5/8/23 Concrete Grade: S2M, 3500HP Sample Date:

Dates Test I	Represents:	5/9/2023	through	5/15/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1575	9.63	2.62	51.6
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	75-051	Mid Michigan	1230	7.41	2.66	40.3

Contractor:

MDOT No.:



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

	Total Wt	3055	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	6 A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	98.8	10	0.0	100.0	99.4	0.6	0.6
3/4"	80.2	10	0.0	100.0	89.8	9.6	10.2
1/2"	33.4	96	96.7		65.4	24.4	34.6
3/8"	19.8	88	3.0	100.0	57.7	7.7	42.3
#4	4.2	21	.6	97.2	43.1	14.6	56.9
#8	2.1	5	.2	81.8	34.4	8.6	65.6
#16	1.8	3	3.0		27.6	6.8	72.4
#30	1.7	2.6		47.8	20.3	7.3	79.7
#50	1.7	2.5		21.9	9.9	10.4	90.1
#100	1.6	2	.3	5.2	3.1	6.8	96.9
LBW	1.4	2	.1	0.8	1.2	1.9	98.8

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

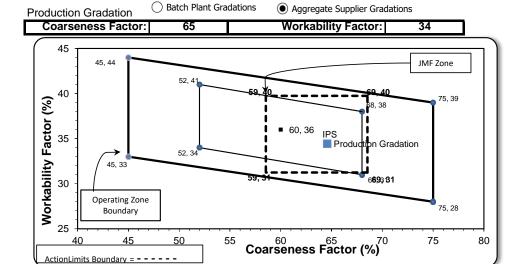
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Initial Production Sample (IPS)

Coars	Coarseness Factor:		
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
	% Passing	Retained	% 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"	93.9	6.1	6.1
1/2"	71.4	22.5	28.6
3/8"	59.0	12.4	41.0
#4	45.1	13.9	54.9
#8	35.5	9.6	64.5
#16	28.3	7.2	71.7
#30	21.3	6.9	78.7
#50	11.0	10.3	89.0
#100	3.4	7.6	96.6
LBW	1.1	2.3	98.9

PREPARED BY: SM, LLC Technical Service

Sample Date:

5/8/23 Concrete Grade: S2M, 3500HP 5/15/2023

Agg. Class Pit # Source Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA 58-003 Stoneco 1600	9.53	2.69	51.6
26A 58-003 Stoneco 300	1.79	2.69	9.7
2NS 81-019 Pleasant Lake 1200	7.26	2.65	38.7

Contractor:

MDOT No.:



ative ined	Suberior Materials, LLC
)	Suite 500
)	Farmington Hills, MI 48336

	Total Wt	3100	18.58		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	6 A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	99.4	10	0.0	100.0	99.7	0.3	0.3
3/4"	87.2	100.0		100.0	93.4	6.3	6.6
1/2"	46.1	99.8		100.0	72.2	21.2	27.8
3/8"	25.4	87	7.5	100.0	60.3	11.9	39.7
#4	2.2	7.	.5	98.7	40.1	20.2	59.9
#8	1.3	1.	9	84.8	33.7	6.4	66.3
#16	0.9	1.	.5	67.7	26.8	6.9	73.2
#30	0.9	1.	3	48.1	19.2	7.6	80.8
#50	0.8	1.2		22.9	9.4	9.8	90.6
#100	0.8	1.2		6.0	2.9	6.5	97.1
LBW	0.5	0.	9	1.4	0.9	2.0	99.1

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

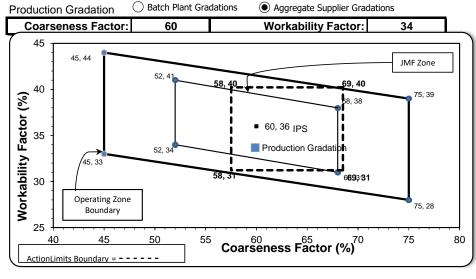
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY: SM, LLC Technical Service

Sample Date:

Concrete Grade: S2M, 3500HP 5/8/23

Dates Test Represents: 5/9/2023 5/15/2023 through Specific ft³ Agg. Class Pit# Source Weight (SSD) Gravity Contribution Stoneco 6AA 58-003 1600 9.53 2.69 51.6 26A 58-003 Stoneco 300 1.79 2.69 9.7 2NS 81-019 Pleasant Lake 1200 7.26 2.65 38.7

MDOT No.:

Contractor:

SUPERIO MATERIAL	R

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.

