Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

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%

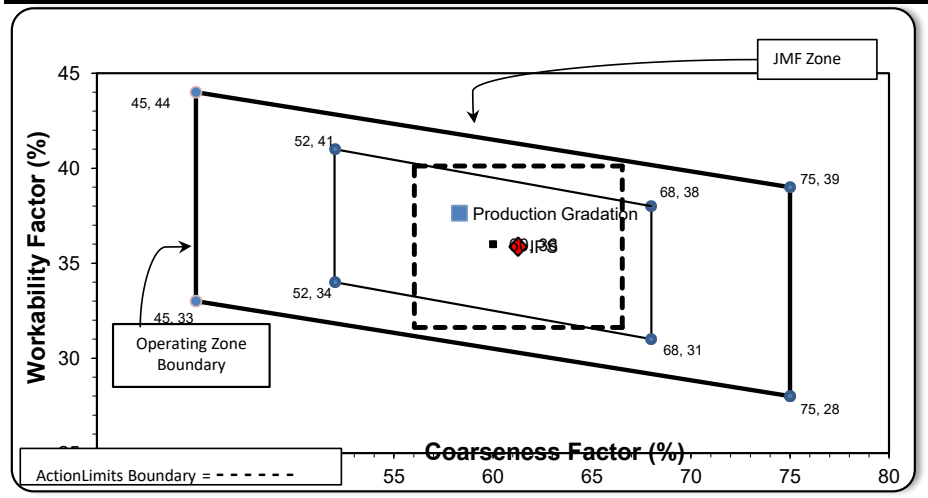
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.3	100.0	100.0	95.6	4.4	4.4
1/2"	41.1	97.6	100.0	73.1	22.5	26.9
3/8"	21.7	83.4	100.0	62.2	10.9	37.8
#4	4.9	19.8	96.7	43.5	18.6	56.5
#8	2.4	6.5	83.5	35.1	8.4	64.9
#16	1.8	3.2	62.3	26.0	9.2	74.0
#30	1.6	2.5	46.0	19.3	6.7	80.7
#50	1.5	2.2	23.4	10.3	9.0	89.7
#100	1.3	2.1	5.2	3.0	7.3	97.0
LBW	1.0	1.8	0.9	1.1	1.9	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:	58	Workability Factor:	35	Adjusted WF 37.6



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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1280	7.98	2.57	44.4
26A	71-47	Presque Isle	440	2.74	2.57	15.3
2NS	63-115	Ray Rd	1160	6.96	2.67	40.3
		Total Wt	**2880**	**17.69**		100.0

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

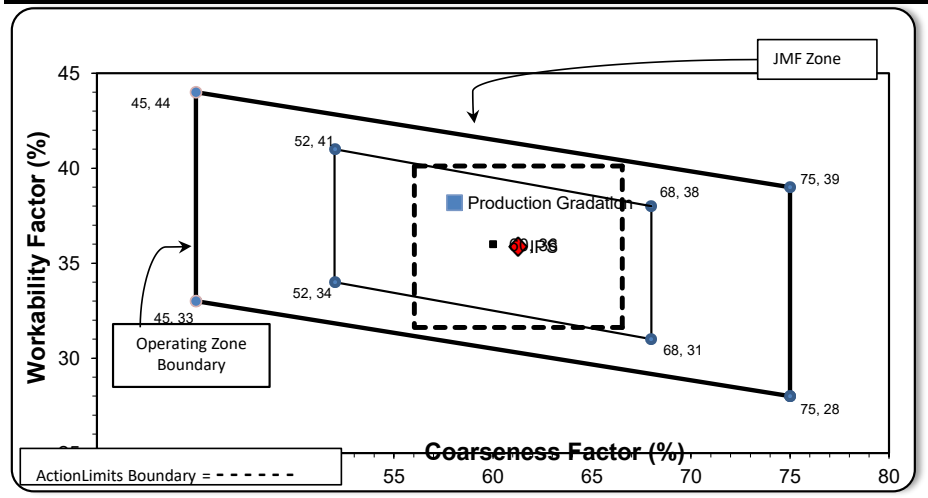
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Suite 500
Farmington Hills, MI 48336

