

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.48	2.57	53.0
26A	71-47	Presque Isle	150	0.94	2.57	5.2
2NS	63-115	Ray Rd	1200	7.20	2.67	41.8
Total Wt			2870	17.62		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"	99.1	100.0	100.0	99.5	0.5	0.5
3/4"	86.4	100.0	100.0	92.8	6.7	7.2
1/2"	50.8	97.1	100.0	73.8	19.0	26.2
3/8"	28.5	81.4	100.0	61.2	12.6	38.8
#4	4.4	17.7	96.3	43.5	17.6	56.5
#8	2.3	5.2	82.3	35.9	7.6	64.1
#16	1.9	2.5	61.4	26.8	9.1	73.2
#30	1.8	2.0	45.4	20.0	6.8	80.0
#50	1.7	1.8	23.7	10.9	9.1	89.1
#100	1.6	1.7	6.5	3.7	7.2	96.3
LBW	1.4	1.5	1.1	1.3	2.4	98.7



Superior Materials, LLC

30701 W. 10 Mile Rd.
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

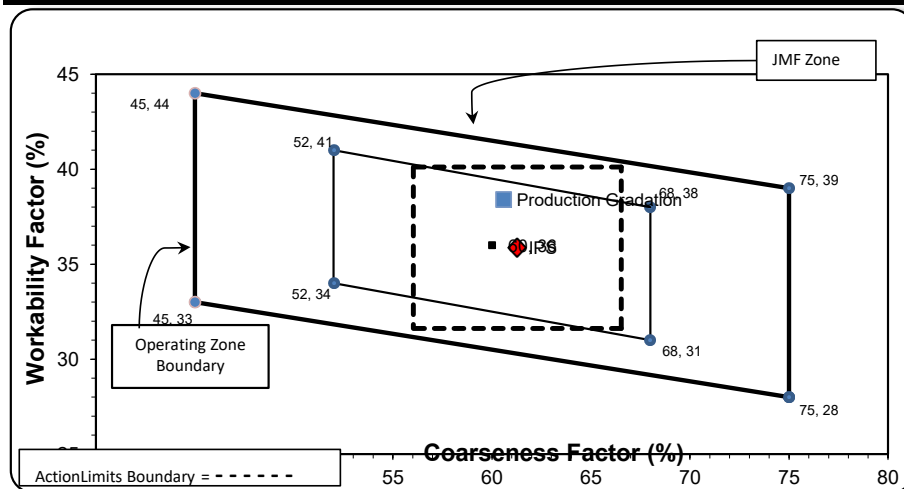
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	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

Production Gradation Report

PLANT #: **P-11**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.48	2.57	52.1
26A	71-47	Presque Isle	200	1.25	2.57	6.8
2NS	63-115	Ray Rd	1200	7.20	2.67	41.1
Total Wt			2920	17.93		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"	99.1	100.0	100.0	99.5	0.5	0.5
3/4"	86.4	100.0	100.0	92.9	6.6	7.1
1/2"	50.8	97.1	100.0	74.2	18.7	25.8
3/8"	28.5	81.4	100.0	61.5	12.7	38.5
#4	4.4	17.7	96.3	43.1	18.4	56.9
#8	2.3	5.2	82.3	35.4	7.7	64.6
#16	1.9	2.5	61.4	26.4	9.0	73.6
#30	1.8	2.0	45.4	19.7	6.7	80.3
#50	1.7	1.8	23.7	10.7	9.0	89.3
#100	1.6	1.7	6.5	3.6	7.1	96.4
LBW	1.4	1.5	1.1	1.3	2.3	98.7



Superior Materials, LLC

30701 W. 10 Mile Rd.

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.

