Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1320	8.23	2.57	45.1
26A	71-47	Presque Isle	450	2.81	2.57	15.4
2NS	63-115	Ray Rd	1160	6.96	2.67	39.6
		Total Wt	**2930**	**18.00**		100.0

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

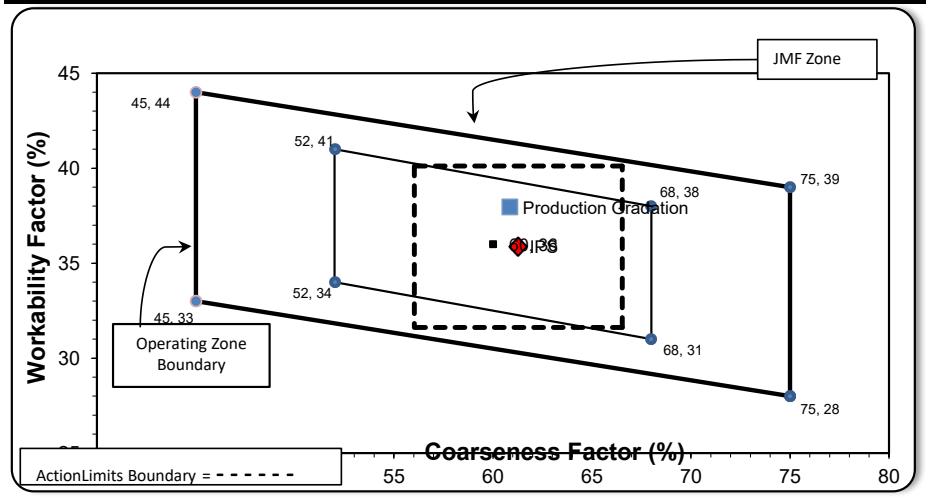
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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	99.5	0.5	0.5
3/4"	88.9	100.0	100.0	95.0	4.5	5.0
1/2"	39.6	97.1	100.0	72.3	22.7	27.7
3/8"	18.6	83.1	100.0	60.7	11.6	39.3
#4	3.0	16.1	97.2	42.3	18.4	57.7
#8	1.8	5.0	85.6	35.5	6.8	64.5
#16	1.4	2.8	65.5	27.0	8.5	73.0
#30	1.3	2.4	49.5	20.6	6.4	79.4
#50	1.2	2.2	24.7	10.7	9.9	89.3
#100	1.1	2.1	5.5	3.0	7.7	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:	61	Workability Factor:	35	Adjusted WF 38.0



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: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1410	8.40	2.69	46.8
26A	58-003	StoneCo	400	2.38	2.69	13.3
2NS	81-019	Pleasant Lk	1200	7.26	2.65	39.9
		Total Wt	**3010**	**18.04**		100.0