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.3	100.0	100.0	95.7	4.3	4.3
1/2"	41.1	97.6	100.0	73.5	22.2	26.5
3/8"	21.7	83.4	100.0	62.7	10.8	37.3
#4	4.9	19.8	96.7	44.2	18.5	55.8
#8	2.4	6.5	83.5	35.7	8.5	64.3
#16	1.8	3.2	62.3	26.4	9.3	73.6
#30	1.6	2.5	46.0	19.6	6.8	80.4
#50	1.5	2.2	23.4	10.4	9.2	89.6
#100	1.3	2.1	5.2	3.0	7.4	97.0
LBW	1.0	1.8	0.9	1.1	1.9	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:	58	Workability Factor:	36	Adjusted WF 38.2



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-35**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1420	8.46	2.69	47.3
26A	58-003	StoneCo	380	2.26	2.69	12.7
2NS	81-019	Pleasant Lk	1200	7.26	2.65	40.0
		Total Wt	**3000**	**17.98**		100.0

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

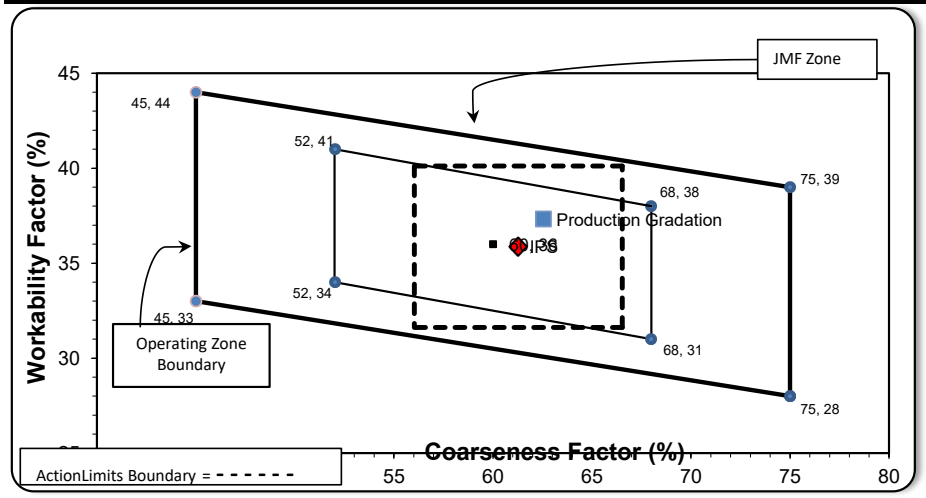
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	77.2	100.0	100.0	89.2	10.5	10.8
1/2"	38.5	98.5	100.0	70.7	18.5	29.3
3/8"	20.5	75.3	100.0	59.2	11.5	40.8
#4	2.6	5.7	98.0	41.2	18.1	58.8
#8	1.7	1.5	84.6	34.8	6.3	65.2
#16	1.5	1.3	65.4	27.0	7.8	73.0
#30	1.4	1.2	46.0	19.2	7.8	80.8
#50	1.3	1.1	21.3	9.3	9.9	90.7
#100	1.2	1.0	5.0	2.7	6.6	97.3
LBW	1.1	0.9	1.1	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.