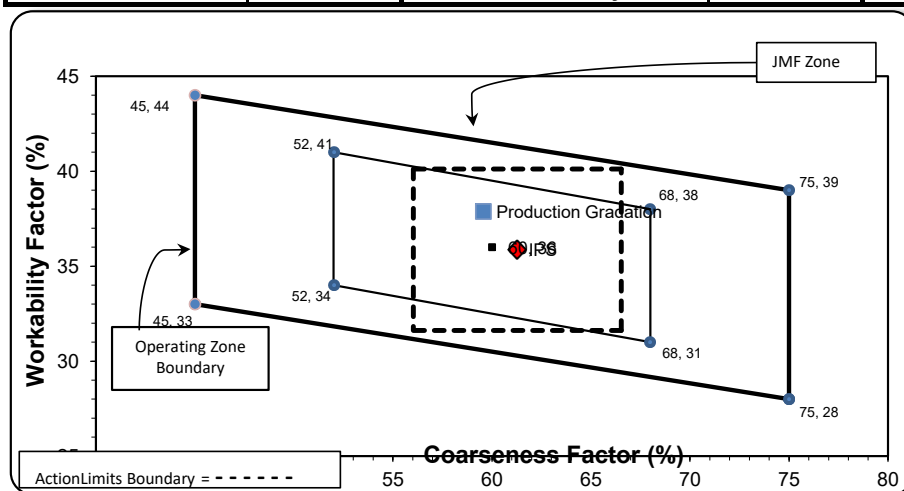
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	35	37.9
--------------------	----	---------------------	----	------

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**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.48	2.57	52.1
26A	71-47	Presque Isle	200	1.25	2.57	6.8
2NS	63-115	Ray Rd	1200	7.20	2.67	41.1
Total Wt			2920	17.93		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"	99.1	100.0	100.0	99.5	0.5	0.5
3/4"	86.4	100.0	100.0	92.9	6.6	7.1
1/2"	50.8	97.1	100.0	74.2	18.7	25.8
3/8"	28.5	81.4	100.0	61.5	12.7	38.5
#4	4.4	17.7	96.3	43.1	18.4	56.9
#8	2.3	5.2	82.3	35.4	7.7	64.6
#16	1.9	2.5	61.4	26.4	9.0	73.6
#30	1.8	2.0	45.4	19.7	6.7	80.3
#50	1.7	1.8	23.7	10.7	9.0	89.3
#100	1.6	1.7	6.5	3.6	7.1	96.4
LBW	1.4	1.5	1.1	1.3	2.3	98.7



Superior Materials, LLC

30701 W. 10 Mile Rd.
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

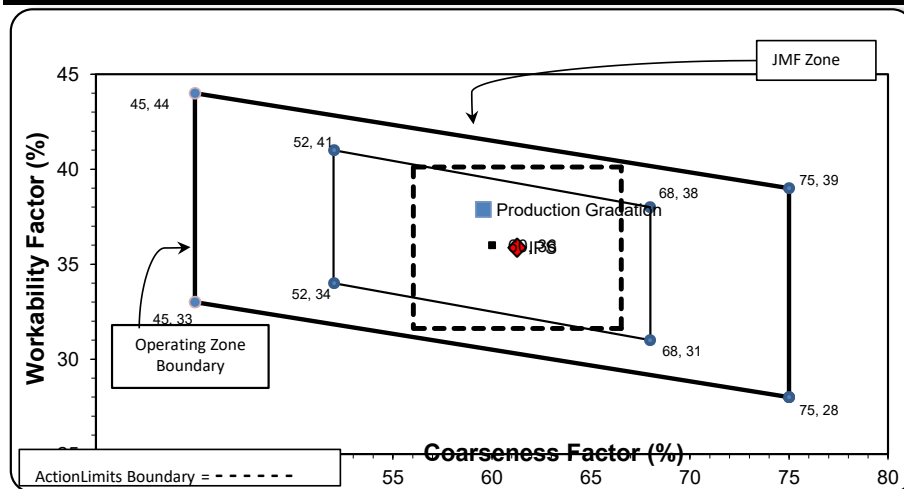
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	35	37.9
--------------------	----	---------------------	----	------

