

Aggregate Optimization Chart

PLANT #: **P-102**

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 6/21/2026 through 6/28/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1400	8.34	2.69	45.6
IA	58-003	Stone Co	450	2.68	2.69	14.7
2NS	63-114	Highland	1220	7.35	2.66	39.7
Total Wt			3070	18.37		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"	87.1	100.0	100.0	94.1	5.9	5.9
1/2"	46.0	90.5	100.0	74.0	20.1	26.0
3/8"	26.3	74.9	100.0	62.7	11.3	37.3
#4	4.0	17.0	98.5	43.5	19.3	56.5
#8	1.4	3.0	87.6	35.9	7.6	64.1
#16	1.1	2.2	71.1	29.1	6.8	70.9
#30	1.0	1.9	51.4	21.2	7.9	78.8
#50	0.9	1.7	18.0	7.8	13.3	92.2
#100	0.9	1.5	2.4	1.6	6.2	98.4
LBW	0.9	1.3	0.7	0.9	0.7	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.

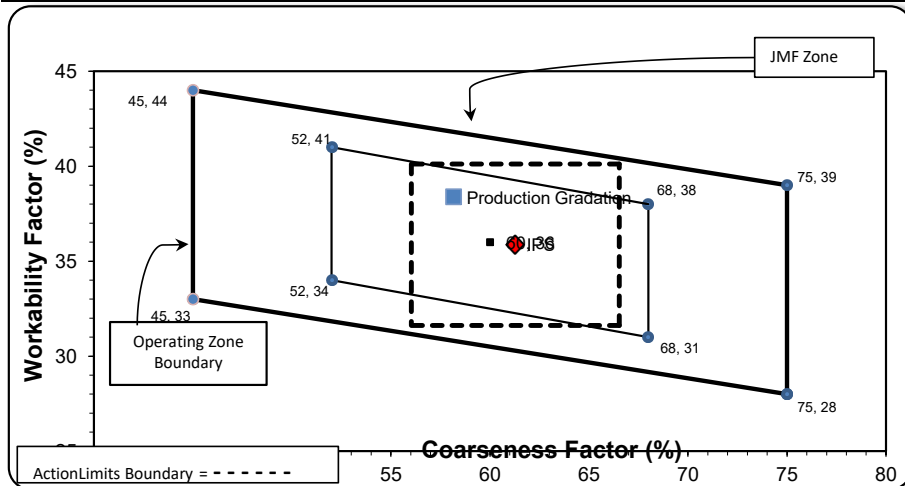
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	36	38.4
---------------------------	-----------	----------------------------	-----------	-------------

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

PLANT #: **P-103**

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 6/21/2026 through 6/28/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1400	8.34	2.69	45.6
IA	58-003	Stone Co	450	2.68	2.69	14.7
2NS	63-114	Highland	1220	7.35	2.66	39.7
Total Wt			3070	18.37		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"	87.1	100.0	100.0	94.1	5.9	5.9
1/2"	46.0	90.5	100.0	74.0	20.1	26.0
3/8"	26.3	74.9	100.0	62.7	11.3	37.3
#4	4.0	17.0	98.5	43.5	19.3	56.5
#8	1.4	3.0	87.6	35.9	7.6	64.1
#16	1.1	2.2	71.1	29.1	6.8	70.9
#30	1.0	1.9	51.4	21.2	7.9	78.8
#50	0.9	1.7	18.0	7.8	13.3	92.2
#100	0.9	1.5	2.4	1.6	6.2	98.4
LBW	0.9	1.3	0.7	0.9	0.7	99.1

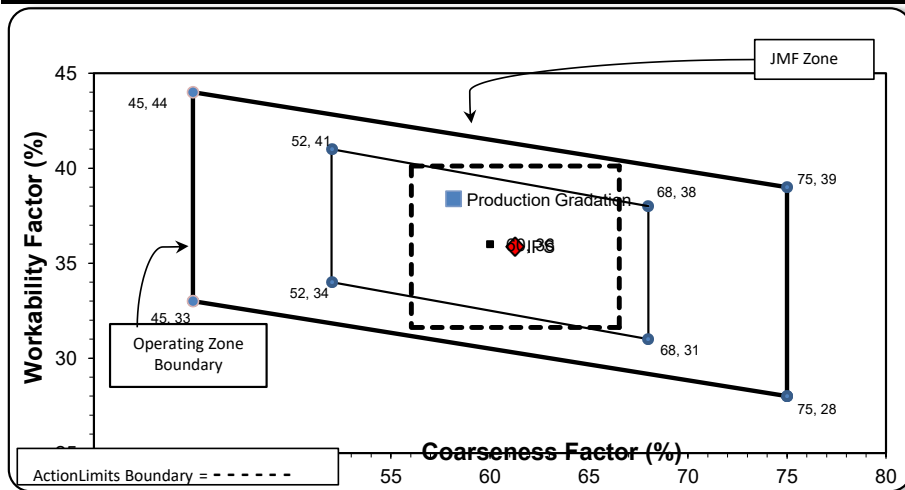
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	36	38.4
---------------------------	-----------	----------------------------	-----------	-------------