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Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	63	Workability Factor:	35	Adjusted WF 37.3



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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

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%

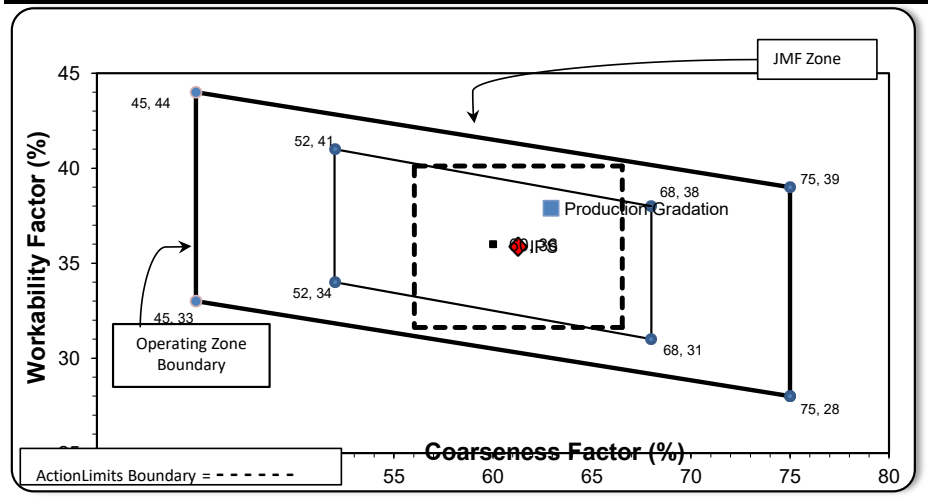
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	77.2	100.0	100.0	89.2	10.5	10.8
1/2"	38.5	98.5	100.0	70.6	18.5	29.4
3/8"	20.5	75.3	100.0	59.3	11.3	40.7
#4	2.6	5.7	98.0	41.8	17.6	58.2
#8	1.7	1.5	84.6	35.4	6.4	64.6
#16	1.5	1.3	65.4	27.5	7.9	72.5
#30	1.4	1.2	46.0	19.5	8.0	80.5
#50	1.3	1.1	21.3	9.4	10.1	90.6
#100	1.2	1.0	5.0	2.7	6.7	97.3
LBW	1.1	0.9	1.1	1.1	1.6	98.9

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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:	63	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

PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1430	8.92	2.57	48.8
26A	71-47	Presque Isle	300	1.87	2.57	10.2
2NS	63-115	Ray Rd	1200	7.20	2.67	41.0
		Total Wt	**2930**	**17.99**		100.0

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

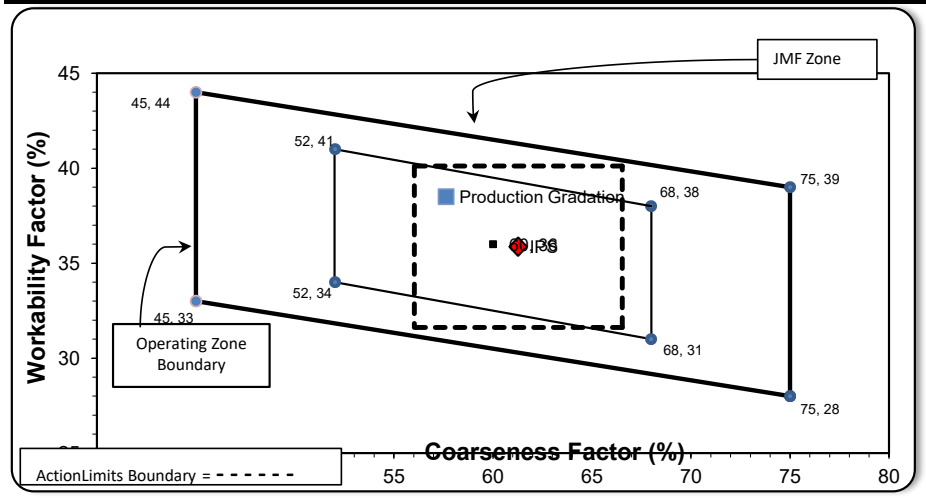
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	88.8	100.0	100.0	94.5	5.5	5.5
1/2"	45.6	97.6	100.0	73.2	21.3	26.8
3/8"	27.8	83.9	100.0	63.1	10.1	36.9
#4	5.5	21.2	96.7	44.5	18.7	55.5
#8	2.4	7.0	83.3	36.0	8.5	64.0
#16	1.8	3.2	62.4	26.8	9.2	73.2
#30	1.7	2.4	47.6	20.6	6.2	79.4
#50	1.5	2.1	23.8	10.7	9.9	89.3
#100	1.4	1.9	5.3	3.0	7.6	97.0
LBW	1.1	1.7	0.9	1.1	2.0	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