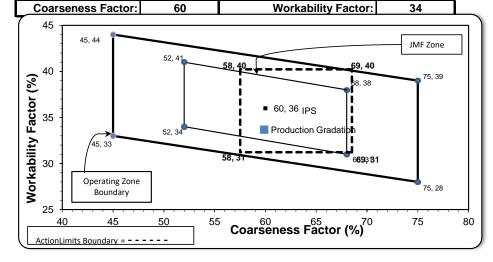
*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.

	Total Wt	3100	18.58		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	i A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	99.4	10	0.0	100.0	99.7	0.3	0.3
3/4"	87.2	10	0.0	100.0	93.4	6.3	6.6
1/2"	46.1	99.8		100.0	72.2	21.2	27.8
3/8"	25.4	87.5		100.0	60.3	11.9	39.7
#4	2.2	7.	.5	98.7	40.1	20.2	59.9
#8	1.3	1.	.9	84.8	33.7	6.4	66.3
#16	0.9	1.	.5	67.7	26.8	6.9	73.2
#30	0.9	1.	.3	48.1	19.2	7.6	80.8
#50	0.8	1.	.2	22.9	9.4	9.8	90.6
#100	0.8	1.2		6.0	2.9	6.5	97.1
LBW	0.5	0.	.9	1.4	0.9	2.0	99.1
roduction (Gradation O Batch Plant Grada	tions	regate Supplier Gra	adations		Intial Production	on Sample (IP



Coars	Coarseness Factor:		
Worl	kability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY: SM, LLC Technical Service

PLANT #: 14 Contractor:

Sample Date: 5/8/23 Concrete Grade: S2M, 3500HP

Dates Test Represents: 5/9/2023 through 5/15/2023 MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	51.4
26A	58-003	Stoneco	300	1.79	2.69	9.6
2NS	19-04	Schlegel	1210	7.26	2.67	38.9
		Total Wt	3110	18.58		100.0

MDOT No.:

<---- Verify this number is 100%

Builders'
REDI-MIX
Finish First With Builders'

Builders Redi-Mix

30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

Total Tit		0110 10.00		100.0	< voing this ii	umber 13 10070
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"	87.2	100.0	100.0	93.4	6.3	6.6
1/2"	46.1	99.8	100.0	72.3	21.2	27.7
3/8"	25.4	87.5	100.0	60.4	11.8	39.6
#4	2.2	7.5	99.9	40.7	19.7	59.3
#8	1.3	1.9	90.1	35.9	4.8	64.1
#16	0.9	1.5	69.4	27.6	8.3	72.4
#30	0.9	1.3	44.5	17.9	9.7	82.1
#50	0.8	1.2	14.3	6.1	11.8	93.9
#100	0.8	1.2	2.7	1.6	4.5	98.4
LBW	0.5	0.9	0.2	0.4	1.2	99.6

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

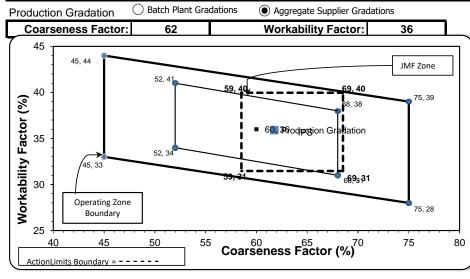
nom. max., #100 and #200 sieves.

 $^{*}\%$ Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	64	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	8.0
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.2	12.1	40.8
#4	41.5	17.7	58.5
#8	35.7	5.8	64.3
#16	27.9	7.9	72.1
#30	18.3	9.5	81.7
#50	7.3	11.0	92.7
#100	2.0	5.3	98.0
LBW	0.9	1.1	99.1

PREPARED BY: SM, LLC Technical Service

PLANT #: 12

Concrete Grade: S2M, 3500HP

Sample Date: 5/8/23
Dates Test Represents: 5/9/2023

through 5/15/2023

Batoo Toot I	toproconto.	0/0/2020	unougn	0/10/2020		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1720	10.52	2.62	56.4
26A	71-47	Presque Isle	100	0.61	2.62	3.3
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	18 57		100.0

MDOT No :

MDOT No.:

Contractor:

<---- Verify this number is 100%

SUPERIOR	

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"	98.6	100.0	100.0	99.2	0.8	0.8
3/4"	84.3	100.0	100.0	91.1	8.1	8.9
1/2"	49.6	95.1	100.0	71.4	19.7	28.6
3/8"	31.6	85.7	100.0	61.0	10.5	39.0
#4	5.2	15.4	96.4	42.3	18.6	57.7
#8	1.9	3.3	79.2	33.1	9.2	66.9 r
#16	1.5	1.7	63.4	26.5	6.6	73.5
#30	1.4	1.4	48.1	20.2	6.2	79.8 r
#50	1.3	1.3	25.4	11.0	9.2	89.0
#100	1.3	1.2	4.2	2.5	8.6	97.5
LBW	1.0	0.8	0.5	0.8	1.7	99.2

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

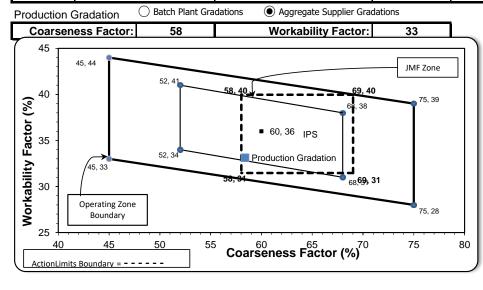
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	64	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.2	12.1	40.8
#4	41.5	17.7	58.5
#8	35.7	5.8	64.3
#16	27.9	7.9	72.1
#30	18.3	9.5	81.7
#50	7.3	11.0	92.7
#100	2.0	5.3	98.0
LBW	0.9	1.1	99.1

PREPARED BY: SM, LLC Technical Service

PLANT #: p11

Sample Date:

5/8/23 Concrete Grade: S2M, 3500HP 5/15/2023

Dates Test F	Represents:	5/9/2023	through	5/15/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific	%
Agg. Class		Source	Weight (SSD)	Weight (33b)		Gravity
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
		Total Wt	3050	18 57		100.0

Contractor:

MDOT No.:



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

	i otai wt	3050	18.5 <i>1</i>		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0
1"	97.4	100	0.0	100.0	98.7	1.3	1.3
3/4"	82.4	100	0.0	100.0	91.3	7.4	8.7
1/2"	43.6	95	.1	100.0	71.7	19.6	28.3
3/8"	24.3	85	.7	100.0	61.3	10.5	38.7
#4	3.2	15	.4	96.6	42.1	19.1	57.9
#8	1.4	3.	3	84.1	35.0	7.2	65.0 r
#16	1.1	1.	7	68.6	28.4	6.6	71.6
#30	1.0	1.	4	48.6	20.2	8.1	79.8
#50	1.0	1.	3	22.8	9.8	10.4	90.2
#100	0.9	1.	2	6.5	3.2	6.6	96.8
LBW	0.8	0.	8	1.5	1.1	2.1	98.9

75, 28

80

75

*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 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.

 Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation Coarseness Factor:** 60 **Workability Factor:** 35 JMF Zone 75. 39 Workability Factor (%) ■ 60, 36-S ■ Production Gradate 52, 34

Coarseness Factor (%) 70

Coars	eness Factor:	62	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY: SM, LLC Technical Service

50

Operating Zone

Boundary

45

ActionLimits Boundary = - - - - -

Sample Date:

5/8/23 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	5/9/2023	through	5/15/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3

MDOT No.:

Contractor:



Cumulative 6 Retained	
0.0	Suite 500
0.0	Farmington Hills, MI 48336

	Total Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	iA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	97.4	10	100.0		98.7	1.3	1.3
3/4"	82.4	10	100.0		91.3	7.4	8.7
1/2"	43.6	95.1		100.0	71.7	19.6	28.3
3/8"	24.3	85	5.7	100.0	61.3	10.5	38.7
#4	3.2	15	5.4	96.6	42.1	19.1	57.9
#8	1.4	3	.3	84.1	35.0	7.2	65.0
#16	1.1	1.	.7	68.6	28.4	6.6	71.6
#30	1.0	1.	4	48.6	20.2	8.1	79.8
#50	1.0	1.3		22.8	9.8	10.4	90.2
#100	0.9	1.2		6.5	3.2	6.6	96.8
LBW	0.8	0.	.8	1.5	1.1	2.1	98.9