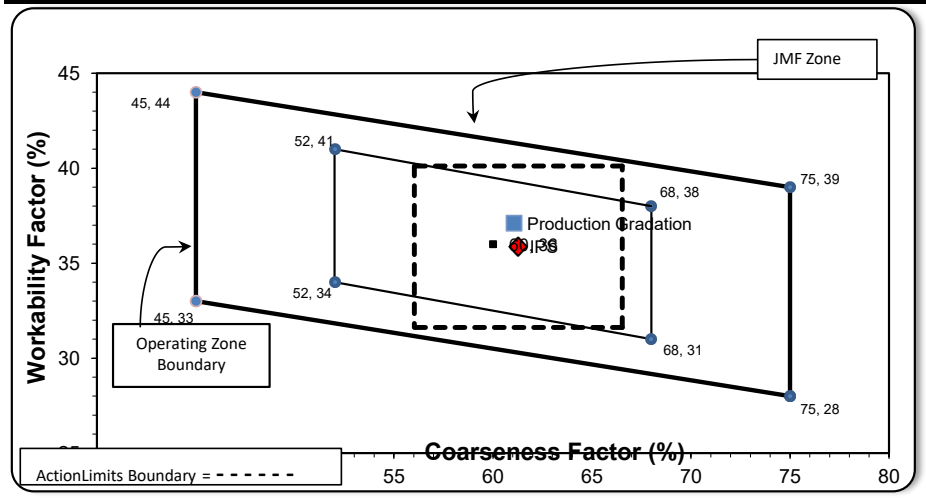
<----- Verify this number is 100%

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	91.1	8.9	8.9
1/2"	40.3	98.1	100.0	71.8	19.4	28.2
3/8"	20.6	79.4	100.0	60.1	11.7	39.9
#4	4.0	10.4	97.6	42.2	17.9	57.8
#8	2.0	2.0	83.8	34.6	7.6	65.4
#16	1.1	1.6	62.8	25.8	8.8	74.2
#30	1.1	1.5	43.3	18.0	7.8	82.0
#50	1.0	1.4	19.3	8.3	9.6	91.7
#100	1.0	1.3	4.7	2.5	5.8	97.5
LBW	1.1	1.1	0.8	1.0	1.5	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:	61	Workability Factor:	35	Adjusted WF 37.1



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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PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor:

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

1" Slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1320	7.86	2.69	43.7
IA	58-003	StoneCo	500	2.98	2.69	16.6
2NS	63-114	Highland	1200	7.23	2.66	39.7
		Total Wt	**3020**	**18.07**		100.0

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

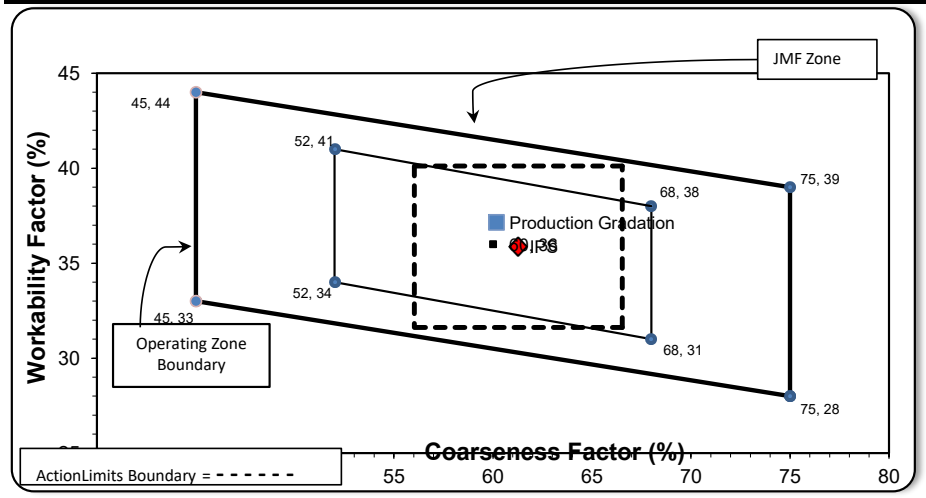
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Sieve	6AA	IA	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	91.7	8.3	8.3
1/2"	40.3	88.1	100.0	71.9	19.8	28.1
3/8"	20.6	72.1	100.0	60.7	11.3	39.3
#4	4.0	17.9	98.3	43.8	16.9	56.2
#8	2.0	2.9	83.8	34.7	9.1	65.3
#16	1.1	1.8	65.1	26.6	8.0	73.4
#30	1.1	1.7	45.1	18.7	8.0	81.3
#50	1.0	1.6	22.4	9.6	9.1	90.4
#100	1.0	1.5	4.0	2.3	7.3	97.7
LBW	1.1	1.3	0.4	0.9	1.4	99.1

*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 37.2



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-103**

Contractor:

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

1" Slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1320	7.86	2.69	43.7
IA	58-003	StoneCo	500	2.98	2.69	16.6
2NS	63-114	Highland	1200	7.23	2.66	39.7
		Total Wt	**3020**	**18.07**		100.0