Coarseness Factor:	58	Workability Factor:	36	Adjusted WF 38.5



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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1430	8.92	2.57	49.7
26A	71-47	Presque Isle	300	1.87	2.57	10.4
2NS	63-115	Ray Rd	1150	6.90	2.67	39.9
		Total Wt	**2880**	**17.69**		100.0

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

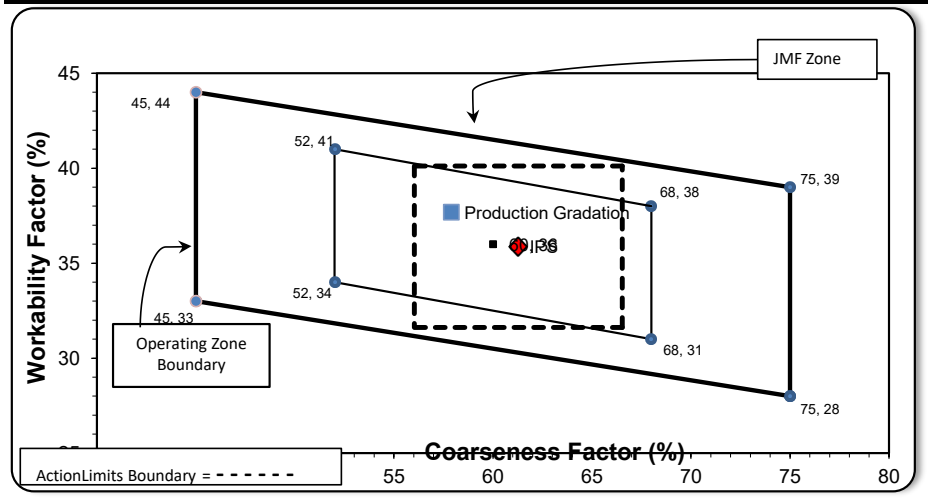
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30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	88.8	100.0	100.0	94.4	5.6	5.6
1/2"	45.6	97.6	100.0	72.7	21.7	27.3
3/8"	27.8	83.9	100.0	62.5	10.3	37.5
#4	5.5	21.2	96.7	43.6	18.9	56.4
#8	2.4	7.0	83.3	35.2	8.4	64.8
#16	1.8	3.2	62.4	26.1	9.0	73.9
#30	1.7	2.4	47.6	20.1	6.0	79.9
#50	1.5	2.1	23.8	10.5	9.6	89.5
#100	1.4	1.9	5.3	3.0	7.5	97.0
LBW	1.1	1.7	0.9	1.1	1.9	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:	58	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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1270	7.92	2.57	43.5
26A	71-47	Presque Isle	600	3.74	2.57	20.5
2NS	63-0009	Koenig	1050	6.35	2.65	36.0
		Total Wt	**2920**	**18.01**		100.0