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

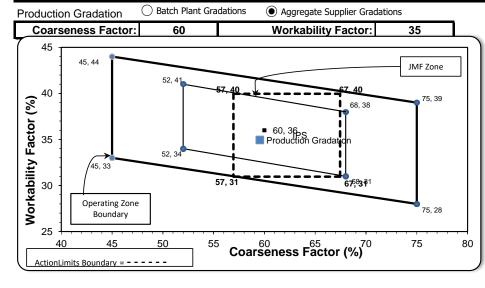
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	62	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY: SM, LLC Technical Service

5/8/23

PLANT #: P-35

Sample Date:

Dates Test Represents:

Concrete Grade: S2M, 3500HP

Contractor:

5/9/2023 5/15/2023 through

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	51.6
26A	58-003	Stoneco	300	1.79	2.69	9.7
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	3100	18.58		100.0

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

	i otai wt	3100 18.58		100.0	< Verify this number is 100%			
Sieve	6AA	26/	1	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100.0		100.0	100.0	0.0	0.0	1
1.5"	100.0	100	0	100.0	100.0	0.0	0.0	1
1"	99.4	100.	.0	100.0	99.7	0.3	0.3	1
3/4"	87.2	100	0	100.0	93.4	6.3	6.6	1
1/2"	46.1	99.	3	100.0	72.2	21.2	27.8	1
3/8"	25.4	87.	5	100.0	60.3	11.9	39.7	1
#4	2.2	7.5		98.7	40.1	20.2	59.9	1
#8	1.3	1.9)	84.8	33.7	6.4	66.3	n
#16	0.9	1.5	,	67.7	26.8	6.9	73.2	1
#30	0.9	1.3	1	48.1	19.2	7.6	80.8	n
#50	0.8	1.2		22.9	9.4	9.8	90.6	1
#100	0.8	1.2		6.0	2.9	6.5	97.1	а
I RW	0.5	0.0		1 /	0.0	2.0	00.1	1

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

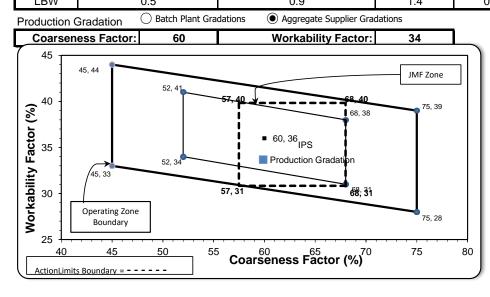
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	63	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.4	11.9	40.6
#4	43.0	16.5	57.0
#8	35.3	7.6	64.7
#16	28.2	7.1	71.8
#30	21.6	6.6	78.4
#50	9.1	12.5	90.9
#100	1.7	7.4	98.3
LBW	1.1	0.6	98.9

PREPARED BY: SM, LLC Technical Service

Concrete Grade: S2M, 3500HP

Sample Date: 5/8/23 Dates Test Represents: 5/9/2023

5/15/2023 through

MDOT	No.:	

Contractor:

Batoo Toot I	toproconto.	0,0,2020	unougn	0/10/2020		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1700	10.40	2.62	55.7
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
		Total Wt	3050	18.57		100.0

SUPER	IOR

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

	Total Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0
1"	98.6	100	0.0	100.0	99.2	0.8	0.8
3/4"	84.3	100	0.0	100.0	91.2	8.0	8.8
1/2"	49.6	95	.1	100.0	71.7	19.6	28.3
3/8"	31.6	85	.7	100.0	61.2	10.5	38.8
#4	5.2	15	.4	97.2	41.9	19.3	58.1
#8	1.9	3.	3	83.1	33.9	8.0	66.1
#16	1.5	1.	7	66.3	27.0	6.9	73.0
#30	1.4	1.	4	43.1	17.8	9.2	82.2
#50	1.3	1.	3	17.0	7.5	10.3	92.5
#100	1.3	1.	2	3.4	2.1	5.4	97.9
LBW	1.0	0.	8	0.6	0.8	1.3	99.2