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**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1460	9.10	2.57	51.0
26A	71-47	Presque Isle	220	1.37	2.57	7.7
2NS	63-0009	Koenig	1180	7.14	2.65	41.3
Total Wt			2860	17.61		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"	99.1	100.0	100.0	99.5	0.5	0.5
3/4"	86.4	100.0	100.0	93.1	6.5	6.9
1/2"	50.8	97.1	100.0	74.7	18.4	25.3
3/8"	28.5	81.4	100.0	62.1	12.6	37.9
#4	4.4	17.7	97.5	43.8	18.2	56.2
#8	2.3	5.2	84.1	36.3	7.6	63.7
#16	1.9	2.5	69.4	29.8	6.5	70.2
#30	1.8	2.0	50.6	21.9	7.8	78.1
#50	1.7	1.8	24.8	11.2	10.7	88.8
#100	1.6	1.7	2.5	2.0	9.3	98.0
LBW	1.4	1.5	0.2	0.9	1.1	99.1



Superior Materials, LLC

30701 W. 10 Mile Rd.

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.

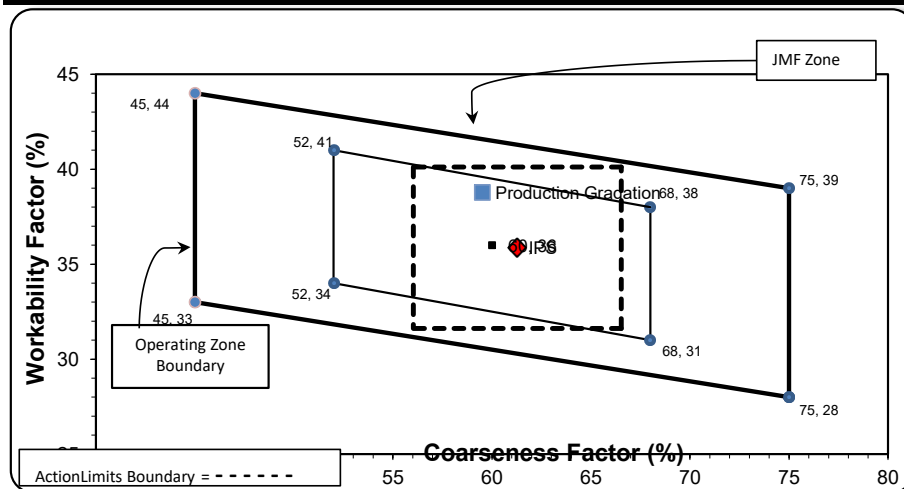
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	36	38.8
--------------------	----	---------------------	----	------

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**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1650	9.83	2.69	55.9
1A	58-003	StoneCo	170	1.01	2.69	5.8
2NS	63-114	Highland	1130	6.81	2.66	38.3
Total Wt			2950	17.65		100.0

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



Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Sieve	6AA	1A	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"	87.8	99.9	100.0	93.2	6.8	6.8
1/2"	52.7	88.4	100.0	72.9	20.3	27.1
3/8"	33.8	71.6	100.0	61.3	11.5	38.7
#4	6.4	19.5	98.5	42.4	18.9	57.6
#8	2.4	2.9	83.9	33.6	8.8	66.4
#16	1.8	1.8	66.1	26.4	7.2	73.6
#30	1.6	1.5	46.3	18.7	7.7	81.3
#50	1.6	1.4	21.8	9.3	9.4	90.7
#100	1.5	1.3	4.3	2.6	6.8	97.4
LBW	1.1	1.1	0.4	0.8	1.7	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.