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

PLANT #: **P-102**

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 6/21/2026 through 6/28/2026

5 inch

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1350	8.04	2.69	45.0
IA	58-003	Stone Co	450	2.68	2.69	15.0
2NS	63-114	Highland	1200	7.23	2.66	40.0
Total Wt			3000	17.95		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"	87.1	100.0	100.0	94.2	5.8	5.8
1/2"	46.0	90.5	100.0	74.3	19.9	25.7
3/8"	26.3	74.9	100.0	63.1	11.2	36.9
#4	4.0	17.0	98.5	43.8	19.3	56.3
#8	1.4	3.0	87.6	36.1	7.6	63.9
#16	1.1	2.2	71.1	29.3	6.9	70.7
#30	1.0	1.9	51.4	21.3	8.0	78.7
#50	0.9	1.7	18.0	7.9	13.4	92.1
#100	0.9	1.5	2.4	1.6	6.3	98.4
LBW	0.9	1.3	0.7	0.9	0.7	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.

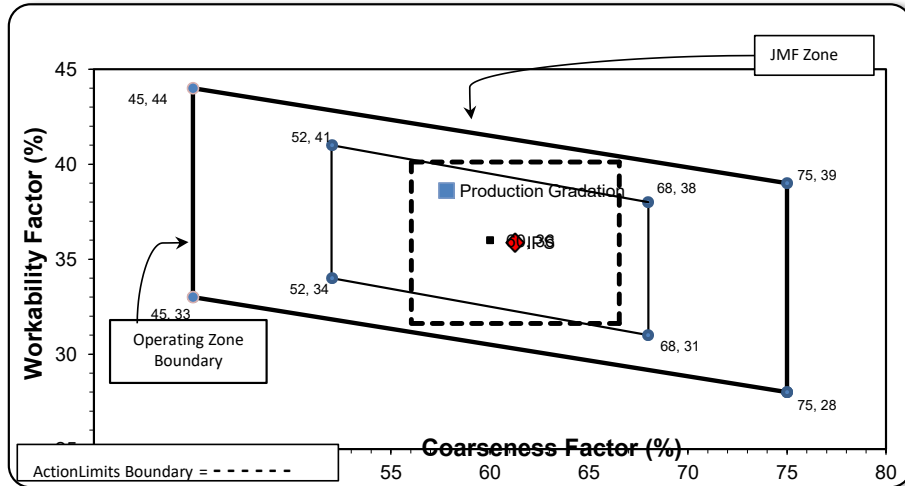
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	36	38.6
---------------------------	-----------	----------------------------	-----------	-------------

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

PLANT #: **P-103**

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 6/21/2026 through 6/28/2026 5 inch

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1350	8.04	2.69	45.0
IA	58-003	Stone Co	450	2.68	2.69	15.0
2NS	63-114	Highland	1200	7.23	2.66	40.0
Total Wt			3000	17.95		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"	87.1	100.0	100.0	94.2	5.8	5.8
1/2"	46.0	90.5	100.0	74.3	19.9	25.7
3/8"	26.3	74.9	100.0	63.1	11.2	36.9
#4	4.0	17.0	98.5	43.8	19.3	56.3
#8	1.4	3.0	87.6	36.1	7.6	63.9
#16	1.1	2.2	71.1	29.3	6.9	70.7
#30	1.0	1.9	51.4	21.3	8.0	78.7
#50	0.9	1.7	18.0	7.9	13.4	92.1
#100	0.9	1.5	2.4	1.6	6.3	98.4
LBW	0.9	1.3	0.7	0.9	0.7	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.

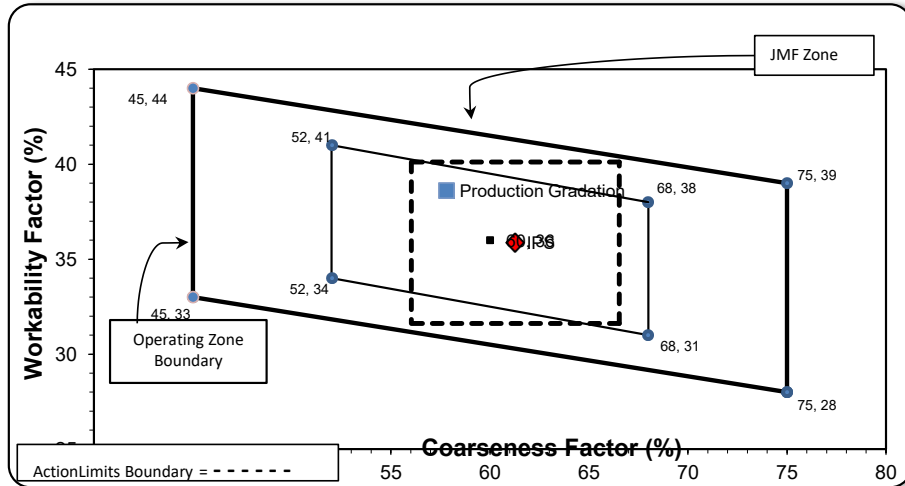
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	36	38.6
---------------------------	-----------	----------------------------	-----------	-------------

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