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

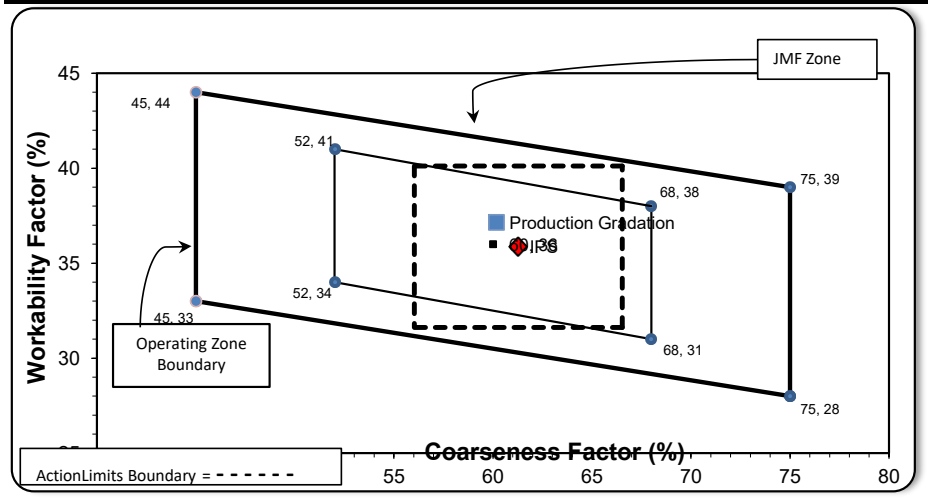
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30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Sieve	6AA	IA	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	91.7	8.3	8.3
1/2"	40.3	88.1	100.0	71.9	19.8	28.1
3/8"	20.6	72.1	100.0	60.7	11.3	39.3
#4	4.0	17.9	98.3	43.8	16.9	56.2
#8	2.0	2.9	83.8	34.7	9.1	65.3
#16	1.1	1.8	65.1	26.6	8.0	73.4
#30	1.1	1.7	45.1	18.7	8.0	81.3
#50	1.0	1.6	22.4	9.6	9.1	90.4
#100	1.0	1.5	4.0	2.3	7.3	97.7
LBW	1.1	1.3	0.4	0.9	1.4	99.1

*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 37.2



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-2**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1180	7.36	2.57	41.0
26A	71-47	Presque Isle	540	3.37	2.57	18.8
2NS	63-115	Ray Rd	1160	6.96	2.67	40.3
		Total Wt	**2880**	**17.69**		100.0

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

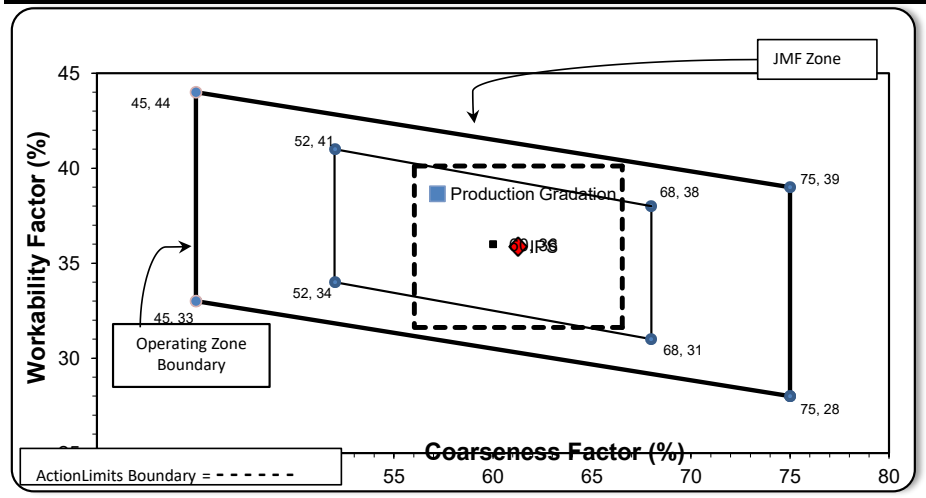
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.8	100.0	100.0	99.5	0.5	0.5
3/4"	88.9	100.0	100.0	95.5	4.1	4.5
1/2"	39.6	97.1	100.0	74.7	20.7	25.3
3/8"	18.6	83.1	100.0	63.5	11.2	36.5
#4	3.0	16.1	97.2	43.4	20.1	56.6
#8	1.8	5.0	85.6	36.2	7.2	63.8
#16	1.4	2.8	65.5	27.5	8.7	72.5
#30	1.3	2.4	49.5	20.9	6.6	79.1
#50	1.2	2.2	24.7	10.9	10.1	89.1
#100	1.1	2.1	5.5	3.1	7.8	96.9
LBW	1.0	1.8	1.1	1.2	1.9	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