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

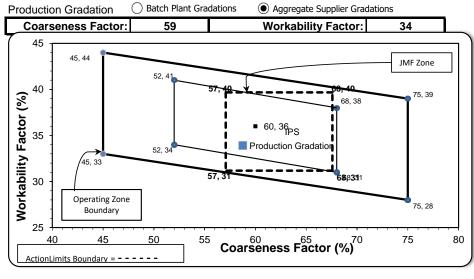
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	62	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.1	0.9	0.9
3/4"	90.5	8.6	9.5
1/2"	69.8	20.7	30.2
3/8"	59.8	10.0	40.2
#4	42.2	17.6	57.8
#8	35.4	6.7	64.6
#16	28.8	6.7	71.2
#30	21.4	7.4	78.6
#50	8.8	12.6	91.2
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

PREPARED BY: SM, LLC Technical Service

Total Wt

PLANT #: P-39

Sample Date:

5/8/23 Concrete Grade: **S2M**, **3500HP**

Dates Test Represents:		5/9/2023	through	5/15/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1570	9.60	2.62	51.5
26A	71-47	Presque Isle	230	1.41	2.62	7.5
SINC	44-051	Krako Willie Dd	1250	7.56	2.65	41.0

Contractor:

MDOT No.:



---- Verify this number is 100%

Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
0.0	Suite 500
0.0	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	99.4	0.6	0.6
3/4"	80.2	100.0	100.0	89.8	9.6	10.2
1/2"	33.4	96.7	100.0	65.5	24.3	34.5
3/8"	19.8	88.0	100.0	57.8	7.7	42.2
#4	4.2	21.6	97.0	43.5	14.3	56.5
#8	2.1	5.2	83.8	35.8	7.7	64.2
#16	1.8	3.0	68.6	29.3	6.5	70.7
#30	1.7	2.6	50.2	21.6	7.6	78.4
#50	1.7	2.5	22.4	10.2	11.4	89.8
#100	1.6	2.3	5.4	3.2	7.0	96.8
LBW	1.4	2.1	1.0	1.3	1.9	98.7

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

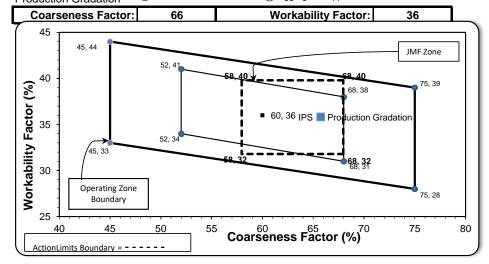
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	89.8	10.2	10.2
1/2"	70.7	19.1	29.3
3/8"	59.6	11.1	40.4
#4	43.2	16.4	56.8
#8	35.8	7.4	64.2
#16	29.2	6.6	70.8
#30	21.4	7.8	78.6
#50	9.8	11.6	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

PREPARED BY: SM, LLC Technical Service

Sample Date:

5/8/23 Concrete Grade: S2M, 3500HP

Dates Test Represents:		5/9/2023	tnrougn	5/15/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1720	10.52	2.62	56.4
26A	71-47	Presque Isle	100	0.61	2.62	3.3
2NS	63-115	Ray Rd	1230	7 44	2 65	40.3

Contractor:

MDOT No.:



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

	i otai Wt	3050	18.5 <i>1</i>		100.0	< Verify this n	umber is 100%
Sieve	6AA	26A		2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	98.6	10	0.0	100.0	99.2	0.8	0.8
3/4"	84.3	10	0.0	100.0	91.1	8.1	8.9
1/2"	49.6	95	5.1	100.0	71.4	19.7	28.6
3/8"	31.6	85	5.7	100.0	61.0	10.5	39.0
#4	5.2	15	5.4	96.4	42.3	18.6	57.7
#8	1.9	3	.3	79.2	33.1	9.2	66.9
#16	1.5	1	.7	63.4	26.5	6.6	73.5
#30	1.4	1	.4	48.1	20.2	6.2	79.8
#50	1.3	1	.3	25.4	11.0	9.2	89.0
#100	1.3	1	.2	4.2	2.5	8.6	97.5
LBW	1.0	0	.8	0.5	0.8	1.7	99.2

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

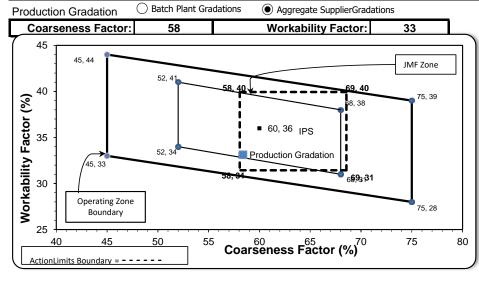
nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1

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