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

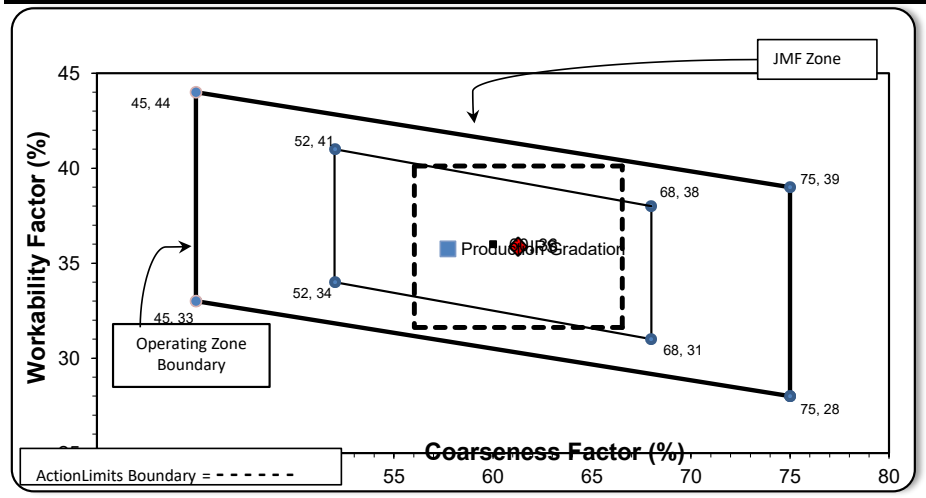
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	82.0	100.0	100.0	92.2	7.2	7.8
1/2"	36.8	97.2	100.0	71.9	20.2	28.1
3/8"	19.6	82.7	100.0	61.5	10.5	38.5
#4	2.9	24.4	97.6	41.4	20.1	58.6
#8	2.0	8.7	85.1	33.3	8.1	66.7
#16	1.7	8.7	71.1	28.1	5.2	71.9
#30	1.6	2.9	51.6	19.8	8.2	80.2
#50	1.5	2.5	22.4	9.2	10.6	90.8
#100	1.3	2.2	4.5	2.6	6.6	97.4
LBW	1.2	1.8	0.9	1.2	1.4	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:	58	Workability Factor:	33	Adjusted WF 35.8



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-39**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1240	7.73	2.57	43.4
26A	71-47	Presque Isle	570	3.55	2.57	19.9
2NS	63-0009	Koenig	1050	6.35	2.65	36.7
		Total Wt	**2860**	**17.64**		100.0

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

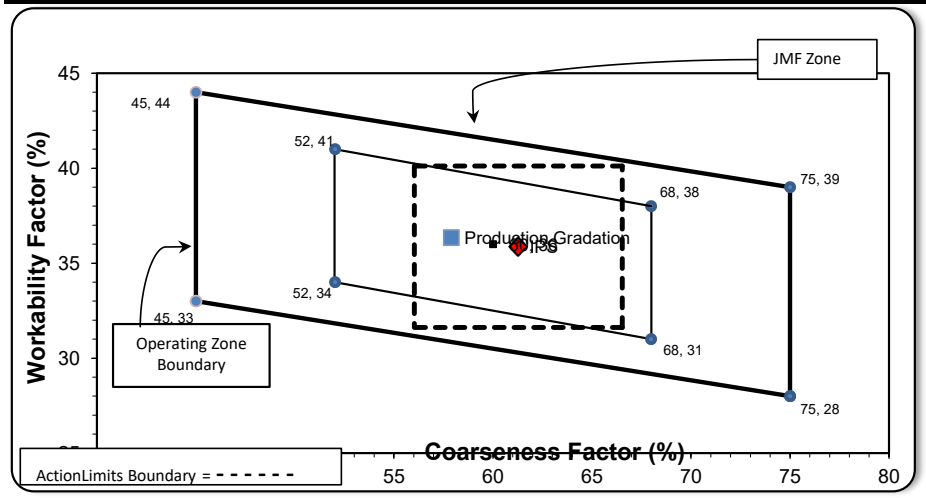
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	82.0	100.0	100.0	92.2	7.2	7.8
1/2"	36.8	97.2	100.0	72.0	20.2	28.0
3/8"	19.6	82.7	100.0	61.7	10.3	38.3
#4	2.9	24.4	97.6	42.0	19.7	58.0
#8	2.0	8.7	85.1	33.8	8.1	66.2
#16	1.7	8.7	71.1	28.6	5.3	71.4
#30	1.6	2.9	51.6	20.2	8.4	79.8
#50	1.5	2.5	22.4	9.4	10.8	90.6
#100	1.3	2.2	4.5	2.7	6.7	97.3
LBW	1.2	1.8	0.9	1.2	1.4	98.8