Coarseness Factor:	57	Workability Factor:	36	Adjusted WF 38.7



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: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1400	8.34	2.69	47.5
26A	58-003	StoneCo	350	2.09	2.69	11.9
2NS	81-019	Pleasant Lk	1200	7.26	2.65	40.7
		Total Wt	**2950**	**17.68**		100.0

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

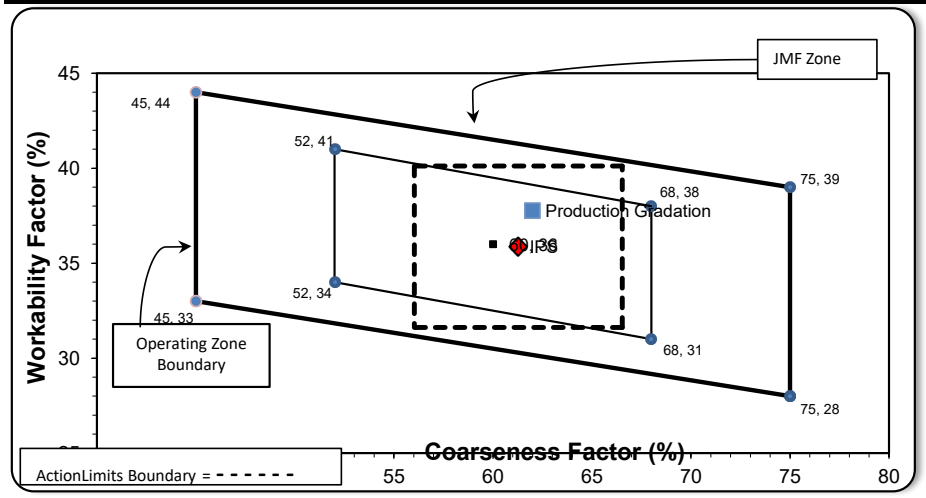
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	81.1	100.0	100.0	91.0	9.0	9.0
1/2"	40.3	98.1	100.0	71.4	19.6	28.6
3/8"	20.6	79.4	100.0	59.9	11.6	40.1
#4	4.0	10.4	97.6	42.8	17.0	57.2
#8	2.0	2.0	83.8	35.3	7.6	64.7
#16	1.1	1.6	62.8	26.3	9.0	73.7
#30	1.1	1.5	43.3	18.3	7.9	81.7
#50	1.0	1.4	19.3	8.5	9.8	91.5
#100	1.0	1.3	4.7	2.5	6.0	97.5
LBW	1.1	1.1	0.8	1.0	1.6	99.0

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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

Coarseness Factor:	62	Workability Factor:	35	Adjusted WF 37.8



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-36**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1260	7.86	2.57	44.1
26A	71-47	Presque Isle	500	3.12	2.57	17.5
2NS	63-115	Ray Rd	1100	6.60	2.67	38.5
		Total Wt	**2860**	**17.58**		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	72.9	22.2	27.1
3/8"	18.6	83.1	100.0	61.2	11.7	38.8
#4	3.0	16.1	97.2	41.5	19.7	58.5
#8	1.8	5.0	85.6	34.6	6.9	65.4
#16	1.4	2.8	65.5	26.3	8.3	73.7
#30	1.3	2.4	49.5	20.0	6.3	80.0
#50	1.2	2.2	24.7	10.4	9.6	89.6
#100	1.1	2.1	5.5	3.0	7.4	97.0
LBW	1.0	1.8	1.1	1.2	1.8	98.8

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Suite 500
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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.

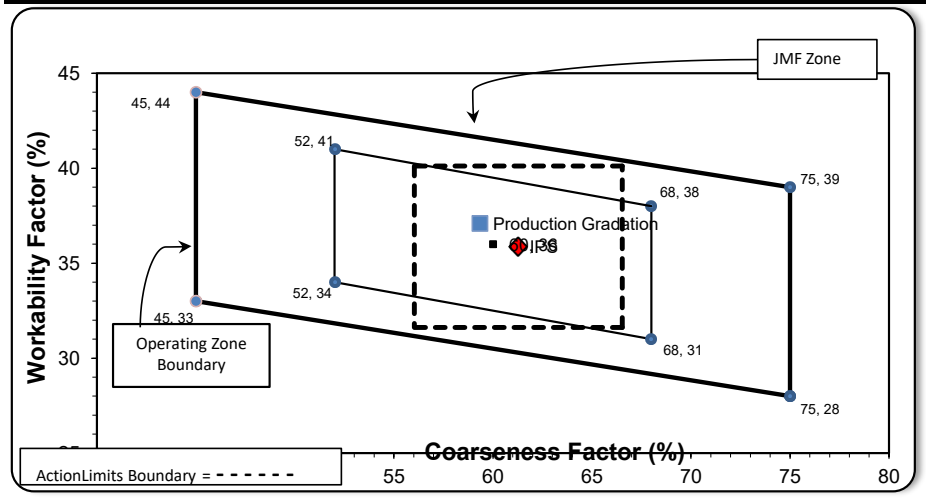
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	59	Workability Factor:	35	Adjusted WF: 37.1

