2	81.6
#50	1.2	1.6	20.6	8.8	9.6	91.2
#100	1.1	1.4	4.0	2.3	6.5	97.7
LBW	0.9	1.5	1.0	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 4% for the 3/4" sieve when

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

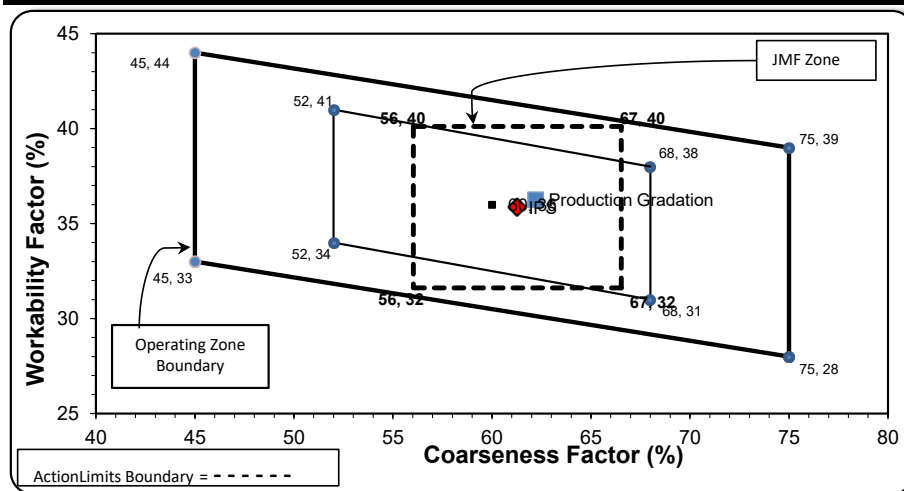
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.3
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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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SM, LLC Technical Service

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: 12

Sample Date: 10/27/25

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 10/28/2025 through 11/3/2025

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.2	100.0	100.0	98.6	1.4	1.4
3/4"	78.5	100.0	100.0	89.2	9.4	10.8
1/2"	31.8	98.0	100.0	65.6	23.6	34.4
3/8"	16.2	87.5	100.0	56.7	8.9	43.3
#4	2.9	20.0	97.4	42.1	14.7	57.9
#8	2.0	3.3	83.2	34.3	7.8	65.7
#16	1.8	1.7	64.4	26.6	7.7	73.4
#30	1.7	1.4	46.1	19.2	7.3	80.8
#50	1.7	1.3	21.8	9.6	9.6	90.4
#100	1.5	1.3	4.8	2.8	6.8	97.2
LBW	1.3	1.1	1.0	1.2	1.6	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.



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

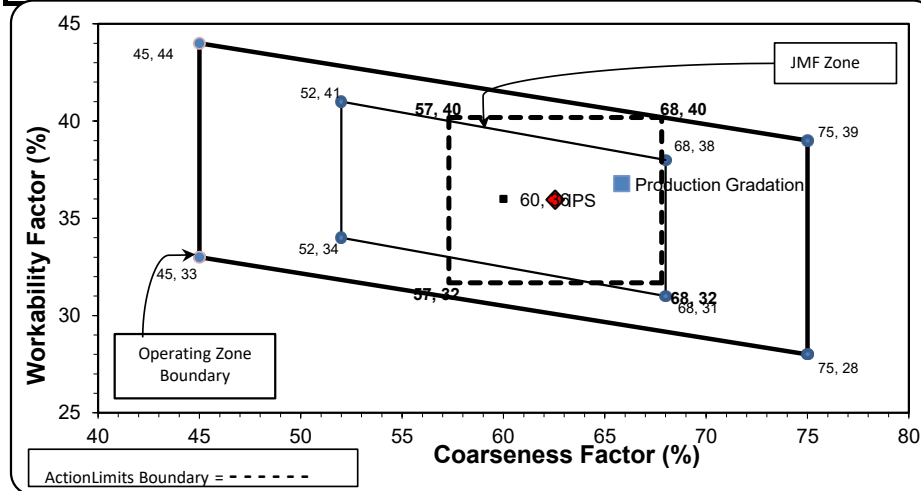
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	66	Workability Factor:	34
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Coarseness Factor:	63
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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"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: 10/27/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 10/28/2025 through 11/3/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.2	100.0	100.0	98.6	1.4	1.4
3/4"	78.5	100.0	100.0	89.2	9.4	10.8
1/2"	31.8	98.0	100.0	65.6	23.6	34.4
3/8"	16.2	87.5	100.0	56.7	8.9	43.3
#4	2.9	20.0	97.4	42.1	14.7	57.9
#8	2.0	3.3	83.2	34.3	7.8	65.7
#16	1.8	1.7	64.4	26.6	7.7	73.4
#30	1.7	1.4	46.1	19.2	7.3	80.8
#50	1.7	1.3	21.8	9.6	9.6	90.4
#100	1.5	1.3	4.8	2.8	6.8	97.2
LBW	1.3	1.1	1.0	1.2	1.6	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.