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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

Coarseness Factor:	58	Workability Factor:	34	Adjusted WF 36.3



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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1360	8.10	2.69	45.2
26A	58-003	StoneCo	400	2.38	2.69	13.3
2NS	63-114	Highland	1250	7.53	2.66	41.5
		Total Wt	**3010**	**18.02**		100.0

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

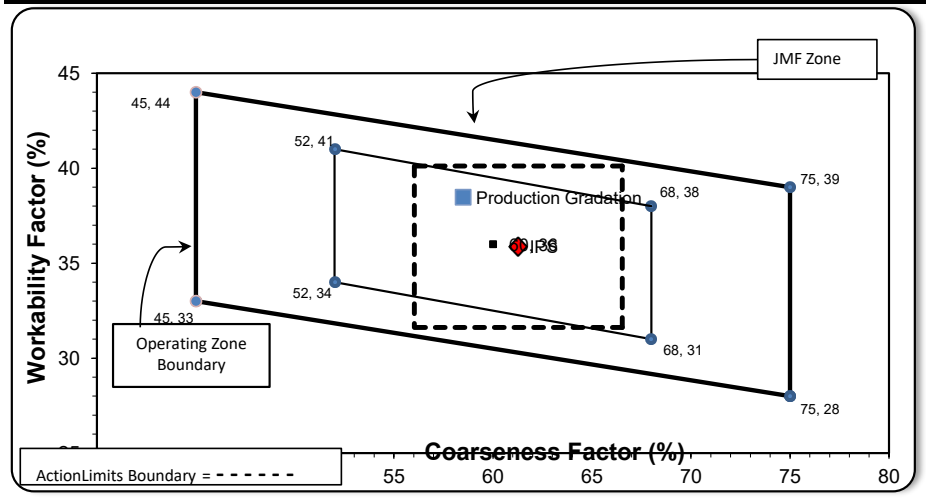
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.4	100.0	100.0	95.7	4.3	4.3
1/2"	38.0	99.5	100.0	71.9	23.7	28.1
3/8"	20.4	88.8	100.0	62.5	9.4	37.5
#4	2.8	11.7	98.0	43.5	19.0	56.5
#8	1.7	2.7	83.9	36.0	7.5	64.0
#16	1.5	2.0	66.4	28.5	7.5	71.5
#30	1.4	1.7	45.6	19.8	8.7	80.2
#50	1.3	1.5	23.1	10.4	9.4	89.6
#100	1.2	1.4	5.0	2.8	7.6	97.2
LBW	1.1	1.3	0.8	1.0	1.8	99.0

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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:	58	Workability Factor:	36	Adjusted WF 38.5



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: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1350	8.04	2.69	45.8
26A	58-003	StoneCo	400	2.38	2.69	13.6
2NS	63-114	Highland	1200	7.23	2.66	40.7
		Total Wt	**2950**	**17.66**		100.0