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



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: **DM-4500HP**

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

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1260	7.86	2.57	44.1
26A	71-47	Presque Isle	500	3.12	2.57	17.5
2NS	63-0009	Koenig	1100	6.65	2.65	38.5
		Total Wt	**2860**	**17.63**		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	72.9	22.2	27.1
3/8"	18.6	83.1	100.0	61.2	11.7	38.8
#4	3.0	16.1	97.2	41.5	19.7	58.5
#8	1.8	5.0	84.8	34.3	7.2	65.7
#16	1.4	2.8	70.2	28.1	6.2	71.9
#30	1.3	2.4	51.2	20.7	7.4	79.3
#50	1.2	2.2	25.0	10.5	10.2	89.5
#100	1.1	2.1	5.3	2.9	7.6	97.1
LBW	1.0	1.8	0.3	0.9	2.0	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.

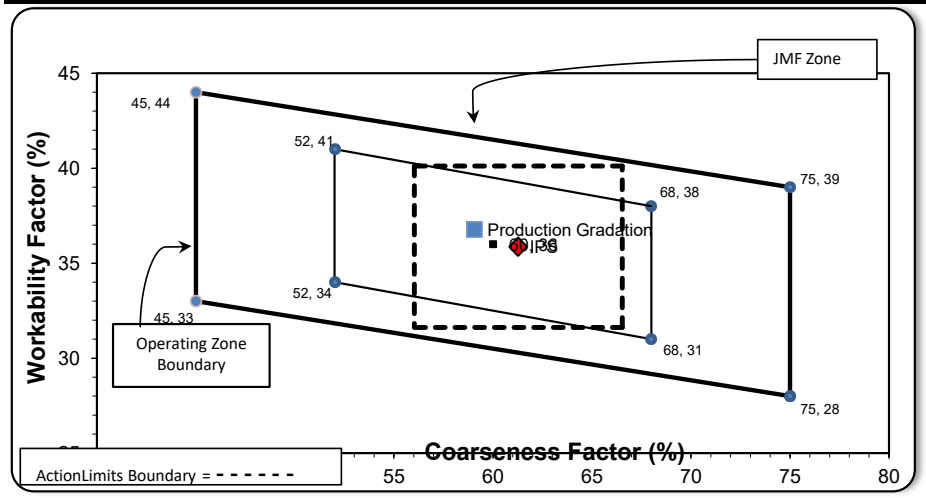
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	59	Workability Factor:	34	Adjusted WF: 36.8

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-102**

Contractor:

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

5" Slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1300	7.74	2.69	44.1
IA	58-003	StoneCo	450	2.68	2.69	15.3
2NS	63-114	Highland	1200	7.23	2.66	40.7
		Total Wt	**2950**	**17.66**		100.0