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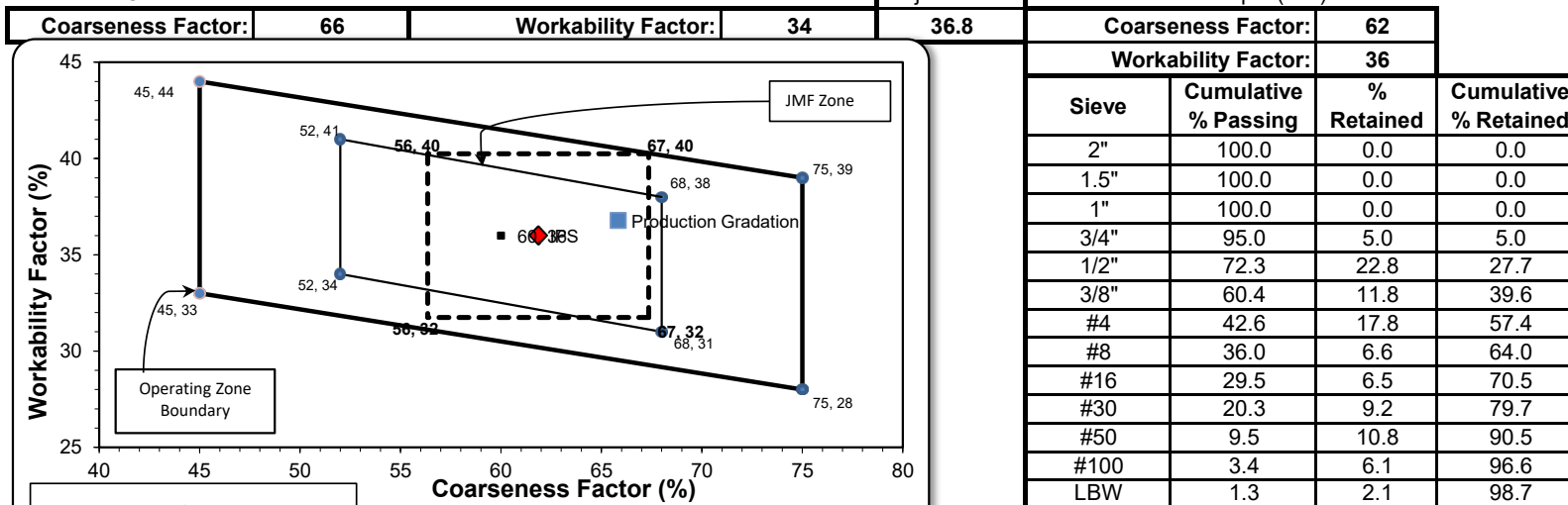
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)



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[Signature]

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-O2**

Sample Date: 10/27/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 10/28/2025 through 11/3/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.2	100.0	100.0	98.6	1.4	1.4
3/4"	78.5	100.0	100.0	89.2	9.4	10.8
1/2"	31.8	98.0	100.0	65.6	23.6	34.4
3/8"	16.2	87.5	100.0	56.7	8.9	43.3
#4	2.9	20.0	97.4	42.1	14.7	57.9
#8	2.0	3.3	83.2	34.3	7.8	65.7
#16	1.8	1.7	64.4	26.6	7.7	73.4
#30	1.7	1.4	46.1	19.2	7.3	80.8
#50	1.7	1.3	21.8	9.6	9.6	90.4
#100	1.5	1.3	4.8	2.8	6.8	97.2
LBW	1.3	1.1	1.0	1.2	1.6	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.



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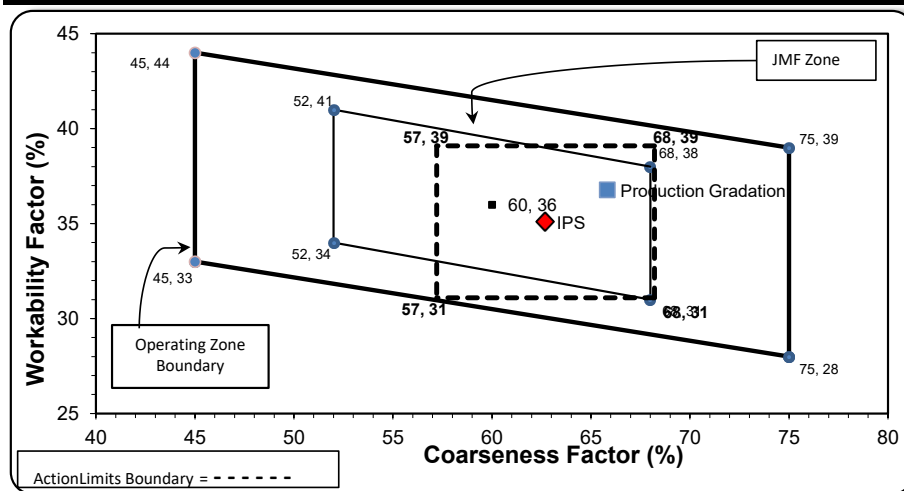
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	66	Workability Factor:	34	36.8
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Coarseness Factor:	63
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Workability Factor:	35
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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"	100.0	0.0	0.0
3/4"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

PREPARED BY:
SM, LLC Technical Service

Approved By:

[Signature]