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

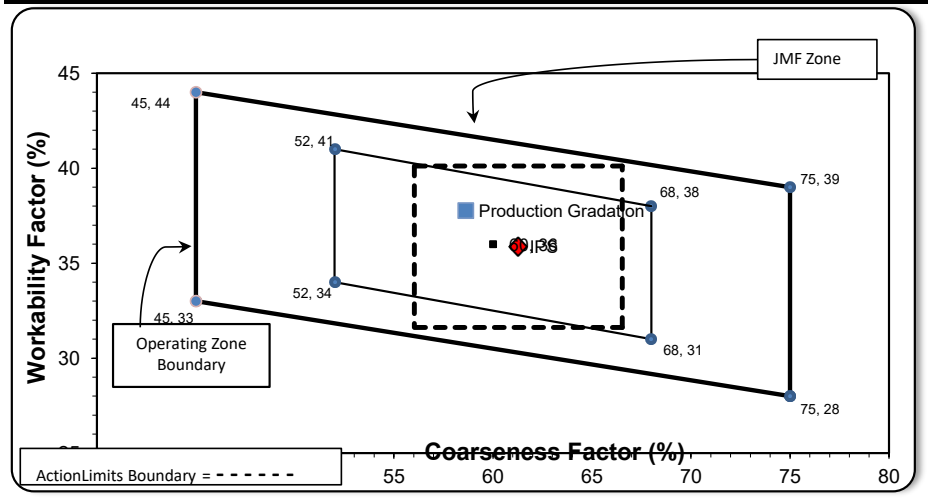
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.4	100.0	100.0	95.6	4.4	4.4
1/2"	38.0	99.5	100.0	71.6	24.0	28.4
3/8"	20.4	88.8	100.0	62.1	9.5	37.9
#4	2.8	11.7	98.0	42.7	19.3	57.3
#8	1.7	2.7	83.9	35.3	7.5	64.7
#16	1.5	2.0	66.4	28.0	7.3	72.0
#30	1.4	1.7	45.6	19.4	8.5	80.6
#50	1.3	1.5	23.1	10.2	9.2	89.8
#100	1.2	1.4	5.0	2.8	7.4	97.2
LBW	1.1	1.3	0.8	1.0	1.8	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.

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Farmington Hills, MI 48336

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	59	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-103**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1300	7.74	2.69	43.2
26A	58-003	StoneCo	500	2.98	2.69	16.6
2NS	63-114	Highland	1210	7.29	2.66	40.2
		Total Wt	**3010**	**18.01**		100.0

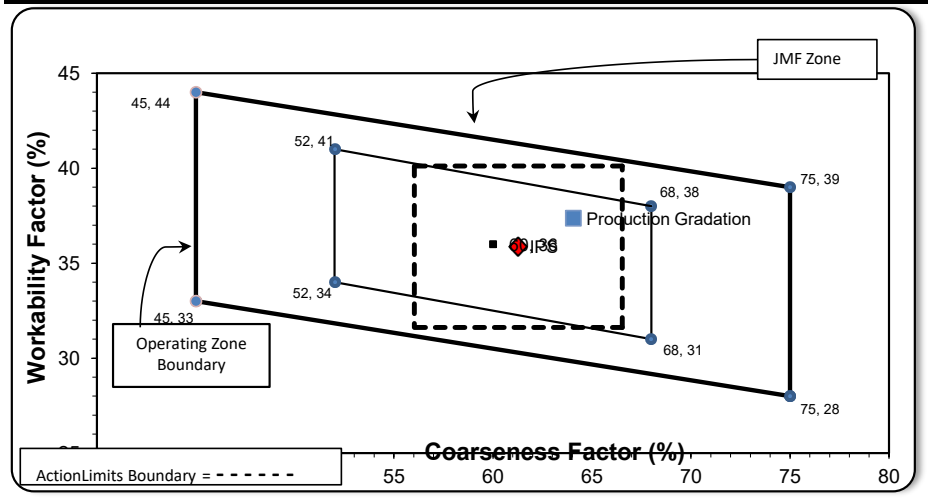
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Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.8	100.0	100.0	99.5	0.5	0.5
3/4"	64.8	100.0	100.0	84.8	14.7	15.2
1/2"	19.9	97.9	100.0	65.1	19.7	34.9
3/8"	8.9	85.7	100.0	58.3	6.8	41.7
#4	2.0	17.6	98.4	43.3	14.9	56.7
#8	1.5	3.7	83.6	34.9	8.5	65.1
#16	1.4	2.6	65.1	27.2	7.7	72.8
#30	1.3	2.5	44.0	18.7	8.5	81.3
#50	1.3	2.3	22.0	9.8	8.9	90.2
#100	1.3	2.1	4.6	2.8	7.0	97.2
LBW	1.2	1.9	0.5	1.0	1.7	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:	64	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

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