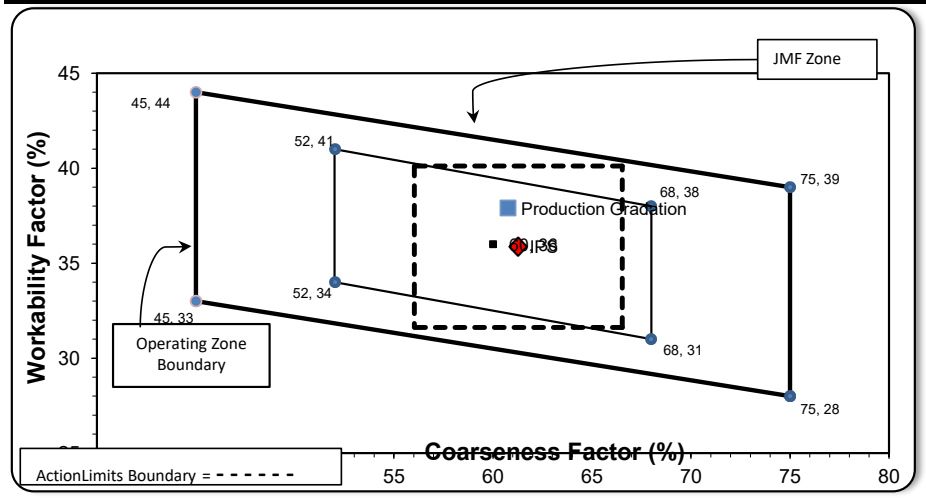
<----- Verify this number is 100%

Sieve	6AA	IA	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	91.7	8.3	8.3
1/2"	40.3	88.1	100.0	71.9	19.8	28.1
3/8"	20.6	72.1	100.0	60.8	11.1	39.2
#4	4.0	17.9	98.3	44.5	16.3	55.5
#8	2.0	2.9	83.8	35.4	9.1	64.6
#16	1.1	1.8	65.1	27.2	8.2	72.8
#30	1.1	1.7	45.1	19.1	8.2	80.9
#50	1.0	1.6	22.4	9.8	9.3	90.2
#100	1.0	1.5	4.0	2.3	7.5	97.7
LBW	1.1	1.3	0.4	0.8	1.5	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

Coarseness Factor:	61	Workability Factor:	35	Adjusted WF 37.9



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-103**

Contractor: _____

Sample Date: 11/4/26

Concrete Grade: **DM-4500HP**

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

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1300	7.74	2.69	44.1
IA	58-003	StoneCo	450	2.68	2.69	15.3
2NS	63-114	Highland	1200	7.23	2.66	40.7
		Total Wt	**2950**	**17.66**		100.0

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

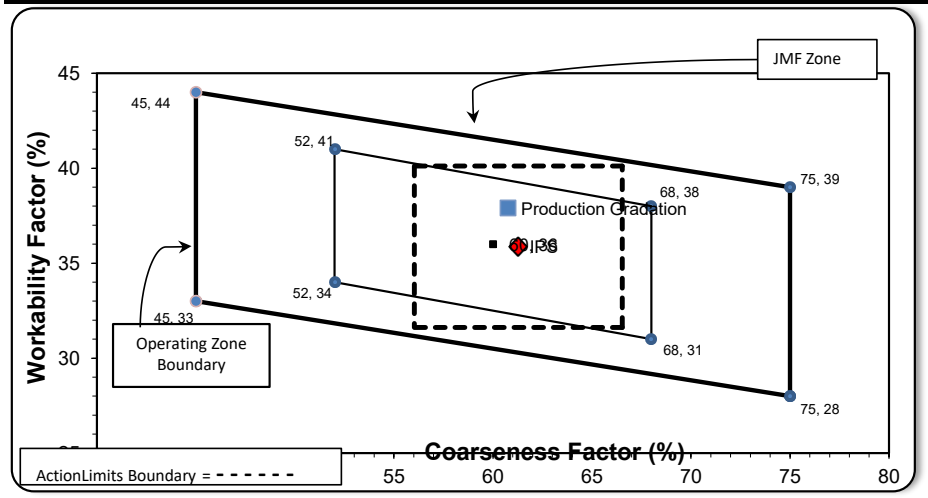
Sieve	6AA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	81.1	100.0	100.0	91.7	8.3	8.3
1/2"	40.3	88.1	100.0	71.9	19.8	28.1
3/8"	20.6	72.1	100.0	60.8	11.1	39.2
#4	4.0	17.9	98.3	44.5	16.3	55.5
#8	2.0	2.9	83.8	35.4	9.1	64.6
#16	1.1	1.8	65.1	27.2	8.2	72.8
#30	1.1	1.7	45.1	19.1	8.2	80.9
#50	1.0	1.6	22.4	9.8	9.3	90.2
#100	1.0	1.5	4.0	2.3	7.5	97.7
LBW	1.1	1.3	0.4	0.8	1.5	99.2

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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:	61	Workability Factor:	35	Adjusted WF 37.9



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
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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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