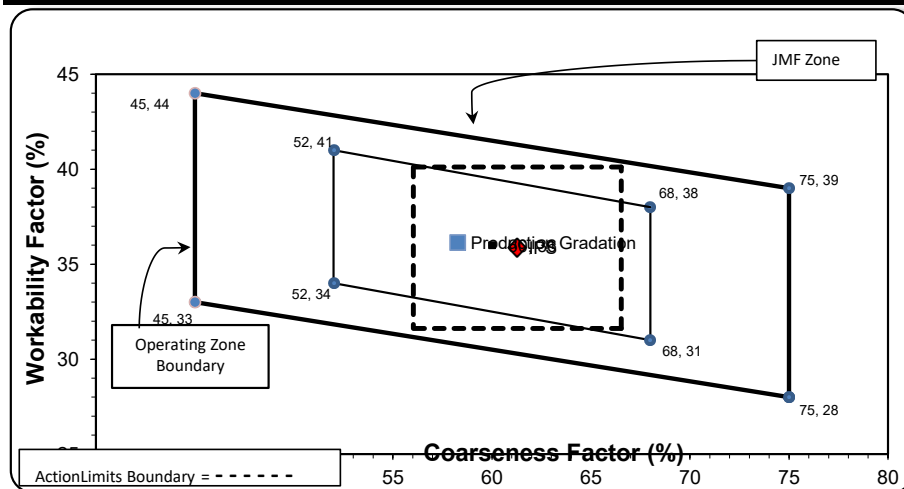
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	34	36.1
---------------------------	-----------	----------------------------	-----------	-------------

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**

Sample Date: 8/26/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/27/2026 through 9/2/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1650	9.83	2.69	55.9
1A	58-003	StoneCo	170	1.01	2.69	5.8
2NS	63-114	Highland	1130	6.81	2.66	38.3
Total Wt			2950	17.65		100.0

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



Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Sieve	6AA	1A	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"	87.8	99.9	100.0	93.2	6.8	6.8
1/2"	52.7	88.4	100.0	72.9	20.3	27.1
3/8"	33.8	71.6	100.0	61.3	11.5	38.7
#4	6.4	19.5	98.5	42.4	18.9	57.6
#8	2.4	2.9	83.9	33.6	8.8	66.4
#16	1.8	1.8	66.1	26.4	7.2	73.6
#30	1.6	1.5	46.3	18.7	7.7	81.3
#50	1.6	1.4	21.8	9.3	9.4	90.7
#100	1.5	1.3	4.3	2.6	6.8	97.4
LBW	1.1	1.1	0.4	0.8	1.7	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.

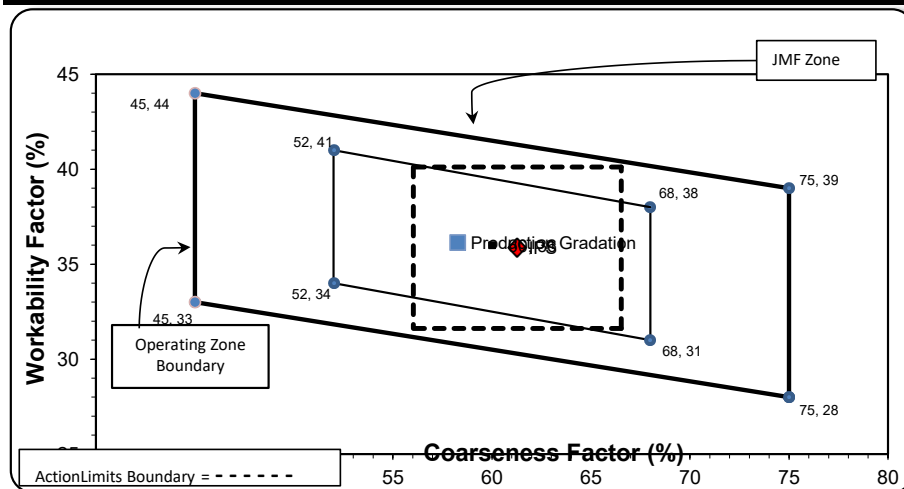
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	34	36.1
--------------------	----	---------------------	